

REDACTED

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 26, 2019

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

- IR-PL-1-9: Please provide the following information regarding regulator stations within the area of the South Union Street Project:
- a) A list of regulator stations within one mile of the South Union Street Project;
 - b) The process to review, verify, and approve the possible effects imposed on the regulator stations identified in IR-PL 1-9(a);
 - c) Details regarding the transfer of sensing lines from abandoned to newly installed pipeline;
 - d) Responsibility of M&R personnel during construction activities;
 - e) Explain the responsibility of M&R personnel to be present during main tie-ins and abandonments that involve piping connected to regulator stations;
 - f) Explain whether M&R personnel were onsite on the day of the incident. If not, explain why;
 - g) Explain whether CMA's procedures require M&R personnel to be onsite during main construction, tie-ins, or abandonment when a regulator station is connected to associated piping. If yes, provide the relevant procedure. If not, provide an explanation;
 - h) Names and qualifications of M&R personnel present at the time of construction activity;
 - i) Isometric drawings, critical valve and sensing line locations for the regulator stations noted in IR-PL 1-9(a);
 - j) Type of regulators, including the manufacturer's catalog cut sheets
 - k) Set point of the monitor regulator(s);
 - l) Set point of the control (working) regulator(s);
 - m) Date of last regulator station inspection at the regulator stations referenced in IR-PL 1-9(a);
 - n) Copy of inspection records for the last three years for the regulator stations referenced in IR-PL 1-9(a).

SUPPLEMENTAL

Response: The following are the responses to the remaining subparts (b)-(h).

b) The process to review, verify, and approve the possible effects imposed on the regulator stations identified in IR-PL 1-9(a);

There was coordination among multiple CMA departments regarding the impact the proposed work on the South Union Street Project would have on the low-pressure distribution system's gas supply, including how to mitigate

any potential adverse impact the proposed work would have on that supply while the work was ongoing. Prior to the start of Project construction in 2016 and 2018, Engineering personnel consulted with Gas Systems Planning personnel. Based on modeling of gas system flows and pressures, Gas System Planning provided input on the tie-ins, including the temperatures at which tie-ins could occur, the sequencing of the tie-ins, and how to maintain adequate gas supply while that work was ongoing. Engineering and Construction personnel also consulted with M&R personnel during the design phase of the Project concerning pipe material for the outlet of the South Union @ Winthrop regulator station. During the duration of the Project, CMA departments remained informed regarding the status of the construction and potential impacts on the gas distribution system. For example, Engineering, Operations, M&R and Construction developed and reviewed the Winter Operations Plan for 2016-2017, which listed the South Union Street project as an ongoing system upgrade/betterment project that could impact system performance during the winter season.

c) Details regarding the transfer of sensing lines from abandoned to newly installed pipeline;

There is no precise point at which CMA ordinarily would transfer a sensing line in a project such as the South Union Street Project. The approach ordinarily would be to transfer sensing lines after some services have been tied-in to a new main and before the old main is disconnected from the distribution system. This determination is made on a case-by-case basis upon consideration of the relevant factors for the particular project, which may include the scope and sequencing of other work anticipated on the distribution system, anticipated system demand, and the proposed tie-in location, among others.

As a general matter, Construction personnel consult with personnel from Engineering and/or M&R to determine the appropriate location and timing for the relocation of the sensing lines. These groups also assess whether the regulator station at issue will be shut down at the time of the relocation, which may require consultation with Gas Systems Planning to ensure there is adequate supply of gas throughout the distribution system during the time of the work. A construction crew executes the work necessary to carry out the relocation of the sensing lines, except for work within the walls of the regulator station, which generally is done by or in coordination with an M&R technician. If the regulator station was not shut down, an M&R technician would typically monitor activity at the regulator station throughout the course of this relocation work.

