

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA

v.

BAY STATE GAS COMPANY, doing
business as ("d/b/a") Columbia Gas of
Massachusetts,

Defendant

) Criminal No.

) Violation:

) Count One: Failure to Prepare and Follow a
) Procedure for the Starting Up and Shutting
) Down of a Pipeline Designed to Assure
) Operation within the Maximum Allowable
) Operating Pressure
) (49 U.S.C. §§ 60123(a), 60118(a); 49 C.F.R.
) §§ 192.605(a), 192.605(b)(5))
)

INFORMATION

At all times relevant to this Information:

General Allegations

1. Bay State Gas Company, d/b/a Columbia Gas of Massachusetts ("CMA"), was a Massachusetts corporation that supplied natural gas to approximately 325,000 customers in Massachusetts in and around Springfield, Brockton, and three Merrimack Valley communities in Lawrence, Andover, and North Andover. CMA was a wholly-owned subsidiary of NiSource, Inc. ("NiSource"), a publically traded company based in Merrillville, Indiana.

2. CMA engaged in the transportation of natural gas, was an operator of a gas pipeline system as well as a gas distributor operator ("Operator"), and was subject to the jurisdiction of the U.S. Department of Transportation ("US DOT") as well as state and local regulations.

CMA's Low-Pressure Gas Distribution System in South Lawrence

3. CMA owned and operated a network of gas pipeline systems for the transportation and delivery of natural gas that included a series of approximately 25 different low-pressure ("LP") gas distribution systems in Massachusetts. Among these systems, CMA owned and operated a LP gas distribution system in the area of South Lawrence ("the South Lawrence LP System").

4. The South Lawrence LP System used fourteen (14) regulator stations ("Reg. Stations") to supply natural gas to main distribution lines ("mains") and control downstream pressure. The Reg. Stations were belowground and contained "regulators" that monitored and controlled downstream gas pressure.

5. Natural gas came into the South Lawrence LP System at high pressure, about 77 pounds per square inch gauge ("psig"). The regulators decreased pressure to approximately 0.5 psig or 14 inches of water column ("w/c"), a more refined pressure measurement. The Reg. Stations supplied mains with gas through an outlet pipe. Mains, in turn, supplied gas to individual houses and businesses through service lines at roughly the same pressure, 0.5 psig or 14 inches w/c.

6. The fourteen (14) Reg. Stations that were part of the South Lawrence LP System controlled and regulated pressure in an automated manner. Based on the pressure the regulator sensed downstream, the regulator valve opened or closed to control downstream pressure at a pre-set limit called a "set-point" to ensure that the pressure in the system did not exceed the Maximum Allowable Operating Pressure ("MAOP") and become unsafe. Although it varied, the MAOP for the South Lawrence LP System was generally 14 inches w/c.

7. Each regulator was equipped with a “regulator control line” also called a “control line,” “sensing line,” or “static line” (“control line”). A control line was generally a ¾ inch steel pipe that connected the regulator to the main downstream. Without a control line connected from the regulator to the downstream gas main, the regulators in the South Lawrence LP System could not properly function.

8. Each Reg. Station in the South Lawrence LP System had at least two regulators, a “worker regulator” and a “monitor regulator,” each with a control line that sensed downstream pressure and connected back to the regulator, thereby enabling the regulator to regulate system pressure. The worker regulator was the primary regulator that maintained system pressure. The monitor regulator was the redundant backup in case the worker regulator was damaged or malfunctioned. If both control lines malfunctioned or failed to read any downstream pressure, the worker regulator would automatically and continually increase the pressure resulting in an “over-pressurization” of the LP system.

Background of the Pipeline Safety Act

9. Congress first established minimum safety standards for the transportation of natural gas and other gases by pipeline in the Natural Gas Pipeline Safety Act of 1968 (“NGPSA”) and directed the Secretary of the US DOT to issue regulations to protect against risks to life and property posed by pipeline transportation and pipeline facilities.

10. In 1970, in accordance with NGPSA, the Secretary of the US DOT issued regulations codified in Part 192 of Title 49 of the Federal Code of Regulations, Subparts A through M (“Part 192”).

11. In 1979, Congress amended the NGPSA to add criminal penalties for knowing and willful violations of any Part 192 regulation as part of the Hazardous Liquid Pipeline Safety Act of 1979 (“HLPSA”).

12. In 1994, Congress enacted the Pipeline Safety Act (“PSA”), 49 U.S.C. § 60101 *et seq.* The PSA combined and re-codified, without substantive changes, the two then existing pipeline safety statutes, NGPSA and HLPSA. The purpose of the PSA was to “provide adequate protection against risks to life and property posed by pipeline transportation and pipeline facilities.” 49 U.S.C. § 60102(a)(1).

13. In 2004, Congress amended the PSA by enacting the Norman Y. Mineta Research and Special Programs Improvement Act of 2004 to create the Pipeline and Hazardous Materials Safety Administration (“PHMSA”), an agency within the US DOT.

