



PORTLAND PIPE LINE CORPORATION
Safety, Environment, Customer, Community

J. C. GILLIES
PRESIDENT

TELEPHONE
(207) 767-0441

FACSIMILE
(207) 767-0442

E-MAIL
CHRIS.GILLIES@PMPL.COM

December 15, 2022

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

Subject: Notice of Amendment, CPF 1-2022-072-NOA, dated November 17, 2022
Submission of Written Responses and Request for Hearing

Dear Mr. Burrough:

The purpose of this letter and the accompanying document is to provide written responses to the Pipeline and Hazardous Materials Safety Administration (PHMSA) to the above referenced Notice of Amendment (NOA). PHMSA issued the NOA pursuant to its July 6, 2021 through July 30, 2021 inspection of Portland Pipe Line Corporation's (PPLC's) procedures for control room management of its South Portland, Maine control room. The NOA as issued to PPLC by PHMSA was dated November 17, 2022 and was received by PPLC on November 18, 2022. Accordingly, this response is timely.

Following the July 2021 inspection and the November 2022 NOA, PPLC has developed revisions to its procedures in its Portland Montreal Pipe Line Control Room Management Procedures (CRM). The attachment to this letter provides a table correlating each of the two NOA items to the corresponding revised CRM sections, and includes the language of the relevant revised sections for reference. PPLC intends to implement the revisions through a Management of Change (MOC) process in accordance with PPLC's safety management system, PMIMS, once PHMSA has had the opportunity to determine the revisions to be satisfactory to resolve the NOA.

We believe that both of the items raised by the NOA are addressed by our responses and CRM revisions provided in the attached document, and that both items can be resolved informally without resort to a hearing. However, if in its judgment PHMSA determines that our responses and planned actions do not resolve all the items referenced in the NOA, we respectfully reserve our right to, and hereby request, a hearing on any items left unresolved. If in its judgment PHMSA determines that our response and planned action for an item have resolved the item, then we will withdraw the respective request for hearing.

If you have any questions about the response to the NOA or this request for hearing, or about this matter generally, please do not hesitate to contact Nick Payeur, PPLC Operations Manager, at (207) 767-0422.

Sincerely,

J. C. Gillies

Enclosure

cc: N.D. Payeur

2022.12.15 Response Letter CPF 1-2022-072 NOA.docx



Detailed Response to Notice of Amendment CPF 1-2022-072-NOA, dated November 17, 2022

Item 1: §195.446(e)(1)	
PHMSA Comment	<i>"Portland's control room management program procedures were inadequate to ensure safe operation of a pipeline facility. Specifically, Portland's written control room management program procedures for reviewing SCADA safety-related alarm operations failed to include a process that ensures alarms are accurate and support safe pipeline operations as required by §195.446(e)(1). During the inspection, PHMSA asked Portland Pipeline to produce procedures that demonstrate how Portland ensures that alarms are accurate and support safe pipeline operations. Portland initially referred to its Portland Montreal Pipe Line Control Room Management Procedures (CRM) (CRM Procedures), Section 5.1, Review SCADA Safety Related Alarm Operations. This section stated that the Operations Manager will take steps necessary to review SCADA safety alarm operations to ensure alarms received and displayed to the Controller are accurate and support safe pipeline operations. The section did not describe a process for achieving this objective. The procedures failed to include details such as a process for identifying, tracking and correcting inaccurate or malfunctioning alarms, process considerations for safety related alarms to account for different alarm design or alarm types, and/or specific procedures for managing stale or unreliable data.</i> <i>Portland later referred to Section 6 Alarm Handling Methods of its PMPL Alarm Management Program, SCADA Alarm Management, Rev 1, May 2012 (PMPL Alarm Plan). However, this section lacked sufficient details to adequately address how Portland ensures that alarms are accurate and support safe pipeline operations.</i> <i>Therefore, Portland's written control room management program procedures and alarm management procedures were inadequate as they lacked sufficient details for complying with §195.446(e)(1). Portland must revise its control room management program procedures to address this deficiency."</i>
Discussion	Portland Pipe Line Corporation (PPLC) has developed modifications to its procedures to enhance details describing the process for identifying, tracking, and correcting inaccurate or malfunctioning alarms, process considerations for safety related alarms to account for different alarm designs or alarm types, and specific procedures for managing stale or unreliable data.
Proposed Amendment	Please refer to pages 3 and 4 of this document for a copy of the relevant revised language of Portland's control room management plan Section 5.1. If PHMSA agrees that the proposed revisions are adequate, PPLC will replace the previous Section 5.1 with the revised section through PPLC's MOC process under Element 7 of our safety management system, PMIMS.

