



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

901 Locust Street, Suite 480
Kansas City, MO 64106

NOTICE OF AMENDMENT

VIA ELECTRONIC MAIL TO: Jeff.pinter@nglep.com;
eric.coleman@nglep.com

May 8, 2024

Mr. Jeff Pinter
President and CEO
NGL Supply Terminal Company, LLC
6120 South Yale Avenue, Suite 1300
Tulsa, OK 74136

CPF 3-2024-039-NOA

Dear Mr. Pinter:

From June 5 to June 9, 2023, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code (U.S.C.), virtually inspected NGL Supply Terminal Company, LLC's (NGL Supply) procedures for Control Room Management (CRM) in Cushing, Oklahoma.

As a result of the inspection, PHMSA has identified the apparent inadequacies found within NGL Supply's plans or procedures. The items inspected and the inadequacies are described below:

1. **§ 195.402 Procedural manual for operations, maintenance, and emergencies.**
 - (a)
 - (d) ***Abnormal operation.*** The manual required by paragraph (a) of this section must include procedures for the following to provide safety when operating design limits have been exceeded:
 - (1) Responding to, investigating, and correcting the cause of:
 - (i) Unintended closure of valves or shutdowns;
 - (ii) Increase or decrease in pressure or flow rate outside normal operating limits;
 - (iii) Loss of communications;
 - (iv) Operation of any safety device;
 - (v) Any other malfunction of a component, deviation from normal operation, or personnel error which could cause a hazard to persons or property.

NGL Supply's O&M Procedure, section 13, entitled "Abnormal Operations," dated July 1, 2022, was not adequate because it did not require field personnel to call the control room when operating design limits were exceeded, as prescribed in § 195.402(d)(1)(i)-(v). Section 13 directed field personnel to call the operations supervisor, who was also not instructed to call the control room. Information needs to flow to the controller to provide for a controller's prompt and appropriate response to operating conditions, even if the controller is not the first to detect the condition. Section 195.402(c)(15) requires an operator to implement the applicable control room management procedures required by § 195.446.

The O&M Procedure section 13 needs to be amended to include the requirement for field personnel to contact the control room upon the discovery of an abnormal operation, as defined by § 195.402(d)(1)(i)-(v).

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....

NGL Supply's "NGL Crude Terminals Control Centers Control Room Management Plan," Revision 3, Issued May 9, 2023 (CRM Plan), was not adequate to provide a process for control room determination. Section 1.7.4 of the CRM Plan only provided a statement of where the control center is located. The procedure needs to consider all locations where there is a SCADA system that can monitor and control jurisdictional pipeline facilities.

The procedure needs to be amended to provide a process that evaluates each location where there is a SCADA system that can monitor and control jurisdictional pipeline facilities with criteria to support determination of control rooms.

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....

(b)

(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) Implement API RP 1165 (incorporated by reference, *see* § 195.3) whenever a SCADA system is added, expanded or replaced, unless the operator demonstrates that certain provisions of API RP 1165 are not practical for the SCADA system used;

NGL Supply's CRM Plan was not adequate to clearly define when a SCADA system is added, expanded, or replaced to appropriately ensure API RP 1165 is implemented. Section 3.1 stated, "[l]atest approved version of API 1165 (latest approved version)." The version incorporated by reference in the regulations is identified in § 195.3(b)(9) as the First Edition, January 2007. Section 6.1.4, "System/Processes Undergoing Change," of the CRM Plan identified details on changes that require implementation of the MOC process, which included (1) Control System Changes and (2) SCADA System Changes. While many of these types of changes may relate to addition, expansion, or replacement, as addressed in § 194.446(c)(1), these procedure did not address when API RP 1165 must be implemented. Additionally, there was no tie between section 3 and section 6 of the CRM Plan to make sure API RP 1165 will be implemented.

The procedure needs to be amended to define what a SCADA system addition, expansion, and replacement means to the operator. The procedure also needs to include the requirement to document the deviation if certain provisions of API RP 1165 are not practical for the SCADA system. The procedure needs to make the tie between section 3 and section 6 of the CRM Plan, through reference between the MOC process and the intended API RP 1165 standard for compliance. The correct API RP 1165 version needs to be referenced.

4. § 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....

(b)

(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.

NGL Supply's records failed to demonstrate it performed an adequate point-to-point (P2P) verification. Such records were required to be maintained by § 195.446(j)(1). A review of several Incoming data/Outgoing data (I/O) checkout records for various facilities (Block valve 6, Block valve 12, Kalkaska, Lapeer, Wheeler) indicated P2P verification was completed and documented by mapping between SCADA and Programmable Logic Controller (PLC). The P2P verification record failed to include whether (1) the point was verified by live testing or simulation, (2) all screens the point presented on in SCADA were verified, and (3) alarms were presented in SCADA with the correct priority. Additionally, the document did not include color and alarm descriptions. Some points provided a verification between field and SCADA of a current value

or status; for example, a comparison of pressure or valve status – but this lacked consistency between records. The document had a “Discrete I/O tab” which provided designations “As Designed Setpoint” and “As Left Setpoint;” but there was no data in these cells. The “Analog IO tab” offered set point values from “Low Low” through “High High.” It is not clear whether these set point values were verified or whether these values were information to verify values.

