



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

901 Locust Street, Suite 480
Kansas City, MO 64106

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

VIA ELECTRONIC MAIL TO:

**gregory.mcilwain@energytransfer.com; todd.nardozzi@energytransfer.com;
eric.amundsen@energytransfer.com;**

June 13, 2024

Gregory McIlwain
President/CEO
Energy Transfer Company
8111 Westchester
Dallas, TX 75225

CPF 3-2024-020-NOPV

Dear Mr. McIlwain:

From March 29 to January 11, 2023, representatives 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 Crestwood Midstream Partners, LP's (Crestwood) and Colt Connector Pipeline's (Colt Hub) control room management procedures and records in Epping, North Dakota. Colt Hub is a subsidiary of Crestwood Midstream Partners, LP. Crestwood Midstream Partners, LP, reorganized under Energy Partners after an acquisition.

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

1. §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)

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

Colt Hub's Hazardous Liquid Pipeline, Control Room Management Program Manual, Rev. 20200820, updated August 2020 (Colt Hub CRMP), was not adequate to demonstrate compliance for testing any backup SCADA systems at least once each calendar year, but at intervals not to exceed 15 months for calendar year 2020.

During PHMSA's inspection, Colt Hub stated that there was no back up control room location. However, beginning in calendar year 2020, Colt Hub operated a SCADA system with two servers: one functioning as primary and the other as backup in the event the primary failed. Colt Hub's CRMP did not have procedures to test the two-server backup SCADA system at least once each calendar year, but at intervals not to exceed 15 months, and records were not available to demonstrate they tested the system. Colt Hub did provide a separate stand-alone procedure, owned by the SCADA group, to test the SCADA servers, but these procedures were not formalized, and they were not referenced in the Colt Hub CRMP. The stand-alone procedure also did not have procedures to test the two-server backup SCADA system at least once each calendar year, but at intervals not to exceed 15 months. If the stand-alone procedure is going to be used, it must be formalized and referenced in the CRMP. Colt Hub did not keep backup SCADA system test (or actual event) records to show it was done at least once each calendar year at intervals not to exceed 15 months for calendar year 2020, as required by § 195.446(j)(1).

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)

(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.**

Colt Hub failed to follow its procedure to test and verify its internal communication plan to provide adequate means for manual operation of the pipeline safely, as required by Colt Hub's CRMP section 304.

Section 304, entitled "Internal Communication Plan," contained four sections: (1) a general statement of the purpose and frequency requirement, (2) a testing process, (3) a plan process, and (4) testing documentation. The purpose section stated, "this test will be provided to ensure the communication adequately covers operations during a partial failure of the SCADA control displays and to ensure individuals are able to communicate and understand their responsibilities during a SCADA outage." It also stated, "the intent of this requirement is that Colt Hub performs exercises or drills to assure communication plans will be effective during an actual emergency involving loss of all SCADA system functions or other systems relying on SCADA data such as (flow transmitters)." Form CRM-304-EQ, "Test of Internal Communications Systems," was used to document the test. A review of tabletop drill exercises dated October 27, 2019, and October 9, 2020, provided by the operator during the inspection to demonstrate compliance, were drills that tested participants emergency response. One controller was involved in the drill, primarily as a witness. The drill did not reference or include a loss of SCADA. These drills failed to demonstrate that the internal communication plan and associated test procedure was followed.

In addition, Colt Hub's CRMP, which Colt Hub failed to follow, was not adequate to provide a detailed plan for manual shut down or manual operation. Section 304 stated, "Colt Hub has determined that the pipeline may be controlled manually during a catastrophic failure of the SCADA/control displays." This indicated that Colt Hub will move product manually through the pipeline in the event SCADA fails. The procedure indicated that, "procedures are available in O&M & ERP to safely perform a controlled shut down and maintain pipeline integrity." The procedure did not identify how it would be determined, or who would make that determination, that the pipeline would be shut down or continue to move product manually. Section 304 failed to contain any procedures related to how it would be determined the pipeline was shut down and in a safe mode. The procedure also failed to contain: (1) identification of key points to monitor, (2) how to monitor for leaks, (3) abnormal operations, (4) how emergencies would be managed, (5) frequency for calling in to support monitoring of pressures, and (6) other critical information regarding how to document this information and critical operating parameters (replacing SCADA alarm set points) to alert controller of pipeline conditions. Therefore, the procedure, in practice, failed to provide a plan and procedure to manually operate the pipeline safely. For both reasons, Colt Hub failed to meet the burden of § 195.446(c)(3).

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)

(e) Alarm management. Each operator using a SCADA system must have a written

alarm management plan to provide for effective controller response to alarms. An operator's plan must include provisions to:

(1)

(2) Identify at least once each calendar month points affecting safety that have been taken off scan in the SCADA host, have had alarms inhibited, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities.

Colt Hub failed to demonstrate that it identified at least once each calendar month points affecting safety that had been taken off scan in the SCADA host, had alarms inhibited, or that had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities. Specifically, Colt Hub utilized Form 506-1, "Monthly Review of Alarms." A review of the December 2020 record (representing the review of November 2020) indicated that at the time of the inspection Colt Hub had not completed its review. The alarm list was provided, but there was no review of the alarm. Even if there were no points that had been taken off-scan, inhibited, or had forced or manual values during November 2020, the form response should have been "NO," rather than incomplete. Thus, Colt Hub failed to identify at least once each calendar month points affecting safety that had been taken off scan in the SCADA host, had alarms inhibited, generated false alarms, or that had forced or manual values, per the requirements of § 195.446(e)(2).

Additionally, the procedure did not provide adequate detail to require generating reports from the data base to identify points affecting safety that had been taken off scan in the SCADA host, had alarms inhibited, or that had forced or manual values. As a result, a review of records from August 14, 2019 (representing the review for July 2019) indicated that Colt Hub collected and reviewed only the safety related alarms that presented for the month to determine if the points, related to the alarms, had been taken off-scan, were inhibited, or had forced or manual values. Colt Hub did not look in the data base to determine if points had been taken off scan, were inhibited, or had forced or manual values which is important because these would not generate alarms. It also did not include how Colt Hub would validate that these points were not in these states for periods of time exceeding that required for associated maintenance or operating activities. If a point is found to be deficient per the procedure, the procedure failed to include direction of how to address those cases or clarify how long a point could linger without correction, if maintenance was delayed. Outside of identifying the required form, the procedure simply restated § 195.446(e)(2). Thus, on this additional basis, Colt Hub failed to meet the burden of § 195.446(e)(2).

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)

(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.

The Colt Hub CRMP was not adequate to 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. Specifically, Colt Hub CRMP section 507 failed to include the requirement for verifying alarm set-point values and alarm descriptions when associated field instruments are calibrated or changed; it only required the calendar year requirement. Form 303 was used by the field for calibrations. While the form did indicate that verification of the set point with the control room was required, descriptions were not verified by the control room. There was no record in the control room to verify compliance with this section. Colt Hub only used the field verification, which was not adequate to verify compliance. While the Colt Hub CRMP procedure required use of Form 507-1 for the yearly review, it did not provide direction on how to conduct the review or how to complete the form. Additionally, Colt Hub's procedures failed to contain a requirement to document and correct deficiencies identified through the verification review, in violation of § 195.446(e)(3).

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)

(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)

(4) Review the alarm management plan required by this paragraph at least once each calendar year, but at intervals not exceeding 15 months, to determine the effectiveness of the plan.

Colt Hub failed to follow its procedure in CRMP section 508 for the 2019 and 2020 reviews of its alarm management plan to determine the effectiveness of the plan. Specifically, section 508 required using Form 508-1 for the Alarm Management Plan Review. The procedure also provided four "effectiveness criteria," which consisted of both objective and subjective measures with no metrics. The effectiveness criteria utilized in the completed review forms for 2019 and 2020 did not reflect the effectiveness criteria provided in section 508. Section 508 stated the "[r]eview shall determine the effectiveness of the plan, by including safety related alarms and alarm indications of emergency conditions." Form 508-1 did not reflect this element of the

procedure, nor the four effectiveness criteria identified in the procedure. Additionally, Colt Hub's Form 508-1 did not include any values to support determination of effectiveness. For these reasons, Colt Hub failed to follow its procedure for review of its alarm management plan.

Additionally, Colt Hub's CRMP did not provide any performance metrics, such as industry standards or those developed by the operator, that could be used to determine effectiveness of the Alarm Management Plan. The procedure did not offer details of how the annual review was to be completed and who was accountable to conduct the review. For example, the procedure did not clarify (1) how many alarms are to be reviewed, (2) the duration of the review, (3) the alarm descriptions, or (4) over what period and measurement should the alarms be reduced. Thus, section 508 was not adequate to review the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, to determine the effectiveness of the plan, per the requirement of § 195.446(e)(4).

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. . . .

(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.

Colt Hub's workload study was not adequate to demonstrate compliance with § 195.446(e)(5) to monitor the content and volume of general activity being directed to and required of each controller nor to assure that controllers have sufficient time to analyze and react to incoming alarms. Colt Hub did not demonstrate that it examined all tasks and content directed to the controller. Specifically, a review of Colt Hub's workload study records from 2019 and 2020 identified an assessment of number of alarms/per hour per 12-hour shift (2019 and 2020) and phone calls per 12-hour shift (2020). The remainder of the study consisted of controller surveys related to the controllers' perceived effort or workload. An example of a response to one question was, "from the workload studies, and interviews from the controllers at Colt Hub, they were successful in accomplishing their rounds and assigned tasks in a reasonable amount of time." What was missing was the task(s) and time related to this, and how it related to the overall controller workload. The study did not provide enough detail for Colt Hub's CRMP procedures to be based on sufficient information, rendering them inadequate to demonstrate compliance.

Furthermore, the Colt Hub CRMP was inadequate to provide a process to 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. Section 509 of the CRMP described the review method as, “(1) Controllers will complete the activity review forms in a timely manner when utilized or logbooks if used, and (2) Operations Supervisor will review forms and/or logbook data for preparation and development of final report.” The content and volume of general activity includes all activity conducted by the controller. This includes activities such as, phone calls, alarm response, sending commands and set points, paperwork, and/or 811 calls. The procedure was deficient as it did not require review of all activities.

Section 509 also included a subsection entitled "Benchmark for Controller Workload." This stated, “the rule does not establish a uniform benchmark for controller workload. Colt Hub will evaluate and document the substantive adequacy of controller workload criteria.” This procedure did not provide any specific metrics to demonstrate substantive adequacy of controller workload criteria. There are industry best practices that can serve as benchmarks; Colt Hub did not reference these in the CRMP but considered them in the workload study. The procedure also did not describe the surveys and interviews that are identified in the records. The procedure is void of any metric that will assure controllers have sufficient time to analyze and react to incoming alarms.

Thus, Colt Hub failed to demonstrate compliance, in both procedure and implementation, to monitor the content and volume of general activity being directed to and required of each controller, in violation of § 195.446(e)(5).

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)

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

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

Colt Hub failed to follow its CRMP section 602 and section 7 of API RP 1168, “Pipeline Control Room Management,” (IBR) to establish and implement a Management of Change (MOC) when it upgraded the Colt Hub’s HMI from the existing system platform to their standard SE design package early 2021. This upgrade included modifications to screen colors, the addition of a

backup server, and multiple screen capabilities. Section 602 requires an MOC when, “new equipment is coming online” and when “SCADA/control display changes,” both of which occurred during Colt Hub’s December 2020 upgrade. The MOC process is a method of identifying all affected parties, processes, equipment, personnel and others that could be impacted by the change and putting in place the necessary communication, consideration, testing, time, documentation and training to insure smooth transition. Colt Hub failed to follow its procedure to establish and implement an MOC for their SCADA modification.

Colt Hub did complete a Form 302, entitled “Implement API 1165 Requirements,” on December 17, 2020, for the SCADA upgrade, but Form 302 was insufficient as a management of change record. Form 302 was required by CRMP section 602 when, “[c]hanges that impact display parameters (such as display symbols, color palettes, or anything that affects the controller-machine interface).” API RP 1165 section 7.2 discusses the SCADA system and recommends, “[m]odifications should be tested and their functionality be verified.” Section 7.3 also recommended, “[n]otification and/or training should be provided to ensure the ability to implement the change.” Thus, Colt Hub failed to follow the requirements of § 195.446(f)(1).

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)

(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) Responding to abnormal operating conditions likely to occur simultaneously or in sequence.

Colt Hub’s training program was not adequate because it did not provide content to train controllers to carry out the roles and responsibilities defined by the operator as it related to controllers responding to abnormal operating conditions likely to occur simultaneously or in sequence. Specifically, while Colt Hub CRMP section 803 identified the training requirement, it did not include a list of abnormal operating conditions that can occur simultaneously or in sequence and the expected response by the controller for those conditions to provide content for the training. Section 195.446(b)(2) requires operators to define the controller’s role and responsibilities related to the detection of abnormal operating conditions. Colt Hub CRMP section 203 clarified that responding to abnormal operating conditions is a defined role of the controller and responsibilities are assigned for response. Section 195.446(h)(1) requires operators to clarify the roles and responsibilities of controllers when responding to abnormal operating conditions likely to occur simultaneously or in sequence. Therefore, training program content must be in place to train the

controllers to carry out controller's roles and responsibilities in responding to abnormal operating conditions likely to occur simultaneously or in sequence. Colt Hub's training program failed to provide content to train controllers on such subjects, in violation of § 195.446(h)(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 \$266,015 per violation per day the violation persists, up to a maximum of \$2,660,135 for a related series of violations. For violation occurring on or after January 6, 2023, and before December 28, 2023, the maximum penalty may not exceed \$257,664 per violation per day the violation persists, up to a maximum of \$2,576,627 for a related series of violations. For violation occurring on or after March 21, 2022, and before January 6, 2023, the maximum penalty may not 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.

We have reviewed the circumstances and supporting documentation involved for the above probable violations and recommend that you be preliminarily assessed a civil penalty of \$41,200 as follows:

<u>Item number</u>	<u>PENALTY</u>
1	\$11,100
2	\$30,100

Proposed Compliance Order

With respect to Items 1, 2, 3, 4, 5, 6, and 8 pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to Colt Hub. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Warning Items

With respect to Item 7, 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.

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 your receipt of this Notice, you have 30 days to respond as described in the enclosed *Response Options*. 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. The Region Director may extend the period for responding upon a written request timely submitted demonstrating good cause for an extension.

In your correspondence on this matter, please refer to **CPF 3-2024-020-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: Eric Amundsen/ SVP Operations eric.amundsen@energytransfer.com
Todd Nardozzi/ Director – Regulatory Compliance todd.nardozzi@energytransfer.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 Colt Hub a Compliance Order incorporating the following remedial requirements to ensure the compliance of Colt Hub with the pipeline safety regulations:

- A. In regard to Item 1 of the Notice, pertaining to Colt Hub's failure to have a procedure to demonstrate compliance for testing any backup SCADA systems at least once each calendar year, but at intervals not to exceed 15 months for the year 2020, Colt Hub must develop a procedure to test their back up SCADA server once each calendar year not to exceed 15 months. The procedure for the test must be detailed enough to demonstrate a thorough test of operating on the back up SCADA server. The documentation of the test must also provide information to demonstrate thoroughness of the test. Colt Hub must also conduct a test using the new procedures/plans within **60 days** of receipt of the Final Order. Documentation of compliance must be provided to the Director for review upon completion.
- B. In regard to Item 2 of the Notice, pertaining to Colt Hub's failure to follow its procedure to test and verify their internal communication plan and its inadequate procedure to provide a detailed plan for safe manual shut down or manual operation of the pipeline, Colt Hub must develop an internal communication plan to safely manually operate the pipeline to shut down and if selected manually move product through the pipeline. A plan must also be developed to test the internal communication plan at least once each calendar year not to exceed 15 months. Colt Hub's procedures must be modified to implement the plans. Colt Hub must train its controllers in these procedures and conduct a test using the new procedures/plans within **120 days** of receipt of the Final Order. Documentation of compliance must be provided to the Director for review upon completion.
- C. In regard to Item 3 of the Notice, pertaining to Colt Hub's failure to demonstrate that it identified at least once each calendar month points affecting safety that had been taken off scan in the SCADA host, had alarms inhibited, or that had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities, Colt Hub must amend its procedures to provide adequate detail to generate, from the data base or other source, or identify points affecting safety that had been taken off scan in the SCADA host, had alarms inhibited, or that had forced or manual values. The procedure also needs to include how these points will be reviewed and detail how any identified deficiencies will be quickly addressed to correct the condition. The procedure must be implemented, and two monthly reviews conducted and documented using the amended procedure within **90 days** of receipt of the Final Order. Documentation of compliance must be provided to the Director for review upon completion.

- D. In regard to Item 4 of the Notice, pertaining to Colt Hub's inadequate procedure due to the lack of a requirement to verify the correct safety-related alarm set-point values and alarm descriptions when associated field instruments are calibrated or changed which also did not include documentation and deficiency identification and correction, Colt Hub must amend its procedures to include a requirement to verify the correct safety-related alarm set-point values and alarm descriptions when associated field instruments are calibrated or changed and include appropriate documentation and correction of any deficiencies identified. Controllers need to be trained on the amended process and demonstrate competency through implementation of verification with the field technicians and records the within **60 days** of receipt of the Final Order. Documentation of compliance must be provided to the Director for review upon completion.
- E. In regard to Item 5 of the Notice, pertaining to Colt Hub's failure to follow its procedure in CRMP section 508 for its 2019 and 2020 review of its alarm management plan to determine the effectiveness of the plan and inadequate procedure due to a lack of process detailing how to complete annual review and the inadequate form, Colt Hub must amend its procedures to include details of how the procedure will be reviewed, criteria for the review, and how effectiveness will be determined, complete an annual review using the new procedure and correct any deficiencies identified through the review within **60 days** of receipt of the Final Order. Colt Hub must also amend the form for documentation to match the requirements of the procedure for the review within **60 days** of receipt of the Final Order. Documentation of compliance must be provided to the Director for review upon completion.
- F. In regard to Item 6 of the Notice, pertaining to Colt Hub's inadequate procedure that failed to demonstrate that it examined all tasks and general activity directed to the controller, and failed to provide the benchmark to determine controllers had adequate time that will assure controllers have sufficient time to analyze and react to incoming alarms, Colt Hub must amend its procedures to identify all tasks and general activity directed to the controller, the process to conduct the study/review, and a metric or bench mark to evaluate sufficient time for controllers to analyze and react to incoming alarms and to conduct a workload study using the new procedure and associated form within **90 days** of receipt of the Final Order. Documentation of compliance must be provided to the Director for review upon completion.
- G. In regard to Item 8 of the Notice, pertaining to Colt Hub's inadequate training program content that failed to provide controllers training related to responding to abnormal operating conditions likely to occur simultaneously or in sequence, Colt Hub must amend its procedures to identify abnormal operating conditions likely to occur simultaneously or in sequence the appropriate controller response to these conditions. This must be included in the training program content. Controllers must be trained on these conditions and training documented content within **90 days** of receipt of the Final Order. Documentation of compliance must be provided to the Director for review upon completion.

- H. It is requested that Colt Hub maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Gregory 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.