14. In 2006, Congress enacted the the Pipeline Inspection, Protection, Enforcement and Safety Act (“PIPES”) which directed PHMSA to “prescribe minimum standards for integrity management programs for distribution pipelines.” 49 U.S.C. § 60109(e).

15. On December 4, 2009, PHMSA promulgated the regulations codified in Subpart P of Part 192, entitled “Gas Distribution Pipeline Integrity Management (IM).” Subpart P requires an Operator to “develop and implement” an IM Program by no later than August 2, 2011. 49 C.F.R. § 192.1005.

Regulations Regarding Pipeline Operations and Over-Pressurization

16. Subpart L of Part 192 prescribes the minimum requirements for safe pipeline operations and states that “no person may operate a segment of pipeline unless it is operated in accordance with this subpart.” 49 C.F.R. § 192.603(a).

17. Part 192 defines the Maximum Allowable Operating Pressure (“MAOP”) as “the maximum pressure at which a pipeline or segment of a pipeline may be operated[.]” 49 C.F.R. § 192.3. It also defines a “low-pressure distribution system” as a “distribution system in which the gas pressure in the main is substantially the same as the pressure provided to the customer.” 49 C.F.R. § 192.3. Subpart L further mandates that “[n]o person may operate a low-pressure distribution system at a pressure high enough to make unsafe the operation of any connected and properly adjusted low-pressure gas burning equipment” (referring to gas appliances). 49 C.F.R. § 192.623(a).

18. Under Part 192, “[e]ach operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities,” otherwise known as an operation and maintenance manual (“O&M Manual”). Among other requirements, § 192.605(b)(5) requires that the O&M Manual include a procedure for “starting up and shutting down any part of a pipeline in a manner designed to assure operation within the MAOP limits prescribed by this part” in order “to provide safety during maintenance and operations.”

19. Subpart L also requires an operator to “keep records necessary to administer the procedures under § 192.605.” 49 C.F.R. § 192.603. Among the records required to be kept, and made available to operating personnel include, “construction records, maps and operating history.” 49 C.F.R. § 192.605(b)(3).

The September 13, 2018 Over-Pressurization Event

20. On or about September 13, 2018, beginning at approximately 4:00 p.m., a series of fires and explosions resulted from an over-pressurization of the South Lawrence LP System (“the Event”). By approximately 4:07 p.m., the actual operating pressure of the South Lawrence

LP System increased to more than 35 inches of w/c and ultimately increased until the actual operating pressure was approximately 13 times greater than the MAOP.

21. The over-pressurization of the South Lawrence LP System caused multiple fires and explosions including inside house-hold appliances and residences. The resulting fires and explosions caused substantial damage to approximately 131 residential and commercial structures in the communities of Lawrence, Andover, and North Andover, including the total destruction of three houses in Lawrence, injured 22 people, killed one individual in Lawrence and severely disabled another.

Operational Notice 15-05

22. By at least September 2015, CMA's employees in the Lawrence Division from Field Engineering, Construction, and Measurement and Regulation ("M&R"), as well as Senior Field Engineering Management in CMA were aware of the particular dangers associated with belowground control lines. In particular, these employees and CMA knew that a faulty, damaged, or unaccounted for control line on a Reg. Station in a LP system could lead to a dangerous over-pressurization of the system resulting in fires and explosions in a populated area.

23. On or about September 2, 2015, NiSource and CMA internally disseminated Operational Notice ("ON") 15-05, entitled "*Below Grade Regulator Control Lines: Caution When Excavating Near Regulator Stations or Regulator Buildings.*" The impetus for ON 15-05 was a "near miss" experience involving another NiSource company outside of Massachusetts where a construction crew, excavating to repair a gas leak near a Reg. Station, came close to hitting a control line and was unaware of its purpose and importance.

24. The stated objective of ON 15-05 was two-fold: *"1. Bring awareness to Company and Contractor employees regarding the existence and importance of regulator control lines . . . that help to provide critical sensing information for the accurate monitoring and control of outlet pressure into the Company's piping systems . . ."* and *"2. Set forth required actions for future Company excavations."*

25. ON 15-05 described what Reg. Station control lines did, and said control lines:

. . . sense the outlet pressure of the regulator. Based on the pressure sensed through the control line, the regulator valve will open or close to control the downstream pressure at the set point of the regulator.

26. ON 15-05 further warned that a broken or disrupted control line could lead to a *"catastrophic event:"*

If a control line breaks, the regulator will sense a pressure loss, causing the valve to open further, resulting in an over pressurization of the downstream piping system, which may lead to a catastrophic event. The same result occurs if the flow through the control line is otherwise disrupted (e.g., control line valve shut off, control line isolated from the regulator it is controlling).

27. Finally, the *"Required Action"* from ON 15-05 to the Company's employees was that:

any Company excavations within the footprint of a [Reg. Station] and/or within 25 feet of a station building or fence shall only proceed with M&R standing by throughout the excavation . . .

