



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. J. PATRICK BARLEY

June 15, 2022

Mr. J. Patrick Barley
Chief Executive Officer
Scm Pr, LLC
909 Lake Carolyn Parkway, Suite 650
Irving, TX 75039

CPF 5-2022-022-NOA

Dear Mr. Barley:

From March 1 through 5, 2021, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code (U.S.C.), inspected the written procedures and records for the Scm Pr., LLC (SCM) control room located in Irving, Texas.

On the basis of the inspection, PHMSA has identified the following apparent inadequacies found within the SCM 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...

SCM's written control room management procedures are inadequate to assure the safe operation of a pipeline facility. Under §195.402(a), operators must review their written procedures at least once each calendar year to ensure they are effective, and make appropriate changes as necessary. This includes control room management procedures.¹ SCM's procedure "CRM 2-17 Annual Training Review" is inadequate because it does not contain guidance on how to conduct and document an annual review of the fatigue management procedures to ensure they are effective.² During the inspection, PHMSA reviewed the January 2020 report by Berkana on SCM's fatigue management program, which did not include an effectiveness determination, and the February 2021 review conducted by SCM, which only consisted of a document recording the date the review was conducted. After reviewing both these documents, PHMSA was unable to determine if the program was deemed effective, and if not, what changes SCM made to improve its efficacy.

SCM must amend its procedures to include language that guides the effectiveness review. Specifically, the procedure should include information on how to evaluate the effectiveness of the fatigue management program and a process for conducting and documenting the review.³ The procedure must also require that necessary changes be made, as appropriate, to ensure the procedures are effective.

2. § 195.446 - Control room management.

(a)...

(b) *Roles and responsibilities.* Each operator must define the roles and responsibilities of a controller during normal, abnormal, and emergency operating conditions. To provide for a controller's 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

SCM's written control management procedures are inadequate to assure safe operation of a pipeline facility. Specifically, SCM's procedures fail to adequately define the roles and responsibilities of a controller to provide for the prompt and appropriate response to operating conditions, including defining the controller's authority and responsibility to make decisions and take actions during normal operations.

During the inspection, PHMSA noted that SCM has two consoles controlling its two pipeline systems. SCM's SCADA system allows for two controllers operating from separate consoles to

¹ Under §195.446(a), an operator must integrate, as appropriate, its control room management procedures, implementing the requirements set forth in §195.446, with the operator's written procedures required by §195.402.

² Under §195.446(d), an operator must implement certain methods to reduce the risk associated with controller fatigue that could inhibit a controller's ability to carry out the roles and responsibilities the operator has defined, including educating controllers and supervisors about fatigue mitigation strategies and how off-duty activities contribute to fatigue, and training controllers and supervisors to recognize the effects of fatigue.

³ See §195.446(j) (requiring operators to maintain for review during inspection records demonstrating compliance with the requirements of §195.446).

login to the same pipeline system. As a result, it is possible for the controllers to issue conflicting commands simultaneously to SCADA. In order to mitigate this risk, SCM's SCADA has the ability to limit permissions for logins to only personnel qualified to operate a system and limit the number of controllers able to login simultaneously; SCM, however, has not utilized this functionality.

SCM must amend its procedures to adequately define a controller's authority and responsibility during normal operation by including information on simultaneous system control. SCM's revisions should limit the number of simultaneous controller logins to each pipeline system and assign SCADA permissions to each individual login based on the controller's qualifications to operate individual pipeline systems.

3. § 195.446 - Control room management.

(a)...

(b) Roles and responsibilities. Each operator must define the roles and responsibilities of a controller during normal, abnormal, and emergency operating conditions. To provide for a controller's 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...

SCM's written procedure "CRM 2-7 Shift Change" is inadequate to assure safe operation of a pipeline facility because it states that a shift change is required when a controller is away from the console for 90 minutes. If the controller abandons the console for 90 minutes, he or she is no longer controlling the pipeline.⁴ SCM must amend its procedure to shorten the length of time a controller can leave the console unattended before a shift change is required.

