



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

12300 W. Dakota Ave., Suite 110
Lakewood, CO 80228

NOTICE OF AMENDMENT

VIA E-MAIL TO MR. BRIAN WEISKER

June 11, 2021

Mr. Brian Weisker
Senior Vice President & COO Natural Gas
Duke Energy
4720 Piedmont Row
Charlotte, NC 28210

CPF 5-2021-025-NOA

Dear Mr. Weisker:

During the week of October 19 through 23, 2020, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code (U.S.C.), performed a virtual inspection of Duke Energy's (Duke) KO Transmission Control Room located in Charlotte, North Carolina. This inspection included review of the company's procedures and records, and virtual observations of control room operations associated with the Control Room Management Program.

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within Duke's plans or procedures, as described below:

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...

Duke's control room management procedures are inadequate to assure safe operation of a pipeline facility. Specifically, Duke failed to have and follow written control room management procedures that established a maximum limit on controller hours of service (HOS), which may provide for an emergency

deviation from the maximum limit if necessary for the safe operation of the pipeline facility pursuant to § 192.631(d)(4).

Duke's Control Room Management (CRM) Plan for Natural Gas Pipelines, Rev. Sept. 3, 2020, Fatigue Management CRM 1080, Section 1080.4 - *Normal Operations* fails to sufficiently address the supervisor position that works a Monday through Friday, 6am – 6pm shift. For example, it fails to note certain fatigue mitigation tactics, including if the supervisor is afforded a two-day break after successive shifts.¹ It also fails to address the schedules of the Gas Control Manager and Director positions.²

This procedure also fails to adequately address documentation.³ First, it does not explicitly state that all HOS, scheduled and unscheduled, will be tracked and/or tabulated. Second, it fails to explicitly require that countermeasures be documented during the 3am-6am and 3pm-6pm time periods in Duke's eLogger.

Duke must amend its procedure to address the deficiencies noted above.

2. § 192.631 - Control room management.

(a) ...

(e) Alarm management. Each operator using a SCADA system must have a written alarm management plan to provide for effective controller response to alarms. An operator's plan must include provisions to:

(1) ...

(2) Identify at least once each calendar month points affecting safety that have been taken off scan in the SCADA host, have had alarms inhibited, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities;

Duke's control room management procedures are inadequate to assure safe operation of a pipeline facility. Specifically, Duke's CRM Plan for Natural Gas Pipelines, Rev. Sept. 3, 2020, Alarm Management Plan CRM 1090, Section 1090.2 – *Safety Related Alarms and Review Process*, Subsection 1090.2.3 fails to sufficiently describe the process for conducting monthly reviews that identify points affecting safety that have been taken off scan, inhibited alarms, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities. The procedure has identified Key Performance Indicators (KPIs) in Tables 14, 15, and 16, that follow API 1167, but the procedure fails to clearly state how the KPIs are incorporated into the review.

Duke must amend its procedure to address the deficiency noted above.

3. § 192.631 - Control room management.

(a) ...

¹ See, e.g., Control Room Management Frequently Asked Questions (FAQ) Subsection D (Jan. 16, 2018).

² These additional positions are held by qualified controllers who could work any console under emergency situations; therefore, hours of service (HOS) for these positions needs to be included in Duke's procedures.

³ See 49 C.F.R. § 192.631(j)(1) (requiring operators to maintain for review during an inspection records that demonstrate compliance with the requirements of this section).

(e) Alarm management. Each operator using a SCADA system must have a written alarm management plan to provide for effective controller response to alarms. An operator's plan must include provisions to:

(1) ...

(4) Review the alarm management plan required by this paragraph at least once each calendar year, but at intervals not exceeding 15 months, to determine the effectiveness of the plan;

Duke's control room management procedures are inadequate to assure safe operation of a pipeline facility. Specifically, Duke's alarm management plan fails to include provisions to review the plan at least once each calendar year, but at intervals not exceeding 15 months, to determine the effectiveness of the plan. Further, Section 1090.2 – *Safety Related Alarms and Review Process*, Subsection 1090.2.4 fails to clearly identify the process for performing this annual review. For example, Table 3 – Responsibility Z fails to identify who is accountable for the review and who approves the outcome of the review before it is deemed effective. It also does not provide any information on how to measure effectiveness. Additionally, Table 3 indicates a variety of people who participate in the annual review of the program but fails to state exactly who is responsible for what items during the review process. The procedure also fails to identify who has final approval authority or how the review will be documented.⁴

Duke must amend the procedure to address the deficiencies noted above.