Item 2: §195.446(e)(2)	
PHMSA Comment	<i>“Portland’s control room management program procedures were inadequate to ensure safe operation of a pipeline facility. Specifically, Portland’s alarm management plan failed to include adequate provisions for conducting the monthly identification of points affecting safety required by §195.446(e)(2).</i> <i>During the inspection, PHMSA asked Portland to produce procedures addressing a monthly identification of points that have been taken off scan, 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. Portland referred to its CRM Procedures, Section 5.2 Review of SCADA Points. This section discussed a process for identifying, at least once each calendar month, the alarm 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. However, the CRM Procedures failed to cross-reference or mention the SCADA Monthly Checklist located in the PMPL Alarm Plan, Appendix 13.5 which list all the activities for checking alarms. Furthermore, the PMPL Alarm Plan lacked a specific procedure for using the SCADA Monthly checklist. Thus, instead of a monthly review, Portland stated during the inspection that it just reviews a snapshot of the SCADA screen on a day and notes anything off scan, inhibited and forced/manual. There is no report of what was identified or details on subsequent follow up actions.</i> <i>Therefore, Portland’s control room management program procedures were inadequate as they lacked specific details about how to conduct the monthly reviews pursuant to §195.446(e)(2). Portland must clarify the process for using the SCADA Monthly Checklist and subsequent report the subsequent actions.”</i>
Discussion	Portland Pipe Line Corporation (PPLC) has developed modifications to its procedures to clarify the process for using the SCADA Monthly Checklist and subsequent report including required actions.
Proposed Amendment	Please refer to page 4 of this document for a copy of the relevant revised language of Portland's control room management plan Section 5.2. If PHMSA agrees that the proposed revisions are adequate, PPLC will replace the previous Section 5.2 with the revised section through PPLC's MOC process under Element 7 of our safety management system, PMIMS.

Cited Sections of Portland Montreal Pipe Line Control Room Management Procedures (CRM)

Item 1: CRM Manual Section 5.1 Review SCADA Safety Related Alarm Operations

5.1 Review SCADA Safety Related Alarm Operations

The Operations Manager will take the steps necessary to review SCADA safety alarm operations to ensure alarms received and displayed to the Controller are accurate and support safe pipeline operations. Safety-related alarms include operating parameters to ensure safe operation of the system and do not include items such as equipment efficiency alarms and related measurements, alerts, events or notifications. Safety-related alarm set point values are thresholds, which if achieved or exceeded, will present an indication to the Controller that equipment or processes are outside of Company-defined parameters. Any alarm presented to the Controller that did not accurately reflect the actual operational parameter or condition, or an alarm that can mislead a Controller to believe a condition exists that does not exist, is considered by PMPL to be a false alarm. Alarms that are being generated during testing and the Controller is aware of the ongoing testing work would not be considered false alarms since they accurately reflect activities in progress. An alarm not working as intended could be an event that should have resulted in an alarm and did not or the alarm received did not accurately reflect the alarm condition.

When an alarm deficiency is identified the SCADA Alarm Management Checklist will capture the date the deficiency was discovered, track the response including activities to correct the deficiency and the date the correction was completed utilizing the following alarm handling methods.