In the case of the South Union Street Project, during the 2016 construction phase, the Inspector on the project used readily available company documentation to determine the location of the sensing lines, and discussed the planned relocation of the sensing lines with the Construction Leader. In October 2016, the Construction Leader notified M&R that work in the area of the South Union @ Winthrop regulator station had started. At the same time,

he notified M&R that the sensing lines needed to be relocated. Soon thereafter, the City of Lawrence imposed a 30-day stop-work order. CMA raised concerns with the City about this cessation of work, and the City ultimately allowed the Company to conduct limited work on the South Union Street Project in November 2016. These work restrictions, together with the City's impending winter moratorium, impeded CMA from relocating the sensing lines in 2016.

- d) Responsibility of M&R personnel during construction activities;**
- e) Explain the responsibility of M&R personnel to be present during main tie-ins and abandonments that involve piping connected to regulator stations;**
- f) Explain whether M&R personnel were onsite on the day of the incident. If not, explain why;**
- g) Explain whether CMA's procedures require M&R personnel to be onsite during main construction, tie-ins, or abandonment when a regulator station is connected to associated piping. If yes, provide the relevant procedure. If not, provide an explanation;**
- h) Names and qualifications of M&R personnel present at the time of construction activity;**

Response (d) – (h): General information regarding M&R's involvement in the South Union Street Project is available at Columbia Gas's Response to IR-PL-1-4.

On September 13, 2018, excavation and construction work was being done at the South Union Street Project's Salem Street tie-in site, which was located approximately 2,350 feet from the South Union @ Winthrop regulator station. The construction tie-in crew was monitoring the pressure in the cast-iron main and the new plastic main throughout the tie-in procedure. M&R personnel were not onsite. NiSource Operational Notice 15-05, the Company procedure then in effect relating to excavating near a regulator station with below grade regulator sensing lines, required consultation with M&R personnel prior to any company excavations within 25 feet of a regulator station with below grade sensing lines.

Response: (filed September 18, 2019)

The following responses respond to subparts (a) and (i) through (n) of IR-PL-1-9. The responses for subparts (b) through (h) will be provided as soon as they are available.

- a) A list of regulator stations within one mile of the South Union Street Project**

The regulator stations that were part of the low-pressure distribution system affected by the September 13, 2018 event and within one mile of the South Union Street Project are the following:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

i) Isometric drawings, critical valve and sensing line locations for the regulator stations noted in IR-PL 1-9(a)

Please see the following attachments:

- Attachment IR-PL-1-9(a) contains the requested information for the [REDACTED] regulator station;
- Attachment IR-PL-1-9(b) contains the requested information for the [REDACTED] regulator station;
- Attachment IR-PL-1-9(c) contains the requested information for the [REDACTED] regulator station;
- Attachment IR-PL-1-9(d) contains the requested information for the [REDACTED] regulator station; and
- Attachment IR-PL-1-9(e) contains the requested information for the [REDACTED] regulator station.

j) Type of regulators, including the manufacturer's catalog cut sheets

The type of regulators at the regulator stations identified in IR-PL 1-9(a) are the following:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Attachment IR-PL-1-9(f) contains copies of the manufacturer's catalog cut sheets for the referenced regulators.

**k) Set point of the monitor regulator(s)
and**

l) Set point of the control (working) regulator(s)

As of the date of the last inspection prior to the Merrimack Valley event, the set points of the monitor and control (working) regulators at the regulator stations identified in the response to IR-PL 1-9(a), were as follows:

Regulator Station	Monitor Regulator Set Point	Control Regulator Set Point
[REDACTED]	14" wc	10.5" wc
[REDACTED]	14" wc	11" wc
[REDACTED]	14" wc	11" wc
[REDACTED]	14" wc	11" wc
[REDACTED]	14" wc	11" wc

m) Date of last regulator station inspection at the regulator stations referenced in IR-PL 1-9(a)

The regulator stations identified in response to IR-PL 1-9(a) were last inspected on the following dates:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

n) Copy of inspection records for the last three years for the regulator stations referenced in IR-PL 1-9(a)

Please see Attachment IR-PL-1-9(g) for a summary of the 2016, 2017 and 2018 regulator station inspections for the regulator stations referenced in the response to IR-PL 1-9(a). See Attachment IR-PL-1-9(h) for job order detail.