28. While over-pressurization that could result in a "catastrophic event" was a known risk, CMA never prepared or implemented any written procedure to ensure that belowground control lines were accounted for, and, if necessary, removed or relocated. Instead, CMA relied upon an informal practice of encouraging verbal communication among members of Field Engineering, Construction and M&R when excavation took place within the footprint of a Reg. Station.

CMA's Gas System Enhancement Program ("GSEP")

29. An Act Relative to Gas Leaks, Massachusetts General Law, Chapter 164, Section 145), effective October 1, 2014 ("Section 145"), provided Massachusetts gas utility companies with a financial incentive to replace or improve aging or leaking gas infrastructure. Under Section 145, a gas distribution company was permitted to submit a Gas System Enhancement Program ("GSEP") plan to the Massachusetts Department of Public Utilities ("MA DPU"). Among other requirements, the overall GSEP plan had to include a timeline for the removal of all leak-prone infrastructure within 20 years.

30. If accepted by the MA DPU, Section 145 permitted a gas distribution company "to begin recovery of the estimated costs of [pipe replacement] projects included in the plan on May 1 of the year following the initial filing and collect any revenue requirement, including property taxes and return associated with the plan." More broadly, Section 145 permitted a gas company to more quickly recover its capital costs associated with its yearly forecasted pipeline replacement through the rates the MA DPU permitted the Company to charge its customers.

31. On or about October 31, 2014, CMA submitted its first annual GSEP plan and thereafter in 2015, 2016 and 2017. In the 2014 GSEP plan, CMA proposed to replace 44 miles of leak-prone mains and recover approximately \$2.6 million in related costs. In its later GSEP plans submitted to the MA DPU, CMA sought to recover approximately \$9 million in costs for 2016, approximately \$16.8 million in 2017 and approximately \$26.8 million in 2018.

32. In total, between 2015 and 2018, as part of the GSEP program, CMA earned a total of approximately \$49.3 million in accelerated capital cost recovery and, after costs, realized a total profit of approximately \$26.5 million.

The South Union Street Project

33. In or about August 2016, CMA began construction on a GSEP pipe replacement project in the South Lawrence LP System called the “South Union Street Project” (“the South Union Project”). The Field Engineering Department in Lawrence selected the South Union Project in part due to a pending City of Lawrence water-main project that would encroach upon the two aging cast-iron (“CI”) mains on South Union Street.

34. The South Union Project sought to replace two CI mains from the intersection of Market Street to Winthrop Avenue on South Union Street, measuring approximately 6 inches and 8 inches in diameter, with one plastic main. Once installed, the new plastic main would be “tied-in” and connected to the pipes on the side streets that supplied gas to customers through service lines. As typical in pipe replacement projects, upon completion of the project, the two CI mains on South Union Street would be completely disconnected from the LP system and abandoned in the ground.

35. The scope of the South Union Street project included the replacement of the CI mains near a belowground Reg. Station located at the intersection of Winthrop Avenue and South Union Street (the “Winthrop Reg. Station”), one of the fourteen (14) different regulator stations that monitored and controlled downstream pressure in the South Lawrence LP System.

36. From in or about September 2015 and continuing up until the time of the Event, two control lines connected the Winthrop Reg. Station to the two CI mains on South Union Street.

A. The Control Lines at the Winthrop Avenue Reg. Station

37. In or about early September 2015, two CMA M&R technicians conducting an annual inspection of the Winthrop Reg. Station discovered that one of the control lines on the Winthrop Reg. Station failed to read any downstream pressure. Under CMA's O&M Manual, each belowground Reg. Station was required to have at least two functional control lines (one for the "worker" regulator, one for the "monitor" regulator) that connected the Reg. Station to the mains to monitor and regulate downstream pressure.

38. Further investigation by the M&R technicians revealed that the control line reading zero pressure had been erroneously left on the CI main on Winthrop Avenue sometime in 2015, near the intersection of South Union Street, during an earlier pipe replacement project known as the "Parker Street Project." Having only one functional control line was a violation of CMA's O&M procedures and created a significant risk of an over-pressurization event had the second control line also failed.

39. Following the discovery of the control line erroneously left on the abandoned pipe, on or about September 21, 2015, a CMA Construction Leader ("Construction Leader-1") coordinated the installation of a new control line for the Winthrop Reg. Station. Instead of connecting to the abandoned main on Winthrop Avenue, the new control line connected the Winthrop Reg. Station to the 8-inch CI main on South Union Street approximately 39 feet from the Winthrop Reg. Station, a distance further than the 25 feet parameter in ON 15-05.

40. Following the installation of the new control line, a CMA inspector created a hand-drawn "as-built" drawing to document the location of the new control line. Although not foreseen as part of the construction in the Parker Street Project, records of the installation of the

new control line from the Winthrop Reg. Station became part of CMA's records relating to the Parker Street Project. As a result of the installation, a darkened asphalt trench with spray-painted markings remained visible on the street from the Winthrop Reg. Station across South Union Street to the location of the CI mains up through the day of the Event.

