



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: kakuehn@cvrenergy.com; brecord@cvrenergy.com;
mlcogdill@cvrenergy.com

August 3, 2022

Keith Kuehn, VP-Crude Transportation
Coffeyville Resources Crude Transportation, LLC
411 N.E. Washington Boulevard
Bartlesville, Oklahoma 74006

CPF 3-2022-057-NOA

Dear Mr Kuehn:

From August 26 to August 30, 2019, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, inspected Coffeyville Resources' (CVR) procedures for Control Room Management in Houston, Texas.

At the time of the inspection, CVR assets were determined to be operated by a third party control room identified as the Remote Operations Center (ROC). Since the time of the inspection, ROC had been acquired by two different companies: (1) July 22, 2019 to October 1, 2021, LineStar Integrity Services, LLC; and (2) October 1, 2021 to present, Everline Automation. At the time of the issuance of this letter, ROC was part of a control room called Everline located in Houston, Texas but is still operating the CVR assets. However, for clarity in this letter and, as a result of the inspection documentation, the ROC/Everline Control Room will be referred to as "ROC", and the associated procedures as "CVR's CRM procedures".

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

- 1. § 195.402 Procedural manual for operations, maintenance, and emergencies.**
 - (a) General.** Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline system commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

CVR's Operations and Maintenance (O&M) manual was inadequate because it failed to integrate CVR's CRM procedures, as required by § 195.446(a). CVR provided, as part of the inspection, a third party [ROC] Control Room Management (CRM) procedure and stated that this CRM Plan was used for CVR assets. However, CVR's O&M procedures did not reference the CRM procedures used to operate CVR assets.

Specifically, a procedure did not exist to identify the criteria being used to determine a control room location relevant to CVR's existing facilities and to determine applicability for § 195.446. This is significant for CVR because its O&M Manual did not reference ROC as the third party control center from which its assets were operated, and it was not clear by its procedure why the Coffeyville Resources Refinery (even though operated by a separate business unit but not defined in the Safety Program Relationship) had not been identified as a control room for CVR assets, or what other locations on the pipeline could be a control room. A procedure that identifies the criteria that CVR uses to determine control room locations must be integrated into CVR's O&M Manual, and implementation of that procedure to CVR assets is required to know which locations serve as control rooms.

Also, the CVR O&M did not describe the process that would be used to coordinate changes between the field and the control room, as required by § 195.446(f)(1), what would result in point-to-point verifications, as required by § 195.446(c)(2), and/or to include a procedure that would clarify how requests from PHMSA, or its state partners related to records or procedures, would be implemented as required by §§ 195.446(j)(1) and 195.446(j)(2).

Further, CVR's O&M Manual, section 6.06 *ADM 010 Line Valve Inspection*, failed to require the control room to be contacted prior to making field changes that affect operations as required by § 195.446(f)(2).

CVR's CRM procedures require amendment to address the deficiencies noted above.

2. § 195.446 Control room management.

(a)

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

CVR's CRM procedures require amendments because the procedures did not adequately define the controller's roles and responsibilities during normal, abnormal, and emergency operating conditions.

CVR's CRM procedures did not properly define the roles and responsibilities of the controller specific to the console that operates CVR assets from the ROC control room. The specific assets for which each controller was assigned the role and responsibility for operating were not listed in the CRM procedures utilized by CVR. For example, it was discovered during the inspection that the CVR assets were only one of three pipelines for which the controller was assigned

operational responsibility from the ROC control room, but this relevant information regarding controller responsibility was not detailed in CVR's CRM procedures. Additionally, it was not clear in the CRM procedures whether controllers on other consoles at the ROC control room could operate the CVR assets.

Additionally, the roles and responsibilities of the controller that were identified in the CVR CRM procedures failed to address how 800 line calls, 811 locates (emergency or other), 3rd party contractor contacts, encroachments and aerial patrol reports were to be handled specific to CVR assets. CVR's CRM procedures require amendments to clarify the role and the responsibility of the controller with regards to these aspects of operations for CVR's assets.

