



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

820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628
609.989.2171

NOTICE OF AMENDMENT

OVERNIGHT EXPRESS MAIL

April 15, 2015

Brian C. Sheppard
Vice President, Pipeline Operations
Dominion Transmission, Inc.
445 West Main Street
Clarksburg, WV 26302-2450

CPF 1-2015-1007M

Dear Mr. Sheppard:

From March 11 to April 5, 2013, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code inspected the Dominion Transmission, Inc. (DTI) Operations and Maintenance procedures in Clarksburg, West Virginia.

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within DTI's procedures, as described below:

1. **§192.915 What knowledge and training must personnel have to carry out an integrity management program?**
 - (a)...
 - (b) **Persons who carry out assessments and evaluate assessment results. The integrity management program must provide criteria for the qualification of any person—**
 - (1)...
 - (2) **Who reviews and analyzes the results from an integrity assessment and evaluation;**

DTI's integrity management program is inadequate in that it does not provide criteria for the qualification of any person who reviews and analyzes the results from an integrity assessment and evaluation.

During the inspection, PHMSA reviewed DTI Procedure "Integrity Management Program for Gas Transmission Pipelines, Section 18, Training and Operator Qualification, revised September 1, 2012."

1. Section 18.2 references §192.915(b)(2) and states in part that "DTI will provide criteria for the qualification of any person [w]ho reviews and analyzes the results from an integrity assessment and evaluation."
2. Section 18.4 (Procedures and Supporting Documents) of the procedure references a supporting document titled "IMP Job Descriptions and Qualifications." The referenced document defines the essential functions, qualifications and requirements of a pipeline integrity engineer.

The procedure indicates that the pipeline integrity engineer is “[r]esponsible for analyzing the data provided by the in-line inspection contractor looking for defects that require further analysis.” The procedure does not provide details on the training requirements for the pipeline integrity engineer conducting said analysis, such as what courses are required, what topics must be covered, how long is the training, and how the qualifications of the pipeline integrity engineer are evaluated.

2. §192.911 What are the elements of an integrity management program?

(a)...

(b)...

(c) **An identification of threats to each covered pipeline segment, which must include data integration and a risk assessment. An operator must use the threat identification and risk assessment to prioritize covered segments for assessment (§ 192.917) and to evaluate the merits of additional preventive and mitigative measures (§ 192.935) for each covered segment.**

DTI’s integrity management program is inadequate in that it fails to describe how the program integrates data from ILI results with other data as per 192.917(b).

During the inspection, PHMSA reviewed DTI Procedure “Integrity Management Program for Gas Transmission Pipelines, Section 5.4, Inline Inspection revised September 1, 2012.” Section 5.4, step 50 states that “[t]he Pipeline Integrity Engineer integrates additional risk-factor data and new information with the assessment results. . .”

The procedure does not provide details as to what kinds of data must be integrated with ILI results, such as what is described in ASME/ANSI B31.8S-Appendix A.

3. §192.605 Procedural manual for operations, maintenance, and emergencies

Each operator shall include the following in its operating and maintenance plan:

(a) **General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.**

DTI’s procedure for training the appropriate operating personnel to assure that they are knowledgeable of the emergency procedures and verify that the training is effective as per 192.615(b)(2) is inadequate.

During the inspection, PHMSA reviewed DTI Procedure Section: 110 / Emergency Plans SOP: 01 / Combined Emergency Plan revised 10/15/2012. Section II.B.2. states in part that “Dominion shall [c]onduct Emergency Plan training and testing annually not exceeding 15 months for all applicable personnel. Technical Training will maintain test results.”

The procedure does not provide details as to what the training must include, such as mock drills, tabletop exercises, etc.; and how they verify that the training is effective.

4. §192.605 Procedural manual for operations, maintenance, and emergencies

Each operator shall include the following in its operating and maintenance plan:

(a) . . .

(b) **Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.**

(1)...

(2) **Controlling corrosion in accordance with the operations and maintenance requirements of Subpart I of this part.**

DTI's procedure for controlling corrosion in accordance with the operations and maintenance requirements of Subpart I, paragraph 192.465(b) is inadequate.

During the inspection, PHMSA reviewed DTI Procedure Section: 070 / Corrosion Control SOP: 08 / Monitoring Cathodic Protection Levels revised 10/15/2012. Section III.A.2 – Specific Galvanic Cathodic Protection Work Measures, states in part that “When a **deficient** [emphasis added] reading is encountered during test-point monitoring, the extent of the problem area should be verified. If remedial work involves applying additional cathodic protection, the effectiveness of the corrective action should be verified by performing a close-interval survey, with a maximum spacing of 25 feet, over the defined problem area.”

During the review of the rectifier monitoring test records, an abnormally high reading was discovered on a rectifier named “Unit 2 – Martin Road” in Inspection Unit #1411. The reading was dated March 2013 and showed 156.25 DC amps. Other readings showed values in the 10-20 DC amp range.

