



CERTIFIED MAIL

June 25, 2020

Mr. Robert Burrough
Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration
840 Bear Tavern Road, Suite 300
West Trenton, NJ 08628

RE: CPF 1-2020-1021M Notice of Amendment

Dear Mr. Burrough,

This letter is a formal response by Dominion Energy Transmission, Inc. (DETI) to Notice of Amendment CPF 1-2020-1021M, dated May 28, 2020. Specifically, PHMSA noted the following concerns with the DETI Control Room Management Plan:

1. § 192.631 Control room management.

(a) General. (1) This section applies to each operator of a pipeline facility with a controller working in a control room who monitors and controls all or part of a pipeline facility through a SCADA system. Each operator must have and follow written control room management procedures that implement the requirements of this section, except that for each control room where an operator's activities are limited to either or both of:

Dominion's written control room management procedures were inadequate because they failed to include a detailed process to implement the requirements of § 192.631(b)¹. Specifically, Dominion's Control Room Management Plan, Revision 4, 1/23/2018 (CRM Plan) failed to define the roles and responsibilities of a controller during normal, abnormal, and emergency operating conditions.

Dominion's CRM Plan had several references to "supervisor" but did not define the roles and responsibilities of a supervisor. Moreover, Dominion's CRM Plan did not outline the difference between a shift-supervisor and a supervisor's roles and responsibilities in Section 4.2 Defined Roles and Responsibilities.

Therefore, Dominion's CRM Plan was inadequate because they did not define the roles and responsibilities of a controller in accordance with § 192.631(b).

¹ § 192.631(b) Roles and responsibilities. Each operator must define the roles and responsibilities of a controller during normal, abnormal, and emergency operating conditions. To provide for a controller's prompt and appropriate response to operating conditions, an operator must define each of the following:

DETI Response:

The DETI Control Room Management Plan, Section 2 (Definitions) was revised to include definitions of "Gas Control Management" and "Gas Control Staff":

- *Gas Control Management: The Director, Manager, and Coordinator(s) of Gas Control.*
- *Gas Control Staff: Gas Control Management and Controllers.*

The DETI Control Room Management Plan, Section 4 (Roles and Responsibilities), Subsection 4.2 (Defined Roles and Responsibilities) was revised to include the following roles along with associated responsibilities:

- *Director - Gas Control*
- *Manager - Gas Control*
- *Gas Control Coordinator*

The DETI Control Room Management Plan was also revised in entirety to remove references to "shift-supervisor" and "gas control supervisor" and replace the remaining references to "supervisors" with references to "operations".

2. § 192.631 Control room management.

(a) General. (1) This section applies to each operator of a pipeline facility with a controller working in a control room who monitors and controls all or part of a pipeline facility through a SCADA system. Each operator must have and follow written control room management procedures that implement the requirements of this section, except that for each control room where an operator's activities are limited to either or both of:

Dominion's written control room management procedures were inadequate because they failed to include details to implement the requirements of § 192.631(b)(4)². Specifically, Dominion's Control Room Management Plan, Revision 4, 1/23/2018 (CRM Plan) did not have a detailed method of recording controller shift-changes and any hand-over of responsibility between controllers regarding controller absences from consoles.

Dominion CRM Plan, Subsection 4.3 Method of Recording Controller Shift-Changes and Any Hand-Over of Responsibility between Controllers 192.631(b)(4) 192.631(c)(5) stated in part:

"A Shift Change Sheet must be completed at the beginning of every shift and if a controller is away from the controlling console for more than a significant amount of time."

However, Dominion's CRM Plan did not define "significant amount of time". Thus, it is unclear how long a controller could be absent from the console and still maintain adequate coverage.

Therefore, Dominion's CRM Plan was inadequate because they did not include a detailed method of recording controller shift-changes and any hand-over responsibilities between controllers in accordance with § 192.631(b)(4).

² § 192.631(b) Roles and responsibilities. Each operator must define the roles and responsibilities of a controller during normal, abnormal, and emergency

operating conditions. To provide for a controller's prompt and appropriate response to operating conditions, an operator must define each of the following:

§ 192.631(b)(4) A method of recording controller shift-changes and any hand-over of responsibilities between controllers; and

DETI Response:

DETI revised the DETI Control Room Management Plan, Section 4 (Roles and Responsibilities), Subsection 4.3 (Method of Recording Controller Shift-Changes and Any Hand-Over of Responsibility between Controllers) to replace reference to a "significant amount of time" with reference to a defined amount of time (more than approximately 30 minutes):

"A Shift Change Sheet must be completed at the beginning of every shift and if a controller is away from the controlling console for more than approximately 30 minutes. The completed sheet is then submitted to the Manager of Gas Control for review and filing."

Similarly, DETI revised the DETI Control Room Management Plan, Section 5 (Provide Adequate Information), Subsection 5.6 (Shift Changes) to replace reference to a "significant amount of time" with reference to a defined amount of time (more than approximately 30 minutes):

"If a controller leaves the control room during a shift, the remaining controller on duty will verbally review any changes that occurred during his or her absence when that controller returns. If a controller leaves the control room during a shift for more than approximately 30 minutes, the remaining controller on duty will verbally review any changes occurred and the process will be documented through a shift changeover sheet. If a controller leaves unexpectedly then a remaining controller is to complete a shift changeover with an oncoming controller."