NGL Supply’s CRM Plan sections 3.2.2 and 3.2.3 for P2P verifications were not adequate and contributed to this failure because they were written at a very high level and did not represent NGL Supply’s actual practice for P2P verification. The procedure “I/O Verification,” approved May 8, 2023, was developed and used by SCADA for P2P/IO checkout but was not referenced in the CRM Plan sections 3.2.2. and 3.2.3. The “I/O Verification” procedure provided detail of how to conduct a test for each device and should have been included in the CRM Plan. The “I/O Verification” procedure was missing the documentation process that needed to include what form to use and what to specifically record. As such, NGL Supply’s procedures were not in compliance with § 195.446(c)(2).

Furthermore, a review of P2P records identified the verification failed to include whether (1) the point was verified by live testing or simulation, (2) all screens the point presented on in SCADA were verified, and (3) alarms were presented in SCADA with the correct priority. Additionally, the document did not include color and alarm descriptions. Some points provided a verification between field and SCADA of a current value or status; for example, a comparison of pressure or valve status – but this lacked consistency between records. The document had a “Discrete I/O tab” which provided designations “As Designed Setpoint” and “As Left Setpoint;” but there was no data in these cells. The “Analog IO tab” offered set point values from “Low Low” through “High High.” It is not clear whether these set point values were verified or whether these values were information to verify values. All the P2P verification elements and the process to complete the form should have been defined in the procedure.

The procedure needs to be amended to include reference to the form to be used to document the P2P verification. The procedure needs to include all elements to be verified that also includes (1) the point was verified by live testing or simulation, (2) all screens the point presented on in SCADA were verified, and (3) alarms were presented in SCADA with the correct priority. Analogue values between field and SCADA as well as status points that are tested need to be documented. There also needs to be instructions on how to complete a thorough P2P to support compliance.

5. §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. . . .

(b)

(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)

(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.

NGL Supply's CRM Plan did not provide an adequate internal communication plan (ICP) 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.

The ICP did not include consideration for manually managing leak detection whether the decision is to continue to move product through the system or shut down and not move product. The ICP was also missing key system points to monitor and report to the control room that represented enough information to manually operate the pipeline safely. While CRM Plan section 3.3.4 identified some field points to monitor, the plan lacked specific points for the designated systems. This also included an interval requirement for reporting the information from the field. Section 3.3.1.3 incorrectly stated the interval as "annually" not to exceed 15 months, rather than "once each calendar year."

Additionally, sections 2.2.4 and 3.3.4 of the CRM Plan did not provide any parameters around how long a controller was to wait before taking action in the event of loss of communications or SCADA failure. Controllers are trained to contact SCADA and wait 15 minutes before moving to implement the manual operations plan. This is a control room practice and not supported in procedure.

The ICP must be amended to recognize the two different modes of operation: flowing product or not flowing product. A method of leak detection needs to be provided that includes reporting and response. Specific monitoring points, adequate to support manual safe operation of the pipeline, as well as intervals to report to the control room for documentation, analysis and response, need to be provided. Additionally, procedures need to include a time parameter for how long after loss of communication or loss of SCADA the controller should wait before implementing the manual operation plan. Lastly, correction of the interval of "annual" to "calendar year" is necessary.

6. §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. . . .

(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.

NGL Supply's CRM Plan was not adequate to provide 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 in the event a controller is not able to complete a shift. Section 2.4.7 of the CRM Plan, entitled "Controller Unable to Complete Shift," required the supervisor to find the replacement managing the hours of service (HOS) and document any deviations. The expectation of this process was that the individual must stay on the console until relieved. Then, if the person cannot stay until relieved, NGL Supply control operations would revert to the manual operation plan. This was not mentioned in the procedure but was described during the inspection as what controllers and field do in practice. Also, the CRM Plan did not mention a shift change requirement as required by § 195.446(b)(4). Following this section was section 2.4.8, entitled "Temporary Relief," which considered the condition of a controller requiring relief from the console. This did require a mid-day shift change. In summary, the practice described by the Control Room Manager was different than what was outlined in sections 2.4.7 and 2.4.8.

The procedure needs to be amended to provide greater detail on the expectation for when a controller leaves the console either for a temporary break or because they cannot continue on the shift due to emergency conditions. This procedure needs to include considerations for shut down if a suitable replacement cannot be found, shift exchange information, managing hours of service, and where practices are in place, if appropriate, memorialization of them into the procedure to effectively implement methods to reduce the risk associated with controller fatigue that could inhibit a controller's ability to carry out their roles and responsibilities.

7. §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. . . .

(b)

(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.

