



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

901 Locust Street, Suite 480
Kansas City, MO 64106

**NOTICE OF PROBABLE VIOLATION
PROPOSED CIVIL PENALTY
and
PROPOSED COMPLIANCE ORDER**

VIA ELECTRONIC MAIL TO: david.slater@dtmidstream.com;
philip.coleman@dtmidstream.com

May 12, 2022

Mr. David Slater
DTE Midstream Appalachia, LLC
President/CEO
50 Woodward Avenue, Suite 2900
Detroit, MI 48226

CPF 3-2022-047-NOPV

Dear Mr. Slater:

From August 23 to August 27, 2021, 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.), inspected DTE Midstream Appalachia, LLC's (DTM) Control Room Management procedures and records in Detroit, Michigan.

As a result of the inspection, it is alleged that DTM has committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations (CFR). The items inspected and the probable violations are:

1. § 192.631 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:

DTE Midstream Appalachia's (DTM) CRM Plan and Operator Qualification Plan were inadequate because they allowed a 1:2 (1 qualified controller : 2 unqualified controllers) span of control during the on-the-job training (OJT) of controllers. 49 C.F.R. § 192.805(c) states an operator's plan shall include provisions to ". . . allow individuals that are not qualified pursuant to this subpart to perform a covered task if directed and observed by an individual that is qualified." The critical words here being "directed and observed." DTM's 1:2 span of control did not provide conditions where the senior controller (qualified trainer) was free and available to monitor the controller to direct and observe their actions and be ready to respond to, and address, situations that might arise. This is because the unqualified controller trainee was independently monitoring and controlling their own console while the qualified controller trainer was operating a separate console. This practice is not appropriate for the safe operation of a pipeline system.

A review of various shift schedules provided by DTM from 2019 and 2021, identified 40 different days where unqualified controllers were operating the DTE Midstream Appalachian Birdsboro Pipeline on the Blue Stone (BSP) console independently while the senior controller was operating a separate console in the DTE Detroit (DTE) control room. Of these 40 days, 4 days identified that two unqualified controllers were operating under one senior controller, all on different consoles. Of the other 36 days, two or more senior controllers were on shift operating separate consoles with the unqualified controllers.

DTM's CRM Plan defined a Non-Qualified Gas Controller as "[A]n individual that performs all the same actions as a Senior or Principal Gas Control under the Senior or Principal Gas Controller's guidance and direction". A Qualified Gas Controller was defined as "[A]n individual that has been evaluated and can perform assigned Covered Tasks and recognize and react to Abnormal Operating Conditions (AOC) without the guidance and direction of a Senior or Principal Gas Controller". With the Senior Controller operating his/her own system(s), it is not realistic to direct, observe or guide the unqualified trainee to support the safe operation of the pipeline. A review of Figure 1: Main Control Room Layout in the CRM Plan identified that controller consoles were spaced too far apart and that the qualified controllers would not be able to recognize and direct/react to abnormal operations that may arise on another console. If the Senior Controller is attentive to his/her console, then he/she cannot be attentive to the unqualified controller's console.

The concept of span of control, when considering controller OJT training, must consider that the qualified controller is the one responsible and accountable for monitoring and controlling a console and the systems related to that console. Through their observation of the system, via SCADA, and the observation of the trainee's actions, the qualified controller recognizes and directs the actions of the controller. While the trainee is the one sending set points, opening valves, and responding to alarms, they are making these changes with the permission of, and by the direction of, the qualified controller through direct observation.

The operator's 1:2 span of control, combined with their practice of the trainer (senior controller) monitoring and controlling their own console, in addition to up to 2 controller trainees who are also independently operating their own systems, means that the senior controller is operating a total of 2 to 3 separate consoles which is not conducive for the safe operation of the pipeline.

Additionally, ASME B31Q is a standard available to operators to guide them when considering task development and span of control. B31Q, Task 1371 Operate Gas Pipeline - System Control Center Operations suggests a span of control as 1:1. There is also a rating for importance and difficulty of the task of 4 and 5, respectively. For comparison, if one considers tasks that are recommended 1:2 span of control, these include typical difficulty and importance ratings of 3 and 4 respectively. Examples of tasks with 1:2 span of control include Tasks 0321 Valve Corrective Maintenance, 0481 Centrifugal Compressor Inspection, Testing and Maintenance and 0581 Pressure Test: Liquid Medium.

