

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

RESPONSE OF COLUMBIA GAS OF MASSACHUSETTS TO THE
FIRST SET OF INFORMATION REQUESTS FROM THE D.P.U.
PIPELINE ENGINEERING AND SAFETY DIVISION

D.P.U. 19-PL-07 – Merrimack Valley Incident (9/13/18)

Date: September 25, 2019

Responsible: Robert V. Mooney, V.P. Engineering and Construction

IR-PL-1-13: Please explain the type of overpressurization protection that was on the new South Union Street Project pipeline at the time of completion of the project on September 13, 2018. Explain whether the overpressurization and regulator design (including sensing lines as part of the design) were correct at the time of the incident. If not, provide the design inaccuracy.

Response: The low-pressure distribution system affected by the September 13, 2018 over-pressurization had pressure-relieving and/or pressure limiting devices. CMA maintained at least two regulators (a worker and a monitor regulator), each with its own sensing lines, at each of the regulator stations that supplied gas to the affected distribution system. The monitor serves as the over-pressurization protection should the worker regulator fail. In the case of the South Union @ Winthrop regulator station, the worker regulator was designed to regulate gas flow through the station in response to fluctuations in downstream demand. The monitor regulator was designed to serve as a back-up regulator in the event the worker regulator failed. As of September 13, 2018, both the worker and monitor regulators at the South Union @ Winthrop regulator station were set not to exceed the maximum allowable operating pressure (MAOP) of the system. The South Union @ Winthrop regulator station was designed in such a way that both the worker and monitor regulators would have to fail in order to over-pressurize the downstream system. There was no inaccuracy in design, and the configuration deployed at these regulator stations is widely used and accepted across the industry and meets the design criteria described in applicable regulations.

In addition to the regulators at each regulator station, continuous monitoring of pressure levels by the company's SCADA system and critical valves were (and are) also part of the design to mitigate accidental over-pressurization.