



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: paul.bieniawski@enstorinc.com & todd.cash@enstorinc.com

September 10, 2021

Paul Bieniawski
Chief Executive Officer
Enstor Mississippi Hub
10375 Richmond Avenue, Suite 1900
Houston, TX 77042

CPF 3-2021-055-NOA

Dear Mr. Bieniawski:

From November 2 through 6, 2020, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code inspected Enstor Mississippi Hub (Enstor) procedures for Control Room Management in Katy, Texas.

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 has identified the apparent inadequacies found within Mississippi Hub'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, except that for each control room where an operator's activities are limited to either or both of:

Enstor's O&M Procedure 1120 CRM Plan was inadequate because it failed to provide information to define what constitutes additions, expansions, or replacements to the SCADA system required by § 192.631 (c)(1). Section 7.3 of O&M Procedure 1120 simply restated the regulation. While Enstor had adopted the ROC CRM plan, it did not employ the ROC SCADA system for its pipeline remote operations. Enstor used its own SCADA system and the ROC controllers remotely logged in to Enstor's SCADA system. Therefore, the SCADA system was managed by Enstor and its procedures are required to be compliant with the regulation.

The procedure must be amended to provide definitions of additions, expansion, or replacements of the SCADA system, as well as examples of these conditions to provide adequate information of when to implement the required sections of API 1165.

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:

Enstor's O&M Procedure 1120 was inadequate because it failed to provide an adequate process for when a point-to-point must be completed and instruction on how to complete a point-to-point verification as required by § 192.631(c)(2). Section 7.4 of O&M Procedure 1120, and form 1100-27 provided the compliance procedure and documentation for point-to-point verifications. The procedure did not include instructions on how to complete the form, and the form did not provide enough detail to demonstrate thoroughness of the point-to-point verification. The point-to-point needs to include verification of field to control room HMI data and status, alarm set points, alarm messaging, alarm attributes (color, blinking, audio), tag name, who conducted the point to point, correct end device and location, date of completion and screen verification for all screens where the point presents.

The procedure also did not define when and under what conditions a point-to-point needs to be conducted.

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:

Enstor's O&M procedure 1109 was inadequate because it failed to provide a clear process to test the SCADA backup system in coordination with the ROC SCADA back up test. Enstor's

SCADA system was separate from ROC's SCADA system and needed to be tested per Section § 192.631(c)(4). During ROC's back up test, Enstor utilized a laptop to connect with their main SCADA server. While the test was successful, the documentation of the ROC SCADA back up test did not include any consideration for the Enstor laptop, and Enstor did not have documentation of the test. The ROC procedure was silent in the coordination of the testing of the two systems.

The procedure needs to be amended to consider either coordination with ROC during their test or a separate test of the Mississippi Hub back up SCADA. The procedure needs to include any logistical considerations, backup server testing, assessments of monitoring as well as verification of alarming and command functions. It must also include documentation of the test including any findings, corrective actions and lessons learned. The tests must be completed once each calendar year not to exceed 15 months.

The procedure must be amended to include situations and conditions under which a point-to-point must be conducted as well as instructions and forms with detail to provide a thorough point-to-point verification.

4. § 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:

The ROC CRM Plan dated July 7, 2020 was not adequate because it relied heavily on self-reporting fatigue. Section 6.12, Countermeasures for 9-12-hour days, relied on the controller self-reporting fatigue. It did not provide a countermeasure for supervisors or others working in the control room to monitor and report a person suspected or observed to be fatigued. In sections 3.5 and 3.6, Roles and Responsibilities of the Control Room Manager, it stated in items 4 and 6, respectively, "[m]anage fatigue risk and fatigue countermeasures". While these are important and appropriate roles and responsibilities for managers, manage is different than monitor, recognize and respond. The section expressly states in Section § 192.631(d)(3) to "train controllers and supervisors to recognize the effects of fatigue". The procedure did not offer a requirement for managers, supervisors, or other controllers to monitor, identify and respond/report others. Fatigue management and identification, while it is a responsibility of the controllers for themselves, is also a responsibility all members of the control room.

The procedure needs to be amended to include roles and responsibilities for all control room employees to monitor, identify and respond to fatigue of the individual and others.