NGL Supply's CRM Plan was not adequate to demonstrate NGL Supply had verified the correct safety-related alarm set-point values and alarm descriptions when associated field instruments were calibrated or changed. Specifically, CRM Plan section 5.6.2 only required the review of safety-related alarms once each calendar year, not to exceed 15 months, and was silent on the requirement for safety-related alarm set points and descriptions, as well as when field instruments are calibrated or changed. The procedure was also missing the process that included the controllers roles and responsibilities for this task, as well as documentation and verification.

Procedure PTC-HL001, entitled “Pressure Transmitter Device Calibration,” dated July 10, 2019 (PTC HL001), did not include verifying with the control room the set points when the equipment was calibrated.

The procedure needs to be amended to include all the requirements identified in § 195.446(e)(3), as well as a process for the controllers to follow to complete and document the verification. Also, PTC HL001 must be amended to include the requirement that the correct safety related set points are verified and documented with the field.

8. §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. . . .

(b)

(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.

The CRM Plan was not adequate to demonstrate that it considered all the content and volume of general activity being directed to and required of each controller that will assure controllers have sufficient time to analyze and react to incoming alarms. Specifically, section 11.7 established the requirement for the work load review. The procedure listed five items to be included in the review. These review elements were: (1) volume of alarms, (2) volume of nuisance or “bad actor” alarms, (3) volume of states of alarm flood, (4) volume of operational events, and (5) operational changes increasing or decreasing the number of alarms. The procedure stated the review “is not limited to” these five items. All of the five identified items pertained to the volume of alarms, which required controller actions (assumed time component). One of the five items provided consideration for operational events, which may be set points, but this was not clear. The workload review did not include other controller activities such as phone calls, sending commands, acknowledging alarms, report completion, monitoring, scheduling, training, reading, and any other activity that may be unique for the control room. The operator did not have a form to guide review or detailed instructions on how to conduct the review. The operator had no bench mark or relationship to time spent on activities to determine “sufficient time to analyze and react to incoming alarms.”

The procedure needs to be amended to identify all content and volume of general activity being directed to and required of each controller and establish a benchmark as to what designates sufficient time to analyze and react to incoming alarms. The procedure also needs to include the

process for completing the review, as well as how the review, results, and determination will be documented and recorded.

9. §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. . . .

(b)

(g) *Operating experience.* Each operator must assure that lessons learned from its operating experience are incorporated, as appropriate, into its control room management procedures by performing each of the following:

(1) Review accidents that must be reported pursuant to §§ 195.50 and 195.52 to determine if control room actions contributed to the event and, if so, correct, where necessary, deficiencies related to:

(i) Controller fatigue;

NGL Supply's CRM Plan was not adequate to determine if control room actions contributed to the event due to deficiencies related to controller fatigue. Section 4.1.10.2 provided a process to ask probative questions that support evaluation of a controller's potential fatigue level. This included: (1) hours of work for the preceding seven days, (2) hours of sleep in the past 24 hours, past 48 Hours, past 72 hours, (3) hours on duty at time of accident, (4) hours since last sleep, and (5) time accident occurred, with particular attention if it occurred during periods of reduced alertness. How this information was gathered and documented and the process to evaluate if fatigue was a factor were missing from the procedure. The operator indicated they used Form 4 "AOC Report," however there was nothing on that form related to fatigue or the questions and information gathered in section 4.1.10.2.

The procedure needs to be amended to include a form and method to determine a controller's fatigue level and to determine if control room actions contributed to the reported accident and, if so, correct, where necessary, deficiencies related to controller fatigue.

10. §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. . . .

(b)

(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:

NGL Supply's CRM Plan was not adequate because it did not provide a process to review the training program content to identify potential improvements. Section 8.1.1.3 stated the training program "[i]s to be maintained by reviewing it at least once each calendar year, but at intervals not to exceed 15 months and in a manner that identifies continuous process improvement opportunities. The review shall ensure that documents, procedures, records and other information are current and accessible." However, § 195.446(h) requires that an operator have a training program and that the content be reviewed to identify potential improvements. The review was recorded through Form 9. This review included many elements that relate more to effectiveness of training. This type of review could identify if there were gaps in skills/knowledge/transfer of training. Those gaps could lead to evaluating training content. However, the form and process did not get to the heart of training content review, which evaluates the content to verify it addresses all knowledge, tasks and skills required for the controller to carry out their roles and responsibilities as defined by the operator.

The regulation also requires the training program to provide training for the controller to carry out their roles and responsibilities. If over the course of the year, roles and responsibilities have been added or eliminated, then the training content must be reviewed to verify there is content to cover that activity or the content is removed.

The procedure needs to be amended to include a process for reviewing the content to ensure it provides training controllers in their roles and responsibilities. It must also include identification of the findings, and documentation of modification to findings to identify potential improvements.

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 § 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 that NGL Supply 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 3-2024-039-NOA** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

GREGORY ALAN OCHS Digitally signed by GREGORY ALAN OCHS
Date: 2024.05.08 15:25:52 -05'00'

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

cc: Eric Coleman, Director Operations-Compliance, NGL Supply, eric.coleman@nglep.com

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