It is noted that the requirement contained in the first sentence in the DETI Control Room Management Plan, Section 5 (Provide Adequate Information), Subsection 5.6 (Shift Changes) was in effect at the time of the PHMSA inspection on January 17-18, 2018.

3. § 192.631 Control room management.

(a) General. (1) This section applies to each operator of a pipeline facility with a controller working in a control room who monitors and controls all or part of a pipeline facility through a SCADA system. Each operator must have and follow written control room management procedures that implement the requirements of this section, except that for each control room where an operator's activities are limited to either or both of:

Dominion's written control room management procedures were inadequate because they failed to have written control room management procedures that implemented the requirements of § 192.631(d)³. Specifically, Dominion's Control Room Management Plan, Revision 4, 1/23/2018 (CRM Plan) did not include procedures for implementing the methods to reduce the risk associated with controller fatigue that could inhibit a controller's ability to carry out the roles and responsibilities the operator has defined.

Dominion's CRM Plan, Subsection 6.3 Fatigue Mitigation 192.631(d)(2) 192.631(d)(3) stated in part:

"A fatigued controller should call the Gas Control Manager, Director or Coordinator to find a replacement controller. (Controller Fatigue Replacement Procedure)."

However, Dominion's CRM Plan did not describe or reference a process for when someone such as a supervisor identifies that a controller is fatigued and must find a replacement.

Therefore, Dominion's CRM Plan was inadequate because they did not implement the methods to reduce the risk associated with controller fatigue that could inhibit a controller's ability to carry out the roles and responsibilities the operator has defined in accordance with § 192.631(d).

³ § 192.631(d) Fatigue mitigation. Each operator must implement the following methods to reduce the risk associated with controller fatigue that could inhibit a controller's ability to carry out the roles and responsibilities that operator has defined:

DETI Response:

The DETI Control Room Management Plan, Section 6 (Fatigue Mitigation), Subsection 6.3 (Fatigue Education) was revised to include the following:

"If gas control staff identify a controller that is too fatigued, s/he may call for a replacement controller. System activity and remaining controller experience levels would dictate the action."

A replacement controller may not be necessary because appropriate system coverage will remain since DETI schedules four or five controllers to a shift and only requires two controllers to a shift to adequately control the system, as stated in Section 6 (Fatigue Mitigation), Subsection 6.2 (Shift Lengths and Rotations). The increase of the controllers scheduled to a shift from three or four to four or five was included as part of a revision to the DETI Control Room Management Plan after the PHMSA inspection in 2018:

"Gas Control schedules four (4) or five (5) controllers to a shift. On rare occasions, due to vacations and scheduling constraints or unforeseen circumstances, Gas Control will have two (2) controllers scheduled to a shift. Gas Control will ensure that there will always be at least two (2) controllers to a shift."

A shift changeover would not be needed if a replacement controller is not required. All controllers on shift share responsibility for the entire system. A shift changeover would be completed if a replacement controller is called in to replace the fatigued controller, as noted in Section 5 (Provide Adequate Information), Subsection 5.6 (Shift Changes) which was in effect during the PHMSA inspection in 2018.

"If a controller leaves unexpectedly then a remaining controller is to complete a shift changeover with an oncoming controller."

The Controller Fatigue Replacement Procedure which is referenced and linked in DETI Control Room Management Plan, Section 6 (Fatigue Mitigation), Subsection 6.3 (Fatigue Education) was revised to clarify the following:

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"If it is determined that a controller is too fatigued to continue and needs to be replaced, then this procedure will be used to find a replacement controller."

...

"If a replacement controller is needed, then the Gas Control Manager will be contacted first. If unable to contact the Gas Control Manager, then the Director of Gas Control should be contacted. If neither the Gas Control Manager nor Gas Control Director can be contacted, then the Coordinator(s) of Gas Control should be contacted. The Gas Control Manager, Director, or Coordinator(s) will find a fresh Gas Controller to replace the fatigued controller."

The Controller Fatigue Replacement Procedure was also revised to include the following:

"If it is outside of normal business hours, then the on-call gas control management person should be contacted first."

It is noted that the following responsibility existed in DETI Control Room Management Plan, Section 4 (Roles and Responsibilities), Subsection 4.2 (Defined Roles and Responsibilities) for the lead gas controller and senior gas controller at the time of the PHMSA inspection on January 17-18, 2018:

"Can make the decision to call for a replacement controller, but should notify the on-call Gas Control supervisor."

In alignment with the revisions detailed in the response to Item #1, the reference to gas control supervisor in the above responsibility for the lead gas controller and senior gas controller was removed and replaced with reference to Gas Control Management.

If you have any questions, concerns, or should require additional information, please do not hesitate to contact Dan Stahl at 304-266-6062.

Respectfully,

A handwritten signature in blue ink, appearing to read "John M. Lamb".

John M. Lamb
Vice President, Eastern Pipeline Operations
Dominion Energy, Inc.