



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: rjstamour@marathonpetroleum.com;
mlbailey@marathonpetroleum.com

September 26, 2024

Mr. Richard St Amour, President
Marathon Pipe Line LLC
539 South Main Street
Findlay, OH 45840

CPF 3-2024-055-NOA

Dear Mr. St Amour:

From April 17 to May 17, 2023, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code (U.S.C.), inspected Marathon Pipeline LLC's (Marathon) procedures for Control Room Management in Findlay, Ohio.

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

1. § 195.444 Leak detection.

(a) *Scope.* Except for offshore gathering and regulated rural gathering pipelines, this section applies to all hazardous liquid pipelines transporting liquid in single phase (without gas in the liquid).

(b)

(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.

Marathon's procedure, entitled "MPL - Leak Detection Program (MPL-GEN-01211-POL)," was not adequate to demonstrate compliance with API RP 1130 section 6.2 (incorporated by reference) and, therefore, was out of compliance with § 195.444(c). Specifically, Marathon did not have procedures that described how the system would be tested or maintained, or how operational data would be continued to be confirmed.

Additionally, Marathon's procedures did not address both the SimSuite RTTM and the SimSuite Stub Line application of flow in/flow out without line pack. The procedure did not include nor require documentation of which of the aspects of API RP 1130 section 4.2 would be implemented by either system and it did not describe the outputs, dynamic alarming, and how the system has been determined to be operating effectively. Record keeping was also not described in a manner specific to either leak detection system, including that for initial test records, periodic test records, or maintenance aspects.

While Marathon did have a process implemented for temporary and permanent changes to its CPM system, the process Marathon used to review and implement these changes has not been documented for the leak detection system. For example, a change can be identified by a controller and exchanged (by email or verbally), identified during a monthly review of CPM alarms performed by the Hydraulic and Leak Detection department and follow-up management meetings as well, or as the outcome of an incident/accident investigation process where the outcome has recommendations that result in the Opportunity for Improvement to be implemented. As described by Marathon during the inspection, Marathon did not have a procedure to track whether controllers were made aware of unusual situations when a CPM Specialist would force a value in the CPM system without the controller's knowledge. Marathon's procedure did not require communication with the controller or communication between controllers during the shift change. Change management and communication to the controller is required by § 195.446(f) and therefore needs to be in Marathon's procedures.

Marathon also had procedures that were developed and modified as needed in OneNote format. These procedures were not formalized nor approved in the Marathon library of procedures. These procedures, while not written in Marathon's "MPL - Leak Detection Program (MPL-GEN-01211-POL)," were referenced and used for important tasks.

Marathon's procedures must be amended to describe how the system will be tested and maintained and how operational data will be continued to be confirmed. Marathon's procedures also need to include the method of documenting and recording how API RP 1130 section 4.2 will be implemented when a system is selected to determine and record it is operating effectively and how it will be initially tested, undergo periodic tests, and maintained on an ongoing basis, as well as recording the tests. Marathon's procedures must also include a description of the practice in place to document temporary and permanent changes to the CPM system that also includes communication to controllers unusual situations that may occur which a controller may not be aware of, such as when a CPM Specialist would force a value in the CPM system. The CPM manual also needs to be updated with the OneNote information and re-established.

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

(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;

Marathon's procedure, entitled "MPL Pipeline Operations Center Control Room Management Plan, Effective Date: 08/25/2022" (CRM Plan), was not adequate because it did not define the controller's authority and responsibility to make decisions and take actions during normal operations when controllers assigned to the project desk moved systems from and back to the primary controller console, per § 195.446(b)(1).

The CRM Plan needs to be amended to include what conditions prompt moving systems from the primary console to the project desk and how responsibilities for systems shift when moved to and returned from the project desk. For example, the procedure needs to define for the systems transferred to the project desk the roles, responsibilities, and authority for the controller to send commands, respond to alarms, dispatch field personnel, or make emergency notifications. Consideration must also be provided for shift change whenever systems are changed between consoles and if monitoring extends over normal shift period changes.

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.