Finally, CVR's CRM procedures did not identify in an emergency operating condition how long a pipeline can operate without a controller before shutdown of the pipeline system or manual operations is required. Also, the procedures did not clarify what would be required of an incoming controller to become current on console operations when a shift change was not possible due to an emergency.

CVR's CRM procedures require amendment to address the deficiencies noted above.

3. § 195.446 Control room management.

(a)

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

(1) A controller's authority and responsibility to make decisions and take actions during normal operations;

CVR's CRM procedures were inadequate because the procedure did not adequately define the controller's authority and responsibility to make decisions and take actions during normal operations. A controller is defined in § 195.2 as “. . . a qualified individual who remotely monitors and controls the safety-related operations of a pipeline facility via a SCADA system from a control room, and who has operational authority and accountability for the remote operational functions of the pipeline facility.” However, it was not clear how the existing procedures or processes would prevent others within a common control room [ROC] with multiple assets from issuing commands on a console for which they are not qualified.

CVR's CRM procedures must be amended to clearly define how pipeline system operations would be limited to only those controllers qualified to operate CVR's assets from the ROC control room.

4. § 195.446 Control room management.

(a)

(b) Each operator must define the roles and responsibilities of a controller during normal, abnormal, and emergency operating conditions. To provide for a controllers' prompt and appropriate response to operating conditions, an operator

must define each of the following:

(1) A controller's authority and responsibility to make decisions and take actions during normal operations;

CVR's CRM procedures were inadequate because the procedure did not provide a full list of actions to take during normal operations. Specifically, CVR's CRM procedure utilized to operate its assets from the ROC control room, in *Section 3.3 Impromptu Change in Responsibility* and *Section 3.4 Controller Responsibilities* require clarification to insure only controllers qualified to operate the specific console are completing the shift turnover and associated documentation.

The ROC control room has more than one console. Controllers are qualified to a given set of assets located on a specific console. Not all controllers in the ROC control room are qualified to operate the CVR assets. *Section 3.3 Improptu Change in Responsibility* indicates that a verbal conversation will be conducted with another controller about expected actions should a controller need to step away from the console for less than 15 minutes. However, nothing requires that this verbal briefing be provided to a controller qualified to the specific console. This section further indicates that if the controller has to be away from the console more than 15 minutes, then the controller must provide a full shift turnover and complete the Form 11-1 Shift Turnover Checklist. Only qualified controllers for the specific console can receive a full shift turnover and complete Form 11-1. Procedures require an amendment to state that only qualified controllers to the specific console being vacated can received a full shift turnover and complete the Form 11-1 as required by Section 3.3.

Additionally, *Section 3.4 Normal Operations*, did not state that should a controller need a break longer than 15 minutes (as identified in Section 3.3 of CVR's CRM procedures), the controller must complete a full shift turnover with a controller who is qualified to that console.

CVR's CRM procedures require an amendment to clarify that only controllers qualified to the console will operate the console during normal operations.

5. § 195.446 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:

(1)

(2) Conduct a point-to-point verification between SCADA displays and related field equipment when field equipment is added or moved and when other changes that affect pipeline safety are made to field equipment or SCADA displays;

CVR's CRM procedure utilized to operate its assets from the ROC control room, *Section 8.9.7 Point to Point Verification*, procedure was inadequate because it did not identify what record(s) would be used to demonstrate compliance with § 195.446(c)(2).

CVR's CRM procedures must be amended to include what record(s) would be used to demonstrate compliance with the required point-to-point verifications.

6. § 195.446 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;

CVR's CRM procedures were inadequate because the procedure did not provide sufficient provisions for identifying at least once each month points taken off scan, had alarms inhibited, generated false alarms and/or that had points which had been forced or manual values for periods of time exceeding that required for associated maintenance or operating activities as required by § 195.446(e)(2). CVR's CRM procedure utilized to operate its assets from the ROC control room, *Section 8.10.3 Monthly Alarm Reviews*, did not include a description of how information that would be applicable to the conditions identified in § 195.446(e)(2) were being pulled from SCADA or the specific steps involved in the monthly review.