5. § 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:

Enstor's procedure was not adequate because it did not include a list of abnormal operating conditions (AOC's) that are likely to occur simultaneously or in sequence, as required by section § 192.631(h)(1). The operator's third party (ROC) control room manager indicated these considerations were included in the training documents. Upon review of the training documentation, it was identified that the training material does cover AOCs that happen in sequence, but nothing in the training materials discussed how to address ones that occur simultaneously. Additionally, while ROC may have a standard list, it is also necessary to identify asset specific conditions (Enstor) that may occur outside of the generic examples provided by the third-party contractor.

The procedure needs to be amended to include a list or examples of abnormal operating conditions likely to occur simultaneously or in sequence. The list needs to consider conditions specific to Mississippi Hub operations.

6. § 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:

Enstor's procedures were inadequate to provide requirements of what information the controllers needed to record and document in their log that demonstrates compliance with the requirements of this section per § 192.631(j)(1). When attempting to determine if field personnel and others were contacting the control room prior to implementing physical changes to pipeline equipment or configuration, inspectors were not able to make determinations through the controller logs. In reviewing the procedures, it was identified in sections 5.5, 5.5.1, 5.6 and 7.6 Enstor's O&M Manual 1120, dated 1/14/2020, that field personnel were required to contact the control room prior to making changes to the field. Procedures for annual valve maintenance, annual relief valve calibration/maintenance, and testing ESDs all require contacting the control center prior to commencing work. Section 5.7.1 of O&M Manual 1120 required documenting work activities and/or other pertinent information that transpired during the shift, including but not limited to "operational activities (e.g. operations, maintenance, communications, notifications)".

Documenting this type of maintenance, as well as other activities on the pipeline, is an important record for activities on the pipeline that can support compliance with other sections of the

regulations, supports trouble shooting issues as well as responding to abnormal conditions or emergencies if they develop.

Enstor's procedure needs to be amended to include information that must be recorded and documented in the controller log to demonstrate compliance with the requirements of section § 192.631.

7. § 192.631 Control room management.

(a)

(c) ***Provide adequate information.*** Each operator must provide its controllers with the information, tools, processes, and procedures necessary for the controllers to carry out the roles and responsibilities the operator has defined by performing each of the following:

(3) **Test and verify an internal communication plan to provide adequate means for manual operation of the pipeline safely, at least once each calendar year, but at intervals not to exceed 15 months;**

Enstor's CRM Plan was inadequate to provide guidance to the controller when performing manual operations through actual or test condition as required. Remote Operation Control (ROC) began providing Enstor with control room services on August 6, 2019. Enstor's Control Room Management (CRM) procedure adopted ROC's CRM Plan dated July 31, 2020. Section 4.6 of the plan set forth times when manual operation of the pipeline must be initiated. While the procedure addressed the requirement for field personnel to call the control room and provide field operating information, it did not provide guidance on what the controller should do with the information. There was no language in the procedure related to how to document the field information, how to incorporate the information into safely operating the system, or how to maintain the information as a record. Form 11.13 was the document of record for the required test and included questions related to the manual operation conditions and requirements. This form did not have space to document the field information called in to the controller

The procedure must be amended to provide direction and tools for the controller to document field information, and to incorporate that information into the safe manual operation of the pipeline in the event of SCADA failure or if a shutdown of the SCADA system becomes necessary.

8. § 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 intervals not to exceed 15 months;

Enstor's Alarm Management procedure was inadequate because it failed to define all points affecting safety. The procedure does identify safety related alarms. Safety related points often support the definition of safety related alarms, but a safety related point, for operational reasons, can stand on its own without alarming. Several regulatory sections depend upon the operator defining points affecting safety and safety related alarms to meet the compliance requirement; these included §§ 192.631(c)(2), 192.631(e)(1), 192.631(e)(2), and 192.631(e)(3). Because Enstor utilized their own SCADA system, they did not share the ROC Alarm Management Plan, or the identified safety related points and alarms contained therein.

Also noted in the procedure was that Enstor did not identify a designation for identifying safety related alarms in their SCADA database.

The procedure needs to be amended to identify the safety related points, safety related alarms and how to distinguish whether a point or alarm is safety related in the master SCADA database.

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. § 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 Enstor Mississippi Hub 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, Pipeline and

Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 3-2021-055-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: Todd Cash, Director Compliance todd.cash@enstorinc.com

Enclosure: Response Options for Pipeline Operators in Enforcement Proceedings