4. § 195.446 - Control room management.

(a) ...

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

(1) ...

(2) A controller's role when an abnormal operating condition is detected, even if the controller is not the first to detect the condition, including the controller's responsibility to take specific actions and to communicate with others

SCM's written procedure "CRM 2-2 Roles & Responsibilities" is inadequate to assure safe operation of a pipeline facility because it lacks specific instructions for controllers on how to respond to abnormal operating conditions. CRM 2-2 has a subsection regarding responsibilities during abnormal conditions and includes a list of actions to take, but does not provide instruction or guidance on how or when to implement the listed possible actions.

⁴ Most pipeline operators limit the time a controller can leave the console unattended to 15-30 minutes.

SCM must amend its procedure to define a controller's role when an abnormal operating condition is detected, even if the controller is not the first to detect the condition, including the controller's responsibility to take specific actions—including how and when to implement certain actions—and to communicate with others.

5. § 195.446 - Control room management.

(a) ...

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

(1) ...

(3) A controller's role during an emergency, even if the controller is not the first to detect the emergency, including the controller's responsibility to take specific actions and to communicate with others

SCM's CRM 2-5 Internal Communications Plan is inadequate to assure safe operation of a pipeline facility because it fails to adequately define a controller's role during an emergency. Specifically, CRM 2-5 primarily addresses actions for a loss of SCADA or failure of communications. It does not address a total loss of power. Further, although CRM 2-5 mentions physical evacuation, it does not have written procedures for a controller's role and responsibility in transferring pipeline operations to another control room, shutting down the pipelines, or any other details, if controllers must evacuate the premises yet maintain safe operation of the pipeline system.

SCM must amend its procedure to define a controller's role during an emergency, even if the controller is not the first to detect the emergency, including the controller's responsibility to take specific actions and to communicate with others, including addressing the deficiencies noted above.

6. § 195.446 - Control room management.

(a) ...

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

(1) ...

(4) A method of recording controller shift-changes and any hand-over of responsibility between controllers

SCM's written procedure "CRM 2-7 Shift Change" is inadequate to assure safe operation of a pipeline facility because it does not include a method of recording controller shift-changes and any hand-over of responsibility between controllers to provide for a controller's prompt and appropriate response to operating conditions based on SCM's current configuration. Currently,

SCM is utilizing a primary control room and a secondary control room for 24/7 operations.⁵ The primary control room controls the Powder River pipeline system and the back-up, secondary control room controls the Red Butte pipeline system.⁶ The current method for shift change is not conducted face-to-face. It is conducted over the phone, with the on-duty controller in the CRM and the incoming controller out of the room. The procedure has a list of topics for controllers to cover, but no instructions on how to document the shift change. SCM keeps a spreadsheet log of daily activities, but the log does not indicate whether the topics required by SCM CRM 2-7 were discussed during the shift change.

SCM must amend its procedure to account for 24-hour a day, seven-day a week, operation of both primary and secondary control rooms, as well as provide instruction for the documentation of each shift change and any hand-over of responsibilities between controllers.

7. § 195.446 - Control room management.

(a) ...

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

(1)...

(5) The roles, responsibilities and qualifications of others who have the authority to direct or supersede the specific technical actions of controllers.

SCM's written procedure "CRM 2-23 Console Function Criteria" is inadequate to assure safe operation of a pipeline facility because it does not define the roles, responsibilities, and qualifications of others who have the authority to direct or supersede the specific technical actions of controllers, in order to provide for a controller's prompt and appropriate response to operating conditions. SCM must amend its procedure to explicitly address the roles, responsibilities, and qualifications of others who have the authority to direct or supersede the specific technical actions of controllers.

8. § 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

⁵ Each control room is located in different areas. Under normal operations, only the primary control room is staffed.

⁶ The Red Butte pipeline system can also be controlled from the primary control room.