Additionally, false alarms were noted in procedures but false alarms were not well defined. False alarms cannot be pulled from SCADA automatically. False alarms must be accounted for by a procedure that defines what a false alarm is, includes a description of how false alarms will be determined to have occurred, and identifies what specific records (such as controller logs) will be reviewed for false alarms on monthly basis. CVR's CRM procedures must be amended to include a process for identifying, reporting, and evaluating false alarms.

Further, CVR's CRM procedures must be amended to include more details to determine if the time required for associated maintenance or operating activities is exceeded. This would be relevant to a point taken off-scan, a point that had alarms inhibited, a point that had a value forced or a point that was in manual.

The CVR CRM ROC procedures must be amended to address the inadequacies noted above.

7. § 195.446 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)

(6) Address deficiencies identified through the implementation of paragraphs (e)(1) through (e)(5) of this section.

CVR's CRM procedure utilized to operate its assets from the ROC control room, *Section 8.9.1 Inaccurate Alarms*, *Section 8.9.2 Stale Alarms*, and *Section 8.9.6 Reporting Alarm Problems/Malfunction*, require amendments because these sections did not adequately define how deficiencies will be addressed, as required by § 195.446(e)(6), and result in a record that demonstrates compliance with §195.446(j)(1).

CVR's CRM procedure indicated that inaccurate or malfunctioning alarms were to be reported and fixed but failed to define how this would be achieved and what mechanism would be used for recording the issue and resolution thereof. Additionally, *Section 8.9.2 Stale Alarms*, did not define how stale alarms or stale data would be recorded and addressed.

CVR's CRM procedures must be amended to address the inadequacies identified above.

8. § 195.446 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)

(3) Verify the correct safety-related alarm set-point values and alarm descriptions when associated field instruments are calibrated or changed and at least once each calendar year, but at intervals not to exceed 15 months;

CVR's CRM procedure was inadequate because it did not describe how the review to confirm the correct safety-related alarm setpoint values and descriptors would be performed when associated field instruments are calibrated or changed at least once each calendar year not to exceed 15 months, as required by § 195.446 (e)(3). Additionally, the procedure did not define what record or records would be used to demonstrate compliance with § 195.446(e)(3) for either calibrations or the annual review, not to exceed 15 months.

CVR's CRM procedure utilized to operate its assets from the ROC control room, *Section 8.10.4 Alarm Setpoint and Description Review*, identified elements that should be included in the review but did not identify how each of these elements would be reviewed. The procedure failed to specify what would be reviewed or how to correct alarm setpoint values and how alarm descriptors would be determined. The procedure did not describe elements such as a comparative review of these values for consecutive years or if data that was current would be compared to a master alarm database. It did not describe if MOCs would be used to resolve differences, what would happen if an MOC was not issued for a change, and what process would be used to determine the correct setpoint alarm value or descriptor. This would require coordination between CVR and ROC, but it was not developed or explained at all in CVR's CRM procedures.

Also this section of CVR's CRM procedure did not identify what records would be used for calibration or for the annual review, not to exceed 15 months. During the inspection, Form 11-12 titled *Alarm Setpoint and Description Review*, was presented by the Operator as a record to be used to demonstrate compliance for the annual review, not to exceed 15 months, but this was not

referenced in the applicable procedures. Additionally, nothing was provided during the inspection to identify what record would be used to document calibrations and confirm correct alarm setpoint values and alarm descriptors.

Further, *Section 8.9.7 Point to Point Verification*, referenced a requirement for new points, which would include initial calibration information. During the inspection, an excel spreadsheet was used as a record to demonstrate compliance. However, CVR's CRM procedures did not reference the excel spreadsheet as the record to demonstrate compliance with a point-to-point verification.

CVR's CRM procedures must be amended to address the deficiencies identified above.