41. Less than a year later, on or about May 13, 2016, a third party construction crew conducted an additional pressure test of the same newly installed control line from the Winthrop Reg. Station. As part of the process, the construction crew, with a CMA inspector onsite, excavated and removed a portion of the new control line and re-attached the control line again to the 8-inch South Union CI main.

B. CMA's Records of Control Lines in Lawrence

42. Prior to the Event, CMA did not maintain consistent and reliable records of control lines. Instead of mapping control lines into their main computerized mapping system, Geographic Information System ("GIS"), records of control lines were primarily located in a patchwork of multiple locations, including records of completed construction projects known as the "Work Done Files" and "Capital Close-Out" Files; a paper notebook of the location of critical valves known as the "Critical Valve Book" ("CVB"); and in a binder of documents that M&R personnel kept in their CMA trucks.

43. As employees from CMA Engineering, Construction and M&R in Lawrence knew, the records regarding the location of control lines were often outdated, incomplete and thus unreliable. Records of the locations of the control lines for the Winthrop Reg. Station were first located in the CVB, a binder that contained hard copies of maps that depicted the location of "critical valves," valves designated by both state and federal code as critical. The Lawrence

Engineering Department kept and maintained the CVB, but did not regularly or consistently update information about the location of control lines. For example, for the Winthrop Regulator Station, the CVB had the location of the control lines as they existed in approximately May 2010, but when the new control line was installed in or about September 2015, the CVB was never updated to reflect the change.

44. A second location for records of control lines was the Work-Done and Capital Close-Out Files. Following the completion of a construction job, CMA Construction inspectors completed hand-drawn “as-built” drawings to record the location of pipes and new infrastructure. In the case of the Winthrop Reg. Station, while the Work-Done and Capital Close-Out File for the Parker Street Project included the “as-built” drawing for the September 2015 installation of the new control line, the drawing did not depict the location of the second control line from the Winthrop Reg. Station to the CI main on South Union Street.

45. A third location for records of control lines were the binders of documents and hand-drawn diagrams often referred to as “bibles” that M&R personnel kept in their trucks that were not maintained in a centralized location. With regards to the Winthrop Reg. Station, the M&R book contained two diagrams with information about the location of the control lines in approximately 2000 and 2010, but did not reflect the location of the newly installed control line from September 2015.

46. While GIS, CMA’s most readily available and centralized record of their pipeline system, depicted the location of the Reg. Stations and the outlet pipes, it generally did not include any information about the control lines. Furthermore, despite concerns that CMA engineers raised about control lines not being consistently mapped in GIS, CMA deliberately

chose to not include consistent and reliable information about the location of control lines in GIS and instead relied upon the patchwork of records described above that were often outdated and unreliable.

47. For example, on or about April 24, 2017, a NiSource engineer in Gas Systems Planning (“GSP”) working with CMA Field Engineers scheduled a telephonic meeting entitled “*Feasibility discussion of mapping reg station control lines in GIS*” with the Leader of GIS Capital Closeout and a Leader of Field Engineering (“FE Leader”). During the meeting, GSP Engineer expressed concerns that control lines were not included in GIS and was adversely affecting the accuracy of gas pressure models for Field Engineers.

48. Despite this concern, CMA deliberately chose not to change its practice and failed to include the location of control lines into GIS because of the substantial cost involved in proactively locating and mapping control lines. Instead, the primary use and utility of GIS continued to be the accounting of the replacement and abandonment of CI pipe for capital recapture in the GSEP program, a financial benefit for CMA.

C. *The Responsibility for Control Lines*

49. Without any clear direction and implementation of a procedure to address the dangers associated with control lines, and despite the known risk, employees in CMA’s Lawrence Division in Engineering, M&R and Construction frequently ignored and shifted the responsibility for locating and accounting for control lines to other Departments. For example, while employees in the Field Engineering Department in Lawrence considered the control lines to be an M&R responsibility (because they were associated with Reg. Stations), M&R personnel

considered control lines to be an Engineering responsibility because the control line pipes extended outside the boundaries of the Reg. Station.

D. Early Planning Stages of the South Union Project

50. In and around 2015, CMA Field Engineering in Lawrence was understaffed and consisted only of two Field Engineers: a more junior Field Engineer (“Field Engineer-1”) whom CMA hired in approximately July 2015 with no prior professional engineering experience and a more senior Field Engineer (“Field Engineer-2”). Because of Field Engineer-2’s workload, in or about late 2015, Field Engineer-2 gave the South Union Project to Field Engineer-1. In terms of size, complexity and budget, the South Union Project, at a projected cost of over \$1.4 million, was the largest project on which Field Engineer-1 had ever worked to date.

51. In or about February 2016, Field Engineer-1 finalized an initial Proposed Drawing (“Pro-Drawing”) for the South Union Project that included maps derived from GIS that depicted the location of the existing gas main to be abandoned and the proposed location of the new plastic main. The Pro-Drawing also depicted the location of the Winthrop Reg. Station and outlet pipes, but because CMA did not include information about control lines in GIS, the Pro-Drawing also did not include any information about control lines.