The procedure does not provide criteria for a “deficient” reading and does not provide detail on verifying the extent of the problem, such as how this should be done and who is responsible for the analysis.

5. §192.605 Procedural manual for operations, maintenance, and emergencies

Each operator shall include the following in its operating and maintenance plan:

(a) . . .

(b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

(1)...

(2) Controlling corrosion in accordance with the operations and maintenance requirements of Subpart I of this part.

DTI's procedure for controlling corrosion in accordance with the operations and maintenance requirements of Subpart I, paragraph 192.481(b) is inadequate.

During the inspection, DTI provided the following procedures for monitoring pipe under thermal insulation:

1. DTI Procedure Section: 070 / Corrosion Control SOP: 16 / Atmospheric Corrosion revised 10/15/2012.
2. DTI Corrosion Manual, Sec. 3.6.4.2 (Rev 1/31/2013)
3. DTI Corrosion Manual Appendix 3.12 (Rev 1/31/2008)

PHMSA reviewed the procedures above and found the following inadequacies:

1. In the procedures noted below, DTI uses the term “*should*” in its procedures where the regulation requires the term “*must*.”
 - a. DTI O&M Procedure Sec. 070, SOP 16 Section VII.A. states that ... Particular attention *should* be given to locations such as clamps . . . under thermal insulation...
 - b. DTI Corrosion Manual, Sec. 3.6.4.2 (Rev 1/31/2013) states that ... special attention *should* be paid to . . .
2. DTI Corrosion Manual, Sec. 3.6.4.2 (Rev 1/31/2013) states in part that:
 - a. “During the atmospheric corrosion inspection special attention should be paid to bulging insulation, dripping moisture from the insulation, and/or rust stains are signs that moisture is forming under the insulation creating a corrosive environment. These signs should be recorded on the appropriate form.” The procedure does provide guidance on how to provide “special attention” to determine the condition of the pipe surface under thermal insulation, such as by removal of a portion of the insulation when bulging insulation, dripping moisture from the insulation, and/or rust stains are observed.

- b. "Inspection ports should be incorporated in the design of new thermal insulation and facilities. If inspection ports exist, the plug should be removed and the coating and/or substrate should be examined for atmospheric corrosion." The procedure does not specify what must be done to determine the condition of the pipe surface under thermal insulation if the piping does not have inspection ports.
- 3. DTI Corrosion Manual Appendix 3.12 (Rev 1/31/2008) – Sec IV titled "Insulated Pipe / Vessel Inspections" states in part that "The exterior insulation of all insulated pipe and vessels shall be visually inspected at intervals stated above. Inspection shall include determinations of the condition of the exterior insulation. It is not necessary to remove any insulation if the temperature of the entire vessel shell is maintained sufficiently low or sufficiently high to prevent the condensation of moisture"

The temperatures noted as "sufficiently low" and "sufficiently high" are not specified. In addition, the procedure does not specify which piping and vessels fall into this category, how they will ensure / document that the temperature of the pipe or vessel remains in the specified temperature range and what methods must be used to ensure that there is no corrosion under the insulation.

The procedure also states in part that "Specific areas that should be inspected on insulated pipe or vessels include:

- A. All surfaces exposed to frequent hot/cold temperature cycling;
- B. Horizontal piping, particularly at joints or piping branches, and on the bottom of the pipe;
- C. Towers or other vessels at four inspection points around the tower/vessel with a 90 deg. separation and at two elevations near bottom and near top;
- D. Wherever the insulation weather barrier has been mechanically damaged or removed such as the damaged insulation;
- E. Wherever the insulation has changed shape or started to swell, indicating a possible rust buildup."

DTI does not specify which piping and vessels fall into the "frequent hot/cold temperature cycling" category, and what methods must be used to ensure that there is no corrosion under the insulation. In addition, the procedure does not specify what must be done to determine the condition of the pipe surface under thermal insulation wherever the insulation weather barrier has been mechanically damaged or removed such as the damaged insulation, or whenever the insulation has changed shape or started to swell.

Response to this Notice

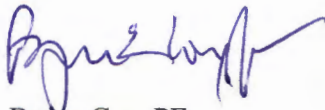
This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.237. Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. Be advised that all material you submit 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). 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, after opportunity for a hearing, 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. § 190.237). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within **60** 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 (not mandated) that Dominion maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to, as well as any correspondence relating to this Notice to: Byron Coy, PE, Director, PHMSA Eastern Region, 820 Bear Tavern Road, Suite 103, W. Trenton, NJ 08628. Please refer to **CPF 1-2015-1007M** on each document you submit, and please provide a (signed) copy in electronic format whenever possible. Smaller files may be emailed to Byron.Coy@dot.gov. Larger files should be sent on a CD accompanied by the original (signed) paper copy to the Eastern Region Office.

Additionally, if you choose to respond to this (or any other case), please ensure that any response letter pertains solely to one CPF case number.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Byron Coy', with a stylized flourish at the end.

Byron Coy, PE
Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration

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