A review of the shift schedules verified that the unqualified controller trainees were not assigned to a specific trainer for any length of time. Additionally, while one or more senior controller(s) was assigned to a shift, the trainee did not have the same person as the trainer for more than 3 or 4 days in a row. With DTE's practice of unstructured and undocumented OJT training, it would be difficult for a trainer to know where a trainee was in their knowledge and skill of pipeline operations. There was no training log to communicate the trainee's status and competencies/deficiencies between the senior controllers overseeing the unqualified controller trainee. This console rotational practice emphasizes the need for a 1:1 span of control.

2. § 192.631 Control room management.

(a)

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

(1) **Implement sections 1, 4, 8, 9, 11.1, 11.3 of API RP 1165 (incorporated by reference, see § 192.7) whenever a SCADA system is added, expanded or replaced, unless the operator demonstrates that certain provisions of sections 1, 4, 8, 9, 11.1, 11.3 of API RP 1165 are not practical for the SCADA system used;**

DTM failed to verify that sections of API RP 1165 provided in § 192.631(c)(1) were implemented in their SCADA system. DTM indicated they developed the SCADA Style Guide to meet the prescribed requirements of API 1165 and the SCADA screens were designed from the Style Guide requirements. DTM has not performed an audit or documented comparison of their SCADA Style Guide to verify the SCADA system and screens perform as required by the prescribed sections of API 1165, per its Style Guide.

3. § 192.631 Control room management.

(a)

(e) ***Alarm management.*** Each operator using a SCADA system must have a written alarm management plan to provide for effective controller response to alarms. An operator's plan must include provisions to:

(1) Review SCADA safety-related alarm operations using a process that ensures alarms are accurate and support safe pipeline operations;

DTM failed to implement, in their SCADA system, designations of safety-related alarms that were readily available to the controller, and supported effective controller response to alarms for safe operations of the pipeline. At the time of the inspection, procedures were inadequate because they did not provide guidance for effective controller response to alarms. DTM supports many procedures related to how to address specific alarms, but it did not have one related to general alarm handling. For example, if multiple alarms of priority 1, then priority 2, then priority 3 are presented, the procedures do not address which priority the controller should handle first. If three priority 3 alarms are presented and 1 is safety related, the procedures do not provide guidance. The procedures also do not address when alarms should be acknowledged. This type of procedure was not available in the alarm management plan, nor was it included in the training documentation.

After the inspection, DTM developed a procedure TP0 Alarm Response Revision date 10/12/2021. This procedure provided both general and specific alarm handling and response. In section 1.2 of the procedure, the procedure stated, "[I]n general, alarms will be addressed based on the timestamp in the alarm summary display. Higher priority alarms will take precedence over lower priority alarms regardless of timestamp. If there are multiple alarms under the same priority, the safety related points will be priorities first based on timestamp."

DTM had a rigorous alarm rationalization process described in Sections 500 and 600 of the Alarm Management Plan Version 2.5 July/12/2021. Within this plan, there are 5 priority levels (1-5) represented by different colors. Priority 1 is the highest priority and is distinguished by the color red. Through rationalization this priority represents a risk that could result in loss of human life, whereas Priority 2 is orange and relates to human injury and/or environmental consequences outside the facility boundary.

Section 602 states "Alarm priority is determined by estimating the system impact if no action is taken by a Gas Controller in response to the alarm. Each alarm is rationalized in four categories: (1) human impact; (2) environmental impact; (3) customer impact; and (4) financial impact. Each category escalates from low severity to high severity." There are 6 severity levels (0-5), with 5 being the highest severity rating, are identified in Table 2 of the section. The section also considers Alarm Impact Seventies and Priority. Table 3, of the section shows the alarm priority based on the assigned severity in each category. The highest alarm priority in any category is maintained as the overall priority for the alarm.

Using the information from Table 3, safety-related alarms "are established based on the category severity and type of point. If an alarm is rationalized to include any personal injury or death (4 or 5 severity rating for human impact) and/or environmental impact outside of a facility boundary

(4 or 5 severity rating for environmental impact), then an alarm is determined to be safety-related. In addition, all high-high pressures, low-low pressures and odorant alarms are safety related regardless of priority”. When reviewing the Alarm Log Screen in SCADA, it was evident that safety-related alarms were presenting on the alarm screens in multiple priorities and, thus, multiple colors.

The description of the alarms did not carry any notation or language that would distinguish for the controller that it was a safety-related alarm. The point face plate did not readily distinguish that the point was safety related. But this information could be obtained by “poking “into a sub-file information. Also, there was a filter available for safety-related alarms, but this was not functioning.

4. § 192.631 Control room management.

(a)

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

(1)....

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

DTM failed to test the whole of their back up SCADA system for calendar years 2019 and 2020. During these years, DTM only tested the backup servers. On June 1, 2021, DTM amended its procedure GCCRM-340 Alternate SCADA Server Test to include testing of the backup control center. Section 192.631(c)(4) requires operators to test any backup SCADA systems at least once each calendar year, not to exceed 15 months. The backup control center includes HMI's connected to the SCADA servers, as well as the facilities and equipment used to facilitate back up control operations – all this is considered part of the system.

5. § 192.631 Control room management.

(a)

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

(1) Records that demonstrate compliance with the requirements of this section.

DTM failed to provide the records regarding the Reading and Discussion Check lists for two controller trainees and DTM Section 1400 - Training Documentation of the Training Manual, as required by § 192.631(j)(1).

Proposed Civil Penalty

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed \$239,142 per violation per day the violation persists, up to a maximum of \$2,391,412 for a related series of violations. For violation occurring on or after May 3, 2021 and before March 21, 2022, the maximum penalty may not exceed \$225,134 per violation per day the violation persists, up to a maximum of \$2,251,334 for a related series of violations. For violation occurring on or after January 11, 2021 and before May 3, 2021, the maximum penalty may not exceed \$222,504 per violation per day the violation persists, up to a maximum of \$2,225,034 for a related series of violations. For violation occurring on or after July 31, 2019 and before January 11, 2021, the maximum penalty may not exceed \$218,647 per violation per day the violation persists, up to a maximum of \$2,186,465 for a related series of violations. For violation occurring on or after November 27, 2018 and before July 31, 2019, the maximum penalty may not exceed \$213,268 per violation per day, with a maximum penalty not to exceed \$2,132,679. For violation occurring on or after November 2, 2015 and before November 27, 2018, the maximum penalty may not exceed \$209,002 per violation per day, with a maximum penalty not to exceed \$2,090,022.

We have reviewed the circumstances and supporting documentation involved for the above probable violation and recommend that you be preliminarily assessed a civil penalty of \$5,800 as follows:

<u>Item number</u>	<u>PENALTY</u>
4	\$5,800

Warning Item

With respect to item 5, we have reviewed the circumstances and supporting documents involved in this case and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to promptly correct this item. Failure to do so may result in additional enforcement action.

Proposed Compliance Order

With respect to items 1, 2, 3 and 4, pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to DTE Midstream Appalachia, LLC. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Response to this Notice

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. All material you submit in response to this enforcement action may be 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, or request a hearing under 49 CFR § 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 a Final Order. If you are responding to this Notice, we propose that you submit your correspondence to my office within 30 days from receipt of this Notice. This period may be extended by written request for good cause.

In your correspondence on this matter, please refer to **CPF 3-2022-047-NOPV** 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: Philip Coleman Director, Codes & Regulatory, philip.coleman@dtmidstream.com

Enclosures: *Proposed Compliance Order*
Response Options for Pipeline Operators in Enforcement Proceedings

PROPOSED COMPLIANCE ORDER

Pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) proposes to issue to DTE Midstream Appalachia, LLC (DTM) a Compliance Order incorporating the following remedial requirements to ensure the compliance of DTM with the pipeline safety regulations:

- A. In regard to Item 1 of the Notice pertaining to inadequacies of the Controller Training Plan and Operator Qualification (OQ) plan because DTM allowed a 1:2 (1 qualified controller : 2 unqualified controllers) span of control during the on the job training (OJT) of controllers, DTM must amend the CRM plan, procedures, practices and OQ Plan to support a 1:1 span of control for pipeline controllers and disallowing the qualified controller trainer from operating an independent console from the unqualified trainee within **180** days of receipt of the Final Order.
- B. In regard to Item 2 of the Notice pertaining to failing to verify implementation of the required sections of API RP 1165 in their SCADA system, DTM must verify through audit or other means that sections 1, 4, 8, 9, 11.1, 11.3 of API RP 1165 were implemented in their SCADA system (as incorporated by reference, see § 192.7) within **90** days of receipt of the Final Order.
- C. In regard to Item 3 of the Notice pertaining to failing to implement, in their SCADA system, designations of safety related alarms that were readily available to the controller and supported effective controller response to alarms for safe operations of the pipeline, DTM must include a safety related notation in the SCADA alarm description or provide an alternate means for the controller to readily determine whether an alarm is safety related within **90** days of receipt of the Final Order.
- D. In regard to Item 4 of the Notice pertaining to failing to test the whole of DTM's SCADA backup system for the years 2019 and 2020, DTM must provide PHMSA documentation of the back up SCADA system tests for the years 2021 and 2022. The records must include the check lists verifying the functionality of the various back up SCADA and control room systems within **90** days of receipt of the Final Order.
- E. It is requested that DTM maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Gregory A. Ochs, Director, Central Region, Pipeline and Hazardous Materials Safety Administration. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.