4. § 192.631 - Control room management.

(a) ...

(h) Training. Each operator must establish a controller training program and review the training program content to identify potential improvements at least once each calendar year, but at intervals not to exceed 15 months. An operator's program must provide for training each controller to carry out the roles and responsibilities defined by the operator. In addition, the training program must include the following elements:

(1) Responding to abnormal operating conditions likely to occur simultaneously or in sequence;

Duke's control room management procedures are inadequate to assure safe operation of a pipeline facility. Specifically, Duke failed to establish a controller training program that included responding to abnormal operating conditions (AOCs) likely to occur simultaneously or in sequence. Duke's CRM Plan for Natural Gas Pipelines, Rev. Sept. 3, 2020, Training CRM 1110, Section 1110, Subsection 1110.2.6 mentions "AOC Conditions Occurring Individually and in Sequence (Scenario Training)" but fails to identify any AOCs that are likely to occur simultaneously or in sequence. It also incorrectly states that controllers must respond to AOCs occurring "individually or in sequence," rather than "*simultaneously or in sequence*" pursuant to the requirement in § 192.631(h)(1) (emphasis added).

Duke must amend its procedure to address the deficiencies noted above.

5. § 192.631 - Control room management.

(a) ...

(h) Training. Each operator must establish a controller training program and review the training program content to identify potential improvements at least once each calendar year, but at intervals not to exceed 15 months. An operator's program must

⁴ *Id.*

provide for training each controller to carry out the roles and responsibilities defined by the operator. In addition, the training program must include the following elements:

(1) ...

(6) Control room team training and exercises that include both controllers and other individuals, defined by the operator, who would reasonably be expected to operationally collaborate with controllers (control room personnel) during normal, abnormal or emergency situations. Operators must comply with the team training requirements under this paragraph by no later than January 23, 2018.

Duke's control room management procedures are inadequate to assure safe operation of a pipeline facility. Specifically, Duke failed to establish a controller training program that included control room team training and exercises that include both controllers and other individuals, defined by the operator, who would reasonably be expected to operationally collaborate with controllers (control room personnel) during normal, abnormal or emergency situations.

Duke's CRM Plan for Natural Gas Pipelines, Rev. Sept. 3, 2020, Training CRM 1110, Section 1110.3 *Team Training* procedure lists topics that will be covered in team training, but fails to specifically address how team training will be conducted. For example, the procedure fails to include information regarding tabletop exercises, lessons learned, historical events, or oil-gas industry events. Team training may include multiple methods and tools to supplement exercises - i.e. computer-based training (CBT), classroom, on the job training (OJT), etc.; however, the focus must be on personnel interaction and team work.⁵

Furthermore, Subsection 1110.3.1 only states that team training will include both controllers and other individuals who would reasonably be expected to operationally collaborate with controllers during normal, abnormal or emergency situations. The procedure fails to identify which identified individuals or positions (job titles) are required to participate in team training.

Duke must amend its Team Training procedure to correct the deficiencies noted above.

Response to this Notice

This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.206. Enclosed as part of this Notice is a document entitled Response Options for Pipeline Operators in Compliance Proceedings.

Please refer to this document and note the response options. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

Following the receipt of this Notice, you have 30 days to submit written comments, revised procedures, or a request for a hearing under §190.211. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue an Order Directing Amendment. If your plans or procedures are found inadequate as alleged in this Notice, you may be ordered to amend your plans or procedures to correct the inadequacies (49 C.F.R.

⁵ See Control Room Management FAQ H.07 (Jan. 16, 2018).

§ 190.206). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 60 days of receipt of this Notice. This period may be extended by written request for good cause. Once the inadequacies identified herein have been addressed in your amended procedures, this enforcement action will be closed.

It is requested (not mandated) that Duke Energy maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Dustin Hubbard, Director, Western Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 5-2021-025-NOA** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Dustin Hubbard
Director, Western Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

Enclosure: *Response Options for Pipeline Operators in Enforcement Proceedings*

cc: PHP-60 Compliance Registry
PHP-500 D. Fehling (#20-177378)