52. While Field Engineer-1 and others members of Field Engineering knew the precise danger associated with control lines, throughout the duration of the project from approximately late 2015 and continuing until the day of the Event, Field Engineer-1 never took any action to locate the control lines associated with the Winthrop Reg. Station. Moreover, despite the high probability of a catastrophic over-pressurization of a LP system that would result if a Reg. Station’s control lines were left connected to a main that was then replaced and

abandoned, CMA and CMA's Field Engineering Department never implemented any formal written procedure to ensure the necessary relocation of control lines.

53. Instead, CMA followed an informal practice of encouraging verbal communication and collaboration among members of Field Engineering, Construction and M&R involved in a particular project including through a process called "Constructability Reviews."

54. For example, on or about March 1, 2016, Construction Leader-1 and Field Engineer-1 engaged in the first of three "Constructability Reviews" on the South Union Project, a discussion between Field Engineering and Construction that followed a two-page checklist entitled "*Constructability/Safety Review*." The two-page checklist, from a CMA template, was required documentation for a pipe replacement project, but made no reference to control lines and did not require a formal discussion with M&R.

55. Despite the fact that Construction Leader-1 knew that in September 2015, a new control line had been installed from the Winthrop Reg. Station to the CI main on South Union Street that was now planned for abandonment in the South Union Project, Construction Leader-1 never discussed with or identified to Field Engineer-1 the need to relocate the control line on the South Union Street CI main. Instead, Construction Leader-1 encouraged Field Engineer-1 to discuss with then-Leader of M&R ("M&R Leader-1") the type and size of the valve needed for a new outlet pipe that would connect the Winthrop Reg. Station to the new plastic main on South Union Street.

56. While Field Engineer-1 generally discussed the South Union Project with M&R Leader-1, Field Engineer-1 did not have a meaningful conversation about the control lines or the necessity to relocate the control lines at the end of the project with M&R Leader-1. Instead,

Field Engineer-1 assumed that nothing further was needed from Engineering even though Field Engineer-1 knew that nothing had been done to plan for, or actually relocate, the control lines before the final abandonment of the CI mains on South Union Street. In doing so, CMA recklessly disregarded a known and certain risk of a catastrophic over-pressurization.

E. Approval of the South Union Street Project

57. In or about March 2016, Field Engineer-1 submitted the South Union Project for approval first to the Leader of FE and then to the Manager of Field Engineering for CMA (“FE Manager”). Among the materials that Field Engineer-1 submitted through the company’s Work Management System were a scope map of the project, specific tie-in and abandonment procedures for the various stages of the project, and a Project Budget Request (“PBR”) that indicated that the total cost of the project was approximately \$1.4 million, but which would ultimately result in the retirement of approximately 7,500 feet of CI main pipe for the GSEP Program.

58. The PBR also made clear that the project involved the ultimate abandonment of a substantial portion of CI mains but not their entirety “*due to the regulator station at the intersection of S. Union Street and Winthrop Ave and that the LP system in this area depends on the stretch of LP mains on S. Union St.*” The documents that Field Engineer-1 submitted through WMS Docs to senior Engineering Management did not include any procedure for the relocation of the control lines before the final abandonment of the CI mains.

59. Even though Field Engineering was ultimately responsible for the design and procedures for the execution of the South Union Project, and Engineering Management knew that the South Union Project was Field Engineer-1’s largest and most difficult project to-date,

members of Field Engineering Management never addressed the need to relocate, or account for, the control lines on the Winthrop Reg. Station to prevent an over-pressurization event. Instead, Field Engineering Management focused its' project review on cost and budget issues. Both the FE Leader and FE Manager approved the project for release to the construction phase without any discussion about control lines or concerns about over-pressurization.

Construction of the South Union Project in 2016

60. In or about July 2016, construction of the South Union Project began with a third-party contractor construction crew and one of three CMA inspectors onsite. From in or about August 2016 through the remainder of 2017, a third-party contractor ("CMA Inspector-1") served as the project's primary inspector. On at least two different occasions in 2016, the construction crew, with a CMA inspector onsite conducted work in and around the Winthrop Reg. Station.

61. First, on or about August 9, 2016, the construction crew excavated in the area of the Winthrop Reg. Station in order to install the new plastic main directly under the two control lines that connected the Winthrop Reg. Station to the CI main's on South Union Street. Even though a CMA inspector was onsite during the work, CMA did not document or record the location of the control lines.

62. Second, on or about October 17, 2016, the construction crew installed an outlet pipe from the Winthrop Reg. Station to the newly installed plastic main. The same day, in an email at approximately 9:09 p.m., Construction Leader-1 informed M&R Leader-1 that construction was *"working on the low pressure outlet [at the Winthrop Reg. Station] . . . and eventually moving the static lines to the new outlet piping."*

63. On or about October 27, 2016, CMA was required to discontinue construction on the South Union Project due to a citywide moratorium from the City of Lawrence on all gas, water and sewer construction projects in Lawrence. Thereafter, from in or about 2017 until in or about early 2018, the City of Lawrence discontinued authorizing permits for all but a limited number of public utility construction projects due to a concern about a lack of coordination and communication about ongoing construction projects.