9. § 195.446 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)

(5) Monitor the content and volume of general activity being directed to and required of each controller at least once each calendar year, but at intervals not exceeding 15 months, that will assure controllers have sufficient time to analyze and react to incoming alarms; and

CVR's CRM procedures were inadequate because the procedures did not include sufficient monitoring of content and volume of general activities tasked to the controller to assure that controllers have sufficient time to analyze and react to incoming alarms, as required by § 195.446(e)(5). CVR's CRM procedure utilized to operate its assets from the ROC control room, *Section 8.10.5 Controller Workload Review*, described various elements that would be reviewed as part of the controller workload analysis, but not how the information would be gathered, what period of time would be reviewed for each item (such as phone usage for a year, manual calculations for a year, training activities for a year, total volume of alarms for a year), and how sufficient time to analyze and react to incoming alarms would be determined.

Additionally, the procedures did not identify what records would be reviewed and what records would demonstrate compliance as the outcome of the workload analysis. Form 11-6 *Sleep Worksheet*, Form 11-7 *Workload Analysis*, and Form 11-8 *Employee Ratio Calculations* contained information that was described during the inspection to be part of the workload analysis, but these forms were not referenced in the procedures and it was not clear how the information collected on these forms would be used to demonstrate that controllers had sufficient time to analyze and react to incoming alarms.

CVR's CRM procedures must be amended to address the inadequacies referenced above.

10. § 195.446 Control room management.

(a)

(f) ***Change management.*** Each operator must assure that changes that could affect control room operations are coordinated with the control room personnel by performing each of the following:

(1) **Implement section 7 of API RP 1168 (incorporated by reference, see § 195.3) for control room management change and require coordination between control room representatives, operator's management, and associated field personnel when planning and implementing physical changes to pipeline equipment or configuration;**

CVR's CRM procedures were inadequate because the procedures did not meet the requirement for § 195.446(f)(1) and Section 7 of API RP 1168 when implementing physical changes to pipeline equipment or configuration that affect control room operations. Additionally, records were not available to demonstrate how changes that could impact the control room had been coordinated between the control room representatives, operator's management, and associated field person, as required.

A new leak detection system was implemented early in 2019 that affected CVR's assets. The leak detection system on CVR's assets was functional at the time of the inspection. PHMSA reviewed Management of Change (MOC) documentation and other associated documentation specific to the addition of the Leak Detection System. MOC documentation did not exist to confirm that the leak detection system had been coordinated with the control room representatives prior to implementation. Controllers operating CVR assets in the ROC control room acknowledged, verbally during the inspection, that MOC documentation did not exist relevant to the leak detection system.

Further, a process or procedure did not exist to clarify how changes that could affect control room operations were coordinated in such a manner as to confirm that controllers receive change information prior to operating the console affected, or that would confirm controllers received training and change information in advance of changes being implemented.

Additionally, conducting a point-to-point verification between SCADA displays and related field equipment requires coordination with CVR field personnel and ROC. In order to perform point-to-point verifications, field personnel would be required to be at specific locations and conduct specific actions inconjunction with the control room, requiring advance planning and notification between CVR and ROC. However, nothing in CVR's CRM procedures or O&M manual defined how the coordination between ROC's and CVR's field personnel would be accomplished.

CVR's CRM procedures need to be amended to include an MOC process that defines how changes that could affect control room operations will be coordinated as required by §§ 195.446(f) and 195.446(f)(1), relevant to Section 7 of RP 1168. Additionally, these amendments require identification of the record that will be used to demonstrate compliance as required by § 195.446(j)(1).

11. § 195.446 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:

CVR's CRM procedures were inadequate because the procedures did not address the training program content as required by § 195.446(h). CVR's CRM procedures utilized to operate its assets from the ROC control room, Section 10 *Training*, did not address how cross-training would be performed, where the cross-training qualifications would be stored, and how controllers or control room managers, supervisor or leads would be informed of who had completed training and was cross-trained on specific single or multiple assets.

Additionally, the procedures did not address what training would be required for a controller when a long term vacancy on the console would occur, such as due to illness. This procedure would need to include reviewing MOC documentation, including alarm and display changes, reviewing changes in assets such as new location additions or instrumentation configuration on the console, and procedures that have been amended as well. Amendments need to include whether or not On-The-Job (OJT) would be required before the controller would be allowed to operate the console.