Stale data and inaccurate or malfunctioning alarms, including false, chattering, frequent, stale, and other nuisance alarms, shall be handled according to the following steps:

- The PMPL Controller logs the event on their control shift log and sends an email notification to the Operations Manager.
- The Operations Manager or designee shall review the shift log and the notification and add the alarm to the *SCADA Alarm Management Checklist (current year)* Deficiency Tracking List as contained in the PMPL Alarm Management Plan Appendix 13.5.
- Safety Related Alarms are identified in SCADA alarm description by the following tag (!! SRD !!) and shall be prioritized and addressed promptly. The process, including timeline and approvals, to bypass or defeat a critical safety device is located in PMIMS Element 7 Management of Change.
- Based on the risk posed by the deficiency and the time required to correct it, a corrective action plan may be developed by the Operations Manager or their designee and implemented until the deficiency has been corrected.
- The Operations Manager routes the corrective action to the appropriate field personnel or third party personnel that maintain the affected equipment.
- Field or third party personnel will promptly correct the malfunction and notify the Operations Manager that the deficiency has been corrected.
- The Operations Manager shall include the *SCADA Alarm Management Checklist* in the PMPL Monthly Alarm Management Statistics Report which is distributed to senior management, local area supervisors and PMPL Controllers.

Nuisance alarms shall not be ignored or indefinitely disabled/inhibited. The *PMPL Alarm Management Plan Section 6 Alarm Handling Methods* provides additional guidance for nuisance alarm management and inhibiting/shelving alarms.

PMPL designates all safety-related alarms through color coding and trains its Controllers to understand which alarms are safety-related and the safety implications of each safety-related alarm. In general, safety-related alarms include operating parameters and do not include equipment efficiency alarms and related measurements, alerts, events or notifications.

The various alarms include:

- *Stale alarms* - alarms that were previously displayed and have been standing for a minimum of 30 days.
- *Stale data* - data that has not updated for a minimum time-frame. Stale data is indicated by an alarm from the PLC.
- *Manual alarms* - alarms that have been triggered by human intervention rather than by a tested and calibrated field device.
- *Forced alarms* - alarms that have been forced by the Controller or field personnel to display an alarm condition when the condition does not exist.
- *Off-scan alarms* - alarms that have been removed from the current scan within SCADA and will not alarm within the normal scan pattern of the SCADA system.
- *Inhibited alarms* - alarms that have been inhibited by a person with the correct authority and approval to inhibit the alarm and remove that alarm display from the Controller's alarm summary display.

Stale, forced, off-scan and inhibited alarms that are displayed will be displayed in a unique manner to differentiate these alarms from current active alarms.

If a Controller takes an alarm point off scan the Controller must log in the Controller shift notes a description of which alarm point has been taken off scan, the expected duration of the off-scan condition and why the point was taken off scan. Alarm inhibiting shall be done in accordance with the *PMPL Alarm Management Plan Section 6.3 Alarm Inhibiting (Shelving)* processes, methodologies, and approvals.

Item 2: CRM Manual Section 5.2 Review of SCADA Points

5.2 Review of SCADA Points

PMPL utilizes the following process to identify, at least once each calendar month, the alarm 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:

- Each month the Operations Manager or their designee shall obtain the SCADA events database from the previous month and export to Excel or similar software. The events shall be filtered to identify points that have been taken off scan, have had alarms inhibited, have generated false alarms, or that have had forced or manual values.
- Each individual event shall be reviewed by the Operations Manager or their designee and documented whether the time periods exceeded that required for associated maintenance or operating activities. Deviations and required subsequent actions shall be noted on the SCADA Alarm Management Checklist (current year) as contained in the PMPL Alarm Management Plan Appendix 13.5.
- The reviewed Excel or similar listing shall be included in the PMPL Monthly Alarm Management Statistics Report and distributed to senior management, local area supervisors and PMPL Controllers.

PMPL's objective is to promptly return any alarm points taken out of service back to service for continued safe operations. PMPL does not allow nuisance alarms to be ignored or indefinitely suppressed as outlined in PMPL Alarm Management Plan Section 6.1 Nuisance Alarm Handling. PMPL Operations Manager and Maintenance Technicians will troubleshoot the cause of the non-functional alarms, take appropriate corrective actions in a timely manner, document the event, and endeavor to return alarm points to service in an expedited manner.