64. While originally planned for completion by the end of 2016, due to the citywide moratorium, in late 2016 the project was placed on hold. By in or about October 2016, the construction crew installed and “energized” the new plastic main on South Union Street by feeding the main with gas from the Winthrop Reg. Station. The construction crew, however, was unable to begin any of the “tie-in” and abandonment procedures to “tie-in” or connect the side-streets to the new plastic main and thus was also unable to abandon the CI mains on South Union Street.

65. By December 2016, CMA Inspector 1’s notes on the tie-in procedures to Field Engineering made clear that the regulator at the Winthrop Reg. Station was still connected to the old CI-mains on South Union Street and were “*NOT CUT-OFF AS OF 12-9-16,*” meaning that gas from the Winthrop Reg. Station was still feeding the two CI mains on South Union Street.

66. Around the same time, Construction Leader-1 and CMA Inspector-1 had discussions about the need to eventually move the control lines, but neither took any material action to ensure that the controls lines were moved at the appropriate time to prevent a catastrophic over-pressurization event. Moreover, by the completion of the project in 2018,

Construction Leader-1 was working in a new position and CMA Inspector-1 was working on different construction projects.

67. As a result, though it was originally planned to be one of three “carry-over projects” that was at first scheduled for 2017, the continued construction of the South Union Project was ultimately delayed until approximately May 2018.

The Project Cost Review of the South Union Project in 2017

68. On or about January 16, 2017, Field Engineer-1 submitted an updated PBR for the “carry-over” South Union Project to Field Engineering Management. In contrast to the first PBR submitted for the South Union Project on March 9, 2016, the updated PBR had an estimated total additional cost of more than \$1.1 million with a projected completion date of the fall of 2017, though no construction took place in 2017.

69. As a result of the increased costs related to the South Union Project, the FE Manager scheduled a “Project Cost Review” to take a closer look at the South Union Project *“due to its’ size and the financial impact to the budget.”*

70. The Project Cost Review for the South Union Project took place on or about February 17, 2017 and included a presentation from Field Engineer-1 and Construction Leader-1 to the FE Manager. The presentation was focused on cost and included a slide entitled *“Work Completed in 2016 (what did we get for our money).”* The presentation also addressed the construction involving the Winthrop Reg. Station and made clear was still feeding both old CI mains as well as the new plastic main on South Union Street. The presentation also included a timeline of events that emphasized the fact that *“City of Lawrence shut down all work”* on October 17, 2016 as the primary reason for the *“extended contracting costs.”*

71. While over three consecutive years in 2016, 2017 and 2018 both the FE Manager and FE Leader participated in the approval of the South Union Project and a more detailed Project Cost Review in February 2017, no one from Field Engineering involved in the project ever specifically addressed the need to account for the control lines on the Winthrop Reg. Station to prevent a known risk of catastrophic over-pressurization. Instead, CMA and Field Engineering's evaluation of risk focused on the actual occurrence of prior events affecting pipeline integrity and the fact that, despite a 2015 "near-miss" involving control lines within NiSource, CMA had never previously had a serious over-pressurization event involving control lines.

Field-Engineering's Focus on GSEP Goals and Company Earnings

72. While CMA Field Engineering was ultimately responsible for the design and written procedures relating to pipeline replacement projects, the focus of the FE Manager's position was the management and administration of CMA's Capital Expenditure and GSEP Program, and promoting the achievement of the company's financial objectives. Following the initiation of the GSEP Program in or about 2015, CMA dictated yearly mileage goals under the GSEP program that increased annually. The FE Manager made clear to CMA employees that meeting GSEP mileage goals was directly connected to company earnings.

73. For example, on or about January 6, 2017, following the completion of the first full year of GSEP in 2016, the FE Manager emailed Engineering, Construction and Senior Management in CMA to tout the booking of approximately \$67.3 million in capital expenditures as a "*huge milestone*" and stated that their meeting "*the GSEP targets is contributing to the earnings of CMA.*"

74. In addition, during monthly Capital Program Management Meetings, the FE Manager frequently encouraged CMA employees from Construction and Engineering to timely execute and close-out capital GSEP projects and connected the completion of these projects to company earnings. In April 2016, the FE Manager's presentation included a graphic linking the terms "Concept," "Execute," and "Close Out" to promote the timely completion of projects. By April 2018, the FE Manager added the term "Earnings" to flow directly from the "Close Out" or completion of GSEP projects to emphasize the point that company earnings derived directly from completed GSEP projects.