SCM's written procedure "CRM 2-4 Point to Point Verification" is inadequate to assure safe operation of a pipeline facility. SCM CRM 2-4 paragraph 3 quotes the regulatory text in § 195.446(c)(2), but lacks specificity concerning what actions trigger a required point-to-point verification, including specific field equipment modifications and other changes, and how point-to-point verification should be documented.⁷ During the inspection, PHMSA reviewed point-to-point verification records demonstrating that, although testing occurred in a timely manner, the operator did not record adequate information to confirm the testing results. For example, the discharge pressure record does not indicate what the simulated pressure was, only that the signal was correctly received. SCM must amend its procedures to define when point-to-point verification is required and how to adequately document such verification.

9. § 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) ...

(4) Test any backup SCADA systems at least once each calendar year, but at intervals not to exceed 15 months

SCM's written procedure "CRM 2-6 Backup Site" is inadequate to assure safe operation of a pipeline facility because it does not address how SCM will test the backup SCADA system, including testing for the effective transfer of control to the backup control room or transferring the secondary, backup control room to the primary control room. Further, SCM CRM 2-6 only addresses server failure and evacuation of the operations center (primary control room) without considering additional failure scenarios such as total power loss that should be included in SCM's testing protocols.

SCM must amend its procedures to provide for testing the backup control room, transferring control to the back up control room, testing the full functionality of the backup control room and all redundant SCADA servers, and returning control back to the primary control room. It must also address failure events beyond server failure and evacuation of the control room.

10. § 195.446 - Control room management.

(a) ...

(d) Fatigue mitigation. Each operator must implement the following methods to reduce the risk associated with controller fatigue that could inhibit a controller's ability to carry out the roles and responsibilities the operator has defined...

SCM's written procedures on fatigue management are inadequate to assure safe operation of a pipeline facility because they lack instructions for managing controllers who self-identified, or

⁷ See §195.446(j) (requiring operators to maintain for review during inspection records demonstrating compliance with the requirements of §195.446).

were identified by supervisors, as too fatigued to carry out the roles and responsibilities the operator has defined.⁸

SCM must amend its procedures to provide guidance regarding the management of controllers who self-identified or were identified by supervisors as being too fatigued to safely carry out the roles and responsibilities the operator defined, as well as a method of documenting when this occurs and what actions, if any, SCM takes. In amending its procedures, SCM should consider implementing the recommendations identified in PHMSA Advisory Bulletin 05-06 (2005).

11. § 195.446 - Control room management.

(a) ...

(d) *Fatigue mitigation.* Each operator must implement the following methods to reduce the risk associated with controller fatigue that could inhibit a controller’s ability to carry out the roles and responsibilities the operator has defined:

(1) ...

(4) Establish a maximum limit on controller hours-of-service, which may provide for an emergency deviation from the maximum limit if necessary for the safe operation of a pipeline facility.

SCM’s written procedure “CRM 2-8 Fatigue Management: Shift Lengths and Rotation” is inadequate to assure safe operation of a pipeline facility because it lacks specificity on how hours of service (HOS) must be documented.⁹ During the inspection, PHMSA learned that, in practice, the SCM Operations Center Manager tracks and documents HOS on a spreadsheet. SCM must amend its procedures to explain what formal method will be used for documenting each controller’s HOS. The revised procedures must also provide information on when deviation in HOS will be approved and by whom.

12. § 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) Review SCADA safety-related alarm operations using a process that ensures alarms are accurate and support safe pipeline operations

SCM’s written procedure “CRM 2-19 Alarm Philosophy” is inadequate to assure safe operation of a pipeline facility because it lacks specificity concerning how the review of SCADA safety-related alarms will be conducted and documented, as well as how corrections should be made if the review identifies that alarms are inaccurate or do not support safe pipeline operation. For example, SCM CRM 2-19 discusses the priority levels of alarms, as well as nuisance alarms.

⁸ See, e.g., 195.446(d)(3) (requiring operators to train controllers and supervisors to recognize the effects of fatigue).