The ROC control room, at the time of the inspection, allowed both liquid and gas assets operated on the same console. However, the existing training procedures including those described in CVR's CRM, Section 10.2 *On Board Training for New Controllers*, did not specifically identify unique training elements that would be required for a controller operating a console with this configuration. For example, on gas assets, the speed of closure is slower than liquid, which allows for more time to respond in some situations, however, there is more complexity associated with this action as a result of compressibility in recognizing a gas leak. On the liquid consoles, FRP/OPA plans may require unique controller roles and responsibilities associated with Incident Command support. This could affect CVR assets if the training does not sufficiently address the differences in operating these types of assets.

Further, Section 10.3 *Annual Training of Existing Controllers*, did not define if refresher training was required unique to those controllers that are cross-trained, or if annual training or refresher training for all controllers will be the same regardless of multiple console qualifications. This needs to be clarified in CVR's CRM procedures.

CVR's CRM procedures need to be amended to include specifics on how controller training will be accomplished for multiple types of assets, identify how cross-training on multiple consoles will be recorded, include a process for controller training when a controller has an extended (long term absence) vacancy, identify where training records will be stored, and confirm the content of annual training for existing controllers that are cross-trained and for controllers qualified to only one console.

12. § 195.446 Control room management.

(a)

(i) ***Compliance validation.*** Upon request, operators must submit their procedures to PHMSA or, in the case of an intrastate pipeline facility regulated by a State, to the appropriate State agency.

CVR's CRM procedures were inadequate because the procedures did not include a process for compliance validation, as required by § 195.446(i). Specifically, a requirement was not included that, upon request, operators must submit their procedures to PHMSA or, in the case of an intrastate pipeline facility regulated by a State, to the appropriate State agency.

CVR's CRM procedures, Section 2.3 *Compliance Validation*, required that ROC will respond to any CVR request within five days. PHMSA or State Partner requests will be provided to CVR and then CVR will pass this request to ROC. However, nothing in the process required a record to demonstrate that PHMSA or State Agency requests had received a response.

CVR's CRM procedures need to be amended to include a process for responding to requests made by PHMSA or the appropriate State agency.

13. § 195.444 Leak Detection.

(a)

(c) ***CPM leak detection systems.*** Each computational pipeline monitoring (CPM) leak detection system installed on a hazardous liquid pipeline must comply with API RP 1130 (incorporated by reference, *see* § 195.3) in operating, maintaining, testing, record keeping, and dispatcher training of the system.

CVR's CRM procedures regarding leak detection were inadequate because the procedures did not adequately comply with API 1130 (incorporated by reference, *see* § 195.3) in operating, maintaining, testing, record keeping, and dispatcher training on the system. CVR assets do have a CPM leak detection system, Atmos Pipe, and this is utilized in the ROC control room. CVR's leak detection procedures (Atmos International Operation and Maintenance Manual) applicable to its assets operated from the ROC control room were provided and reviewed during the inspection. However, the procedure applicable to CVR's assets did not have specifics regarding what would be implemented and how this would be implemented to address API 1130 Section 6.4 Data Retention, 6.5 Controller Training and Retraining, and 6.6 Documentation. Additionally, the procedures failed to address controller training, as required by § 195.446(h), as part of the roles and responsibilities of a controller to help detect an abnormal operation in development or identify an emergency condition.

CVR's CRM leak detection procedures for assets operated from the ROC control room need to be amended to include data retention and documentation, and controller training and re-training specifics, as required in API 1130 and § 195.446(h).

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 90 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 that Coffeyville Resources 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 3-2022-057-NOA** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

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

Enclosure: Response Options for Pipeline Operators in Enforcement Proceedings

cc: Blake Record,, DOT Compliance Primary, brecord@cvrenergy.com
Mike Cogdill, DOT Compliance Primary, mlcogdill@cvrenergy.com