75. In addition to touting success, the FE Manager also frequently expressed dissatisfaction directly to subordinates and direct reports about the failure to meet GSEP goals for the retirement of "priority pipe." For example, on or about November 16, 2017, the FE Manager emailed that *"failing to meet a goal of retiring 234,000 ft will be severely frowned upon. (think Game of Thrones . . . :-)."*

76. On or about March 12, 2018, after CMA had reported the retirement of only 43 miles of pipe, the FE Manager emailed that, *"We better have retired more than 43 miles of priority pipe! More like 53 miles."*

77. On or about September 7, 2018, following an email from the leader of the Capital Closeout that CMA was approximately 14 miles behind its goal for the retirement of priority pipe, the FE Manager emailed a group of subordinates, *"For CMA we are 14 miles behind. My question to the group, is anyone concerned that we will not meet our target for the year? If so, what can we do to mitigate the risk?"* referring to the risk of failing to meet the GSEP goal rather than any particular risk of pipeline integrity or safety.

The M&R Department in Lawrence

78. Between approximately 1988 and January 2018, CMA's M&R Department in Lawrence was primarily responsible for maintaining the Reg. Stations and ensuring compliance with state and federal regulations as well as the company's internal Gas Standards that were based on state and federal regulations, primarily Part 192. During the same period of time, among other responsibilities, M&R was also responsible for maintaining and staffing a Liquefied Natural Gas ("LNG") and Liquid Propane Gas ("LPG") Plant in the Lawrence area that provided additional supplies of gas for winter.

79. In or about 2017, CMA Senior Management proposed a structural change to the Lawrence M&R Department, already in place in the Brockton and Springfield M&R Departments that would divide the responsibility for M&R and the LNG/LPG Plant into two separate departments. By no later than mid-2017, M&R Leader-1 complained to CMA's Vice President and Operations Center Manager ("OCM-1") that the change would be a bad decision, resulting in a lack of resources to manage not only the LNG/LPG Plant, but the area Reg. Stations.

80. Specifically, because the six total qualified employees in M&R could not shift responsibility between Plants and M&R as needed, only two M&R personnel would be left to manage all the Reg. Stations in Lawrence, Andover and North Andover. Around the same time, CMA Senior Management also knew that CMA needed more use of its LNG/LPG Plant, particularly in winter, due to the recent defeat of a proposed transmission pipeline in Northern Massachusetts, requiring four M&R Technicians to work 12-hours shifts to operate the Plant around-the-clock with a minimum staff of two employees per shift. According to an October

2017 email regarding M&R Leader-1's concern, *"That leaves no time to respond to regulator station issues or the like."*

81. Pursuant to a request from CMA's Vice President, M&R Leader-1 was required to put together "a business case" for more resources in M&R. As a result, on or about October 16, 2017, M&R Leader-1 made a presentation to CMA's Vice President, OCM-1 and the Finance Director about the need for more resources in M&R and the Plant. During the meeting, M&R Leader-1 described the need for more resources as "urgent" and warned that there were potential consequences for not adding the resources, including the fact that M&R could not adequately respond if there were multiple Reg. Station concerns. While the CMA Vice President ultimately agreed to provide the additional resources that M&R Leader-1 requested, CMA did not secure more resources for M&R until after the Event, and still divided M&R and the Plant into separate divisions.

82. Specifically, between in or about December 2017 and April 2018, CMA senior management shifted the responsibility for Lawrence M&R and Reg. Stations from M&R Leader-1 to the leader of M&R for Brockton and Springfield ("M&R Leader-2") while M&R Leader-1 retained responsibility for the Plant. By in or about May 2018, M&R Leader-1, the sole CMA employee with the most knowledge of all Lawrence Reg. Stations, abruptly retired from CMA.

83. Around the same time, in April 2018, CMA shifted managerial responsibilities in Lawrence in order to focus on the "rate case" before the MA DPU to increase the rates CMA could charge to CMA's customers, based in part on the GSEP Program. According to a January 29, 2019 email from the Vice President of CMA, *"After the filing [of the rate case in April*

2018], the next six to eight months are focused on the case management and the litigation process – creating a significant burden on resources.”

84. In order to shift CMA’s focus to the upcoming rate case, in late January 2018, CMA temporarily gave the Lawrence Manager of Systems Operations (“OCM-2”) the additional responsibility of serving as the Lawrence OCM, with oversight over M&R in Lawrence even though OCM-2 had no prior experience with M&R as well as no understanding of ON 15-05 and the importance of control lines.

The Continuation of the South Union Project in 2018

85. On or about January 19, 2018, for the third consecutive year, Field Engineer-1 submitted a PBR for the South Union Project to Senior Field Engineering Management. After several revisions to the budget and cost documents that the FE Manager directed, by on or about March 20, 2018, both the FE Leader and FE Manager again approved the continuation of the South Union Project for construction and completion in 2018.

86. The managerial review of the project was again focused on cost and budget in part because the project was delayed, over-budget, and needed to be completed in order to allow for a City of Lawrence water project to commence in the same area. Immediately following the approval, in an email on or about March 20, 2016, Field Engineer-1 informed Construction that, *“This is one of the projects that needs to start as soon as the city allows us”* in order to complete the project in 2018. Furthermore, unlike the previous two years, no Constructability Review took place between Field Engineering and M&R. Instead, the South Union Project proceeded to the final construction phase without any formal or informal collaboration or planning among Field Engineering, Construction, and M&R.

