



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

901 Locust Street, Suite 480
Kansas City, MO 64106

NOTICE OF AMENDMENT

VIA ELECTRONIC MAIL TO: michael.koby@enbridge.com, david.stafford@enbridge.com,
and jim.ramness@enbridge.com

January 7, 2022

Michael Koby
Vice President, US Pipelines
Enbridge Energy, Limited Partnership
5400 Westheimer Court
Houston, TX 77056

CPF 3-2022-015-NOA

Dear Mr. Koby:

From July 19 to September 17, 2020, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, inspected Enbridge Energy, Limited Partnership (Enbridge) procedures for Control Room Management in Edmonton, Alberta, Canada.

This Notice is in response to PHMSA's Control Room Management (CRM) Initiative, which is a national level program that includes inspectors from every region. As a result, you may have received this Notice from a different Regional Director than typical because the CRM Initiative inspections are currently separate from the standard inspection program. Notices and correspondence from other types of inspections will remain unchanged.

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

1. § 195.446 Control room management.

(a) General. 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. The procedures required by this section must be integrated, as appropriate, with the operator's written

procedures required by § 195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2) and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011. The procedures required by paragraphs (c)(1) through (4), (d)(1), (d)(4), and (e) must be implemented no later than August 1, 2012. The training procedures required by paragraph (h) must be implemented no later than August 1, 2012, except that any training required by another paragraph of this section must be implemented no later than the deadline for that paragraph.

Enbridge's Control Room Management Plan (CRM), Version 11.0, Point to Point (P2P) procedure was inadequate to thoroughly verify between SCADA displays and related field equipment when field equipment is added or moved and when other changes affecting pipeline safety are made to field equipment, as required by §195.446(c)(2).

The procedure did not adequately address checking alarms to verify the correct set points were established and the point presented, as required when those set points were reached in SCADA or received from the field. Verification of the alarm presentation included alarm priority levels, color presentations, audible alerts, and messaging; however, while in practice these were checked, the procedure did not include this requirement nor require recording it. Also, alarms often present to the controller on different screens, in addition to the main alarm event screen, for all screens and for new points, are required to be documented and verified. There were three checks performed during a P2P that were described in the verbal explanation of the process; these three checks were included in the procedure.

The procedure needs to be amended to include instruction for a more thorough P2P verification that also includes thorough documentation of P2P verification checks.

2. § 195.446 Control room management.

(a) General. 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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by § 195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2) and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011. The procedures required by paragraphs (c)(1) through (4), (d)(1), (d)(4), and (e) must be implemented no later than August 1, 2012. The training procedures required by paragraph (h) must be implemented no later than August 1, 2012, except that any training required by another paragraph of this section must be implemented no later than the deadline for that paragraph.

Enbridge's Control Room Management Plan (CRM), Version 11.0, for manual operation failed to provide requirements for testing the manual operation of the pipeline safely, at least once each calendar year, but at intervals not to exceed 15 months as required by §195.446(c)(3).

Procedure 4.3.1 of the CRM Plan stated, in the event of a communications failure, including failure modes related to SCADA equipment other than telecommunications, the affected pipeline systems are shut down manually, with no attempt to continue operations other than to conduct an orderly shutdown.

Enbridge's testing of the internal communication plan consisted of a process called "Qualified Individual Notification Exercise." This spontaneous exercise contacted individuals who would be responsible to respond to a manual system shutdown to verify correct contact information and test the individual's knowledge and capability to take the appropriate actions to affect shut down for a specific facility. It did not include any actual or mock exercise in shutting down or manual operation of the pipeline.

Enbridge stated it would not manually operate the system after an orderly shutdown. However, in the event of total loss of SCADA or major communication failure, the only way to affect an orderly shutdown is manually. In the procedure titled Communications Failure – Pipeline, the procedure indicated that in the event of a single facility PLC failure or if a segment lost communication Enbridge would continue to operate. In such an event, field personnel would respond and report to the controller on a periodic basis, every 10-30 minutes. Enbridge had not developed plans to test these scenarios. Providing for individual notification was not adequate to test the operational process of manual shutdown, or manual operation of a pipeline segment.

The procedure needs to be amended to include testing and verifying the manual operation of the pipeline system.

3. § 195.446 Control room management.

(a) General. 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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by § 195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2) and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011. The procedures required by paragraphs (c)(1) through (4), (d)(1), (d)(4), and (e) must be implemented no later than August 1, 2012. The training procedures required by paragraph (h) must be implemented no later than August 1, 2012, except that any training required by another paragraph of this section must be implemented no later than the deadline for that paragraph.

Enbridge's Control Room Management Plan, (CRM) Version 11.0, for Team Training was inadequate because it did not fully establish who, regardless of location, operationally collaborates with control room personnel as required by §195.446(h)(6).

Enbridge focused Team Training on the control room core group (Controller, Sr. Tech Advisor, Shift Supervisor, Leak Analyst and Control Room Administrator). Individuals, such as

schedulers, SCADA designers, field personnel, and engineers are others who collaborate with controllers, but were not included in the Team Training and not listed in the procedure.

Also, Enbridge's procedure failed to specifically define how they addressed all operational modes of normal, abnormal, and emergency in the training. It does address abnormal and emergency through a variety of mediums (incident reviews, tabletop exercises, etc.) however, normal operating conditions were not addressed in the exercises. The training needs to address all operational modes.

The procedure needs to be amended to require team training to include others, defined by the operator, who would reasonably be expected to operationally collaborate with controllers (control room personnel), and include content addressing all operational modes of normal, abnormal, and emergency in the training.

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 Enforcement 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 49 C.F.R. §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. § 190.206). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 30 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 Enbridge maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Gregory A. Ochs, Director, Central Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 3-2022-015 NOA** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Gregory A. Ochs
Director, Central Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

cc: David Stafford, Manager Compliance david.stafford@enbridge.com
Enclosure: Response Options for Pipeline Operators in Enforcement Proceedings