⁹ See §195.446(j) (requiring operators to maintain for review during inspection records demonstrating compliance with the requirements of §195.446).

However, nuisance alarms are just one type of potentially inaccurate or malfunctioning alarm. The procedure fails to address:

- other types of inaccurate or malfunctioning alarms;
- a timeframe for correcting malfunctioning alarms;
- different alarm designs and all alarm types/priorities;
- "calculated" vs. discrete alarms;
- disabling or removing alarms from SCADA;
- correcting alarm set points; and
- ensuring that alarm descriptions are established.

SCM must amend its procedures to provide for the review of SCADA safety-related alarm operations using a process that ensures alarms are accurate and support safe pipeline operations, addressing the deficiencies noted above.

13. § 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

SCM's written procedure "CRM 2-19 Alarm Philosophy" is inadequate to assure safe operation of a pipeline facility because it does not provide for effective controller response to alarms by failing to require verification of 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. Although SCM has a written procedure for point-to-point verification (see Item 8 above), this by itself is not verification of correct safety-related alarm set-point values and alarm descriptions. Rather, a point-to-point verification is a required part of a larger process to verify correct safety-related alarm set-point values and alarm descriptions.

SCM must amend its procedures to verify the correct safety-related alarm set-point values and alarm descriptions when associated field instruments are calibrated or changed at the requisite intervals.

14. § 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...

SCM's written procedure "CRM 1-1 Crude Oil OQ Overview Training" is inadequate to assure safe operation of a pipeline facility. Although the procedure includes "on the job" training and computer-based training, and requires the evaluator to sign off at the end, it fails to provide a syllabus of the controller activities that the training program is expected to cover, such as responding to abnormal operating conditions likely to occur simultaneously or in sequence pursuant to §195.446(h)(1), or a controller's responsibilities for communication under SCM's emergency response procedures pursuant to §195.446(h)(3). Second, it does not have a means to document a new controller's training progression to become fully qualified, nor does it indicate the expected time period for becoming qualified. SCM's training procedures also fail to define a process for reviewing the training program for potential improvements or for documenting actions taken based on the review as noted above in Item 1.

SCM must amend its procedures to provide adequate guidance and documentation for the training of controllers. Specifically, it must provide a syllabus for the controller training program, provide a means of documenting a controller's training progression, define an expected time frame for a controller to be fully qualified, and provide instruction on how to review the training program and document the review findings.

15. § 195.446 - Control room management.

(a) ...

(j) *Compliance and deviations.* An operator must maintain for review during inspection:

(1) ...

(2) Documentation to demonstrate that any deviation from the procedures required by this section was necessary for the safe operation of the pipeline facility.

SCM's written procedure "CRM 2-1 (FD) Silver Creek CRM Framework Document" is inadequate to assure safe operation of a pipeline facility because it fails to provide instruction on how to document a deviation.¹⁰ The procedure only states that the manager of the Operations Center may approve deviation without further instruction on how and why deviation may occur. SCM must amend its procedures to provide instruction on how to document a deviation to demonstrate that doing so was necessary for the safe operation of the pipeline facility.

16. § 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) ...

¹⁰ During the inspection, SCM provided this procedure to PHMSA in response to a request to review its procedures for managing deviations pursuant to § 195.446(j).

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

SCM's written control room alarm management procedures are inadequate to assure safe operation of a pipeline facility because they do not contain a procedure to address deficiencies found in SCM's alarm management plan. Although SCM's written procedure "CRM 2-19 Alarm Philosophy" contains metrics and guidance, it lacks specific instructions for documenting and correcting deficiencies. SCM must amend its procedures to provide detailed instructions to address deficiencies identified through implementation of its alarm management plan.

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 SCM 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 Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 5-2022-022-NOA** and, for each document you submit, please provide a copy in electronic format

whenever possible.

Sincerely,

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

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

cc: PHP-60 Compliance Registry
PHP-500 J. Dunphy (#21-201441)
Mary Patton, Regulatory Manager Silver Creek Midstream, mpatton@scmidstream.com