87. The final stages of the South Union Project involved step-by-step “tie-in” and abandonment procedures whereby the construction crew would “tie-in” or connect the new plastic main to the side-streets and cut-off portions of the CI mains on South Union Street. As CMA collectively contemplated and planned, the project would be completed upon the final “tie-in” and abandonment procedure. At that time, the CI mains on South Union Street would be abandoned and completely disconnected from the flow of gas.

88. Nevertheless, despite the fact that CMA knew that the control lines were still attached to the CI mains and that the complete abandonment of the CI mains would cause the Winthrop Reg. Station control lines to read decreasing pressure, prompting the regulators to automatically and continually supply more gas to the South Lawrence LP System to the point of a dangerous over-pressurization, CMA did not prepare and follow, nor even contemplate, a formal written procedure for the removal of the control lines CMA knew was needed to prevent an over-pressurization and assure operation within the MAOP.

89. Furthermore, while CMA had encouraged an informal practice of verbal communications and collaboration among Field Engineering, CMA and Senior Management knew that by 2018, with the exception of Field Engineer-1, each of the prior significant participants in the South Union Project – including Construction Leader-1, M&R Leader-1, CMA Inspector-1, and the 2016 construction crew – were no longer involved in the project. Yet, CMA did nothing to manage the change in personnel or to pass on the information about the project they collectively shared.

90. For example, in early 2018, Construction Leader-1 took a new position with CMA in the Lawrence Operations Department. Construction Leader-1 was directly involved in

the installation of the new control line in 2015, and knew that CMA would have to eventually move the control lines on the Winthrop Reg. Station, but failed to inform the new Construction Leader or the new CMA Inspector ("CMA Inspector-2") about the need to relocate the control lines to prevent an over-pressurization.

91. The renewed construction of the South Union Project began with a new construction crew and CMA Inspector-2 on or about May 22, 2018. On or about June 12, 2018, the construction crew began work near the Winthrop Reg. Station. During the construction, CMA Inspector-2 contacted Field Engineer-2 and Field Engineer-1 when it was discovered that the construction crew could not excavate in a particular area because the street had been newly paved.

92. As a result, Field Engineer-2 and Field Engineer-1 viewed the construction site, and directed the construction crew to alter the procedure to "cut-and-cap" portions of the old CI mains on South Union Street, thus removing portions of the CI mains from the street. At the time of the construction, CMA Inspector-2 noted the darkened asphalt trench - depicting the location of the control line installed in September 2015 - but wrongly assumed the trench was the location of the outlet pipe. At the same time, while present at the construction site, neither Field Engineer-2 or Field Engineer-1 ever took any steps to investigate or determine the location of the control lines or contact M&R even though the construction site was in close proximity to the Winthrop Reg. Station.

93. On or about September 13, 2018, at approximately 4:00 p.m., the construction crew completed the final "tie-in" and abandonment procedure following the procedures CMA provided to the crew at the intersection of Salem Street and South Union Street. While not

anticipated by the construction crew, the final "tie-in" and abandonment procedure resulted in the complete abandonment of the CI mains on South Union Street. Upon the complete abandonment and isolation of the CI mains on South Union Street, the Winthrop Reg. Station - that CMA knew was still connected to the CI mains on South Union Street - sensed a sharp decline in pressure, causing the Winthrop Reg. Station to automatically and continually feed more pressure into the South Lawrence LP System causing the catastrophic over-pressurization event described above in paragraphs 20 and 21.

COUNT ONE

Failure to Prepare and Follow a Procedure for the Starting Up and Shutting Down of a Pipeline
Designed to Assure Operation within the Maximum Allowable Operating Pressure

(49 U.S.C. §§ 60123(a), 49 U.S.C. § 60118(a);
49 C.F.R. §§ 192.605(a), 192.605(b)(5))

The United States Attorney charges:

94. The United States Attorney re-alleges and incorporates by reference paragraphs 1-93 of this Information.

95. From in or about 2015 through on or about September 13, 2018, in in the District of Massachusetts, the defendant,


BAY STATE GAS COMPANY,
d/b/a Columbia Gas of Massachusetts,

by and through the actions of its employees, and through a pattern of flagrant organizational indifference, knowingly and willfully violated a minimum safety standard for the starting up and shutting of any part of a distribution pipeline, as set forth in Title 49, Code of Federal Regulations, Section 192.605(b)(5). Specifically, BAY STATE GAS COMPANY, d/b/a Columbia Gas of Massachusetts, knowingly and willfully failed to prepare and follow procedures to remove and relocate regulator control lines on the South Union Project to assure operation of the South Lawrence LP System within the Maximum Allowable Operating Pressure and safety during maintenance and operations.

All in violation of Title 49, United State Code, Section 60123(a).

ANDREW E. LELLING
United States Attorney

By:


Neil J. Gallagher, Jr.
Evan Gotlob
Assistant U.S. Attorneys

Dated: February 26, 2020