

NOTICE OF AMENDMENT

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 26, 2016

Mr. Paul Miller
Executive-Vice President/President, Liquids Pipelines
TC Oil Pipeline Operations Inc.
450-1 Street SW
Calgary, Alberta, Canada
T2P 5H1

CPF 4-2016-5013M

Dear Mr. Miller:

On March 3, 2015 – May 14, 2015, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code inspected TC Oil Pipeline Operations Inc. (TransCanada) procedures and records for the pipeline facilities of the Keystone XL – Gulf Coast Pipeline.

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

1. § 195.402 Procedural manual for operations, maintenance, and emergencies.

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

(14) Taking adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapor or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and, a rescue harness and line.

TransCanada's operating procedure (Procedure), "Oil Pipelines Pressure Restriction Implementation Procedure", section 5.0; page 5 of 8, revision 00, dated 2013/02/07 did not include adequate requirements for documenting the pressure restrictions specified by the procedures.

TransCanada's operating procedure (Form), "Excavation Procedure Checklist"; revision 8, dated 2012/07/05 does not include an item requiring documentation of the pressure restriction at the excavation location. TransCanada must revise the Excavation Procedure Checklist to include documentation of the pressure restriction.

2. § 195.432 Inspection of in-service breakout tanks.

(b) Each operator must inspect the physical integrity of in-service atmospheric and low-pressure steel aboveground breakout tanks according to API Standard 653 (incorporated by reference, see § 195.3). However, if structural conditions prevent access to the tank bottom, the bottom integrity may be assessed according to a plan included in the operations and maintenance manual under § 195.402(c)(3).

TransCanada's Procedure 195.432, "Inspection of In-Service Breakout Tanks", revision 8, dated 2015/02/16, section 3 references API 653, Section 4 for the inspection requirements of aboveground breakