

December 18, 2015

Mr. Byron Coy, PE,
Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration
820 Bear Tavern Road, Suite 103
West Trenton NJ 08628

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RE: IMTT-Pipeline Response to CPF 1-2015-5020M

Dear Mr. Coy:

IMTT-Pipeline is in receipt of the Notice of Amendment (NOA) referenced above and has completed a review of the cited findings. IMTT-Pipeline has no issues with the findings and is developing content to address each of the citations at this time. The Attachment provides details associated with each of the citations and our plan to meet the expectations defined in the referenced NOA.

IMTT-Pipeline is committed to operating the Control Room within PHMSA expectations and regulatory guidelines. Please feel free to contact me with any questions or clarifications.

Sincerely,



Michael Morganti

Attachment: NOA Responses to CPF 1-2015-5020M

This Attachment provides IMTT's plan to address PHMSA's NOA Letter and ensure full compliance of the *IMTT-Control Room Management Plan* and associated documentation.

1. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...

(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;

PHMSA Citation

IMTT's CRMP does not adequately describe the controller's authority and responsibility to make decisions and take actions during normal operations when moving operations to another location, in accordance with §195.446 (b)(1), as prescribed in §195.446 (a). Pursuant to §195.446 (a), each operator must have written control room management procedures that implement the requirements of §195.446.

During this inspection, IMTT indicated that it does move control room operation to the backup locations. However the *CRMP* and *OM&E Section 402* did not describe a formal transfer of authority and responsibilities, define the actual time of transfer when moving operations to the backup locations, or when returning to the primary location, in accordance with §195.446 (b)(1).

IMTT Response

IMTT is revising the CRMP and the associated OM&E section to incorporate a more comprehensive Shift Turnover process that covers the variable of handing over authority to the backup location (and return to the primary); once revisions are completed, IMTT will have two Controllers test the new updates to verify effectiveness and validate the documented timeframe for communication requirements. IMTT plans to submit the revisions to the CRMP, revised O&M procedure, and associated Shift Turnover Form for PHMSA review within 30 days from the date of this letter.

2. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...
- (c) **Roles and responsibilities.** Each operator must define the roles and responsibilities of a controller during normal, abnormal, and emergency operating conditions. To provide for a controller's prompt and appropriate response to operating conditions, an operator must define each of the following:
- (1) ...
 - (2) A method of recording controller shift-changes and any handover of responsibility between controllers.

PHMSA Citation

IMTT's CRMP does not contain an adequate description of a method or recording controller shift changes and any hand-over of responsibility between controllers when moving operations to another location, in accordance with § 195.446 (b)(4), as prescribed in §195.446(a). Pursuant to §195.446(a), each operator must have written control room management procedures that implement the requirements of §195.446.

During this inspection, IMTT indicated that there would be a period of time when the control room is scheduled to be unattended. IMTT mentioned that it leaves the control room unattended when product is not being pumped through the pipeline. Also, IMTT mentioned that it periodically shuts down the 5th Street Terminal to go to the back-up control room (Bayonne Control Room or Linden Control Room).

IMTT's CRMP, Section 2 Roles and Responsibilities, Subsection 2.6 Shift Turnover Tracking refers to the Shift Change Procedure in the OM&E. IMTT's OM&E Section 402, Section 4.3 Shift Change Procedures does not address when and how the pipeline is operated when the control room is unattended. Also, OM&E Section 402, Section 4.3 Shift Change Procedures does not have information about shutting down the 5th Street Terminal to go to the backup control rooms. Consequently, the OM&E Section 402, Section 4.3 Shift Change Procedures does not include special provisions for shift change when face-to-face communications between the departing and arriving controllers may not occur in accordance with §195.446 (b)(4).

Additionally, both the CRMP and OM&E Section 402 do not include information about when the controller can leave the console/desk area and time allocated to complete shift hand-over in accordance §195.446 (b)(4).

IMTT Response

IMTT is revising the CRMP and the associated OM&E section to include a detailed procedure for handling the safe shutdown of the pipeline when a Controller must leave the Control Room to go to the backup locations. IMTT is also revising the Shift Turnover procedure to address the variable of handing over authority to the backup location (and return to the primary); once revisions are completed, IMTT will have two Controllers test the new updates to verify effectiveness and determine timeframe for communication requirements. IMTT plans to submit the revisions to the CRMP, revised O&M

procedures, associated Shift Turnover Form for PHMSA review within 30 days from the date of this letter.

3. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...
- (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 1 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;**

PHMSA Citation

IMTT's CRMP does not adequately define safety related points in accordance with §195.446(c)(2), as prescribed in §195.446(a). Pursuant to §195.446(a), each operator must have written control room management procedures that implement the requirements of §195.446. Essentially, section 195.446(c)(2) requires verification of all safety-related points in Supervisory Control and Data Acquisition (SCADA) system.

The *CRMP, Section I. Introduction. Subsection 1.7. Definitions* does not give a clear definition of safety related points. Also, the *CRMP and OM&E Section 402* do not contain a process or criteria for determining points as safety-related.

IMTT Response

IMTT is currently working on the development of a comprehensive Point-to-Point procedure with our third-party SCADA vendor to meet this requirement. IMTT and the vendor are completing review of the new criteria procedure. In addition, IMTT is also in the process of completing documentation and rationalization to further define safety-related points in the new SCADA system being implemented. IMTT and the vendor plan to have a draft of the new procedure submitted for PHMSA review within 30 days from the date of this letter. IMTT will also submit the revised definitions in the CRMP at that time.

4. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...
- (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 1 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;

PHMSA Citation

IMTT's CRMP lacks an adequate, detailed process for point-to-point verification in accordance with §195.446(c)(2), as prescribed in §195.446(a). Pursuant to §195.446(a), each operator must have written control room management procedures that implement the requirements of § 195.446.

The CRMP, Section 3. Adequate Information, Subsection 3.3 Point-to-Point Verification states that "IMTT conducts point-to-point verification testing any time a change is made in the field (emphasis added)." It is unclear whether or not IMTT conducts point-to-point verification literally "anytime" a change occurs. Otherwise, IMTT should define the types of field changes that require point-to-point verification. Subsection 3.3 Point-to-Point Verification also states that "[all] point-to-point verification testing is performed in accordance with IMTT OM&E."

OM&E Section 402, Subsection 4.5.6 Point-to-Point Verification states that "IMTT conducts all point-to-point verification testing in accordance with IMTT Procedure for Point-to-Point Verification and the IMTT SCADA Change Analysis Report and using Master Safety Related List of safety-related points." However, IMTT was unable to provide those supplemental documents. Therefore, the OM&E Section 402, Subsection 4.5.6 Point-to-Point Verification lacks information about how point-to-point verification is conducted to ensure it is done properly and in a timely manner. Overall, the CRMP and OM&E Section 402 do not ensure thoroughness of the point-to-point verification in accordance with §195.446(c)(2). In addition, neither the CRMP nor OM&E addresses like-for-like replacement in accordance with §195.446(c)(2).

IMTT Response

IMTT is currently working on the development of a comprehensive Point-to-Point procedure with our third-party SCADA vendor to meet this requirement. In addition, IMTT is also in the process of completing documentation and rationalization to further define safety-related points in the new SCADA system being implemented. IMTT and the vendor plan to have a draft of the new procedure submitted for PHMSA review within 30 days from the date of this letter.

5. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...
- (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;

PHMSA Citation

IMTT's CRMP does not contain sufficient information on how it will continue operation when SCADA and/or communication fails in accordance with § 195.446(c)(3), as prescribed in §195.446(a). Pursuant to §195.446(a), each operator must have written control room management procedures that implement the requirements of §195.446. Section 195.446(c)(3) requires test and verification or an internal communication plan to assure it will be effective during an emergency involving loss of all SCADA system limitations, or other systems relying on SCADA data.

According to the CRMP Section 3. Adequate Information, Subsection 3.4 Communication Plan for Manual Operation, "[t]he IMTT OM&E Manual and Emergency Response Plan (ERP) addresses specific requirements for communication and actions taken in the event of an emergency that results in manual operation." Subsection 3.4 communications Plan for Manual Operation states that "IMTT policy is to conduct an orderly shutdown manually, with no attempt to continue operations (emphasis added)." It is unclear whether IMTT operates manually or shuts down its pipeline during a SCADA failure/outage.

IMTT provided Section 408 Communications dated June 2010 from the OM&E. However, this procedure does not provide a detailed process on how IMTT communicates while operating manually, or address the safe manual shutdown of the pipeline in accordance with Section 195.446(c)(3).

If IMTT does not intend to operate in a manual mode, then that should be addressed in the CRMP, and a basic plan that describes an orderly shutdown should be included in the CRMP.

IMTT Response

IMTT is revising the CRMP and the associated OM&E section to include a detailed procedure for how Controllers must handle the safe shut down of the pipeline when SCADA and, in addition, is updating the procedures associated with manual operation to address specific requirements for field personnel (should it ever be required in future operations). IMTT plans to submit the revisions to the CRMP and revised O&M procedures for PHMSA review within 30 days from the date of this letter.

6. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...
- (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) ...
- (5) Implement section 5 of API RP 1168 (incorporated by reference, see §195.3) to establish procedures for when a different controller assumes responsibility, including the content of information to be exchanged.

PHMSA Citation

IMTT's CRMP does not contain sufficient guidance on what information should be exchanged and formally documented between outgoing and incoming controllers in accordance with § 195.446 (c)(5), as prescribed in § 195.446(a). Pursuant to § 195.446(a), each operator must have written control room management procedures that implement the requirements of §195.446. Section 195.446(c)(5) requires implementation of section 5 or API RP 1168 to establish procedures for when a different controller assumes responsibility, including the content of information to be exchanged.

Section 5, Subsection 5.3 Information to Exchange of API RP 1168, lists items to be addressed during shift turnover, which includes but is not limited to: (1) incident and/or safety conditions; (2) changes to physical assets, practices, and responsibilities; and (3) third-party incident with potential direct or indirect impact on operations.

The CRMP, Section 3. Adequate Information, Subsection 3.6 API RP 1168 Requirements refers to the Shift Change Procedure in the OM&E for a detailed process and procedure to meet Section 5 or API RP 1168 requirements. OM&E Section 402, Section 4.3 Shift Change Procedure, Subsection 4.3.2. Information Requirement does not clearly require information of third-party incidents with potential direct or indirect impact on operations (emphasis added)" to be documented in accordance with API RP 1168, Section 5.3.

Moreover, during the inspection, IMTT indicated that the outgoing controller verbally communicates with the incoming controller during the shift turn-over. IMTT produced a log book which does not include the information that should be exchanged as described in API RP I 168 Section 5.

IMTT Response

IMTT is revising the CRMP and the associated OM&E section to include specific requirements listed in API RP 1168 and has already implemented a formal Shift Turnover Form for effective recording of the process and critical operating data. IMTT plans to submit the revisions to the CRMP, the revised O&M procedure, and associated Shift Turnover Form for PHMSA review within 30 days from the date of this letter.

7. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...
- (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; and**

PHMSA Citation

IMTT's *CRMP* does not have sufficient instructions to address the requirement in § 195.446(f)(1), as prescribed in §195.446(a). Pursuant to §195.446(a), each operator must have written control room management procedures that implement the requirements of §195.446. Section 195.446(f)(1) requires implementation of section 7 of API RP 1168 for control room management change and coordination between control room representatives, operator's management, and associated field personnel when planning and implementing physical changes to pipeline equipment or configuration.

Section 6 Change Management of the *CRMP* includes an outline of Section 7 of API RP 1168, but does not give details on communication, notification and training, instances when temporary changes are no longer necessary, recordkeeping, and so forth to assure changes are managed appropriately. *Section 6 Change Management* of the *CRMP* is general, and lacks the necessary details to assure changes that could affect control room operations are coordinated with the control room personnel.

Additionally, Subsection 6.3 IMTT Management of Change Process refers to the Change Management procedure in the IMTT OM&E Manual for the detailed procedure and workflow diagram", however the *OM&E* does not have such procedure or workflow diagram.

IMTT Response

IMTT is currently conducting meetings with critical personnel in Operations, Maintenance, Scheduling, Control Room, and Engineering to develop a comprehensive Management of Change process that demonstrates effective communication across the company. IMTT is revising the *CRMP* and will implement the MOC procedure and workflow diagram into the *OM&E*. IMTT plans to submit the revisions to the *CRMP*, revised O&M procedures, associated Shift Turnover Form for PHMSA review within 30 days from the date of this letter.

8. Notice of Amendment #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. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2), and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011...
- (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) ...
 - (2) **Require its field personnel to contact the control room when emergency conditions exist and when making field changes that affect control room operations**

PHMSA Citation

IMTT's *CRMP* does not contain sufficient guidance and information that fulfill the requirement in §195.446(f)(2), as prescribed in §195.446(a). Pursuant to §195.446(a), each operator must have written control room management procedures that implement the requirements of §195.446. Section 195.446(f)(2) requires field personnel to contact the control room when emergency conditions exist, and when making field changes that affect control room operations.

Section 6 Change Management of the *CRMP* restates §195.446(f)(2). There is no further information about how IMTT will fulfill the requirement in §195.446(f)(2).

IMTT Response

IMTT is revising the *CRMP* and the field personnel OM&E procedures to include requirements for communicating directly with Controllers and is updating the procedures associated with manual operation to address specific requirements for field personnel (should it ever be required in future operations). In addition, IMTT is currently conducting meetings with critical personnel in Operations, Maintenance, Scheduling, Control Room, and Engineering to develop a comprehensive Management of Change process that demonstrates effective communication across the company. IMTT is revising the *CRMP* and will implement the MOC procedure and workflow diagram into the OM&E. IMTT plans to submit the revisions to the *CRMP*, revised O&M procedures, associated Shift Turnover Form for PHMSA review within 30 days from the date of this letter.