Marathon's CRM Plan was not adequate to define when API RP 1165 (incorporated by reference) was to be implemented whenever a SCADA system is added, expanded, or replaced, per § 195.446(c)(1). Additionally, the procedure did not provide a method to verify that API RP 1165 had been implemented. CRM Plan section 5.5 did not provide definitions or examples of added, expanded, or replaced to guide when API RP 1165 must be implemented.

Section 5.4 stated, "each SCADA Display Style Guide documents how the various suggestions and recommended practices contained in API RP 1165 edition 1 have been incorporated into MPL's SCADA system as well as recommended SCADA administration directives contained in API RP 1165 edition 1." Marathon's position was that since the SCADA Display Style Guide demonstrated compliance with the recommended practices of API RP 1165, Marathon

implemented its style guide in its SCADA design. What the procedure did not include was a verification process that API RP 1165 continued to be implemented when there were additions, expansions, or replacements to the SCADA system.

The procedure needs to be amended to provide definitions and examples for added, expanded, and replaced as well as a process to verify API RP 1165 was implemented when there are additions, expansions, or replacements to the SCADA system. This should also include verification of the SCADA Display Style Guide when amendments are made that relate to suggestions and recommended practices contained in API RP 1165.

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)

(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;

Marathon's CRM Plan was not adequate to distinguish all points that were categorized as safety related in the SCADA database and how, from this list, safety related alarms and set points are determined, per § 195.446(e)(1). PHMSA reviewed Marathon's Safety Related SCADA Points implemented in the SCADA database related to flow, cavern pressures, and cavern levels and determined that these points were not included in the list of safety related points provided in section 10 of "MPL - SCADA and Field Control Systems Point-to-Point Verification Process (MPL-OPR-01598-PRS) Effective Date: 06/30/2023." Section 11.4 of Marathon's "MPL Pipeline Operations Center Alarm Management Effective Date: 05/02/2023" (ALMP) referenced this section as, "[T]he list of safety related points." Points were aggregated into naming groups, for example, Leak Detection, Mainline Pressures and Flow Rates and Tank Elevations. The points had a variety of names that describe these categories. A review of the SCADA Safety Related Alarm List indicated that one of the naming groups, CPM Leak Warning, was not a safety related alarm. In the data base, there were several alarms that may have been the same event, but were described differently. The alarms: Leak Flow Average Period (1-4), Volume Difference Average Period (1-4), and Flow Difference Average Period (1-4) all could be referring to the same event and it was unclear in Marathon's procedure what they referred to.

Section 11.3 of the ALMP provided a simple 4 step process to determine which alarms received by the Pipeline Operations Center (POC) would be classified as Safety Related Alarms. These steps were: (1) Identify (Plan), (2) Evaluate (Do), (3) Integrate (Check), and (4) Audit (Adjust). There was no further reference or guidance on what these steps entail. Section 18.4, titled "Alarm Justification Process," stated, "[t]he justification process includes determining if the

alarm should be designated as a Safety Related Alarm.” Step 4 of this process stated, “ANSWER the justification questions to determine if the new or modified alarm fits the requirements to be considered a Safety Related alarm.” The procedure seemed to require some type of document that provided very specific questions with associated scoring for the various determinations, but this was not referenced in the procedure. Section 11.5 of the ALMP provided criteria to determine if the alarms are safety related. It was unclear if this section related to Section 18 of the ALMP. While Marathon may have an expanded practice for safety related alarm determination it was not fully formalized in procedure.

The procedure must be amended to include all safety related points implemented in the data base and further define the process for determination of safety related alarms.

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) 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.

Marathon’s ALMP was not adequate to provide a monthly review of points affecting safety that had had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities per § 195.446(e)(2). Specifically, section 23.3 of the ALMP required monthly review of: (1) Alarms were forced to a manual value, (2) Alarms were inhibited, (3) Alarms were taken off scan (4) False/Malfunctioning Alarms. Section 195.446(e)(2) requires review of points affecting safety which may have a direct result on alarming. Additionally, the operator was pulling from the SCADA data base using a third party solution. Thus, the field can place points off scan or forced/manual so the information to the controller is not displaying live information. Manual or forced points in field programmable logic controllers (PLCs) were not being identified and reviewed in the monthly review activity.

Additionally, these data related to the various reviews of these conditions were to be measured “[a]gainst the KPI Metrics and Targets identified in the Alarm Philosophy.” Section 12 of the ALMP did not meet the requirements of § 195.446(e)(2) which requires operators to review their SCADA events and logs related to these conditions and to verify the conditions did not exist “[f]or periods of time exceeding that required for associated maintenance or operating activities.” The ALMP is missing this requirement.

Marathon's procedure needs to be amended to correct the monthly review requirement from alarms to points where appropriate. The process also needs to be amended to include identification of points affecting safety that were placed in forced or manual in field devices for periods of time exceeding that required for associated maintenance or operating activities. This also must include the date the points were taken off scan, placed in forced or manual mode, had the alarm inhibited and when they were returned to normal state to support the review and analysis to verify the conditions did not exist for periods of time exceeding that required for associated maintenance or operating activities.

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

(e)

(f) 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.

Marathon's ALMP was not adequate to define how deficiencies identified through the implementation §§ 195.446(e)(1) through (e)(5) would be addressed. Section 23.5, entitled "Alarm Deficiencies," defined a deficiency as "1) An instance where a KPI metric fails to meet the identified target value or 2) A post-incident investigation where the root cause or a contributing cause was determined to be the SCADA alarm system or the controller's usage of the SCADA alarm system." Section 23.6 provided a process for resolving monthly alarm deficiencies. This is a very simple 4-step process.

However, in practice, controllers reported issues related to SCADA and issues on alarm maintenance through a ticket process. This could include malfunctioning alarms, repeating communication issues or false alarms. Neither aspect seemed to be tracked to completion as work orders or tickets could be accepted or not for maintenance in the field by supervisors. Different ticket systems existed for different locations, and there was no person assigned to verify that issues were addressed promptly.

Marathon's procedures need to be amended to describe how deficiencies identified in the alarm management plan effectiveness review, monthly safety related points review, and review of alarm set point and descriptions and general daily operating conditions need to be addressed in how they will be documented and corrected when identified. There may be a variety of methods depending upon the deficiency finding. Procedures need to include the ticketing practice in place as well as periodic review and action plans to correct deficiencies.

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

(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:

(1)

(5) For pipeline operating setups that are periodically, but infrequently used, providing an opportunity for controllers to review relevant procedures in advance of their application; and

Marathon's procedures were not adequate to demonstrate compliance with § 195.446(h)(5). Marathon's CRM plan section 19.3 stated that, "[t]raining for controllers to carry out their roles and responsibilities, include[es]:...[t]raining on pipeline operating set-ups that are periodically, but infrequently used...[and] [r]eviewing operating procedures in advance of their use." Section 10.4 of "MPL Pipeline Operations Center Training and Qualification Program" stated, "[A]n infrequently used procedure is defined as a procedure that a Controller has not performed frequently enough to be comfortable with executing. In such cases, the Controller will need to review the procedure and seek out additional information, if necessary, before executing. Procedures for all approved operations exist and are accessible through the eDoc (reference) system. Controllers are trained to access and review infrequently used procedures when discussing the eDoc system during their initial training."

What was missing from these procedures is a reference to Marathon's scheduling system, called Polaris practice, executed from scheduling. There were routes schedulers had to select for the batch. If that route had not been executed within the last 24 months it was flagged for the controllers to pull up a Pipeline Management of Change (PMOC) and signals to SCADA to make sure there weren't any changes over the last two years that would impact the POC ability to make that move. The procedure did not provide enough detail to adequately capture Marathon's actual practices. Marathon considers all procedures as current, even if not used for 24 or more months. The controller needs to be alerted through the Polaris system to determine if it is infrequent to review the procedure. This Polaris practice was not a procedure in the CRM plan.

The procedure needs to be amended to provide a detail process of Marathon's Polaris practice currently executed from scheduling to support review of the appropriate routing operating procedure, how the controller is alerted to the condition and ample time for the controller to review and ask questions.

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 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 Marathon 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 Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 3-2024-055-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: Mandy Bailey, Marathon Regulatory Compliance Manager for PHMSA Central Region,
mlbailey@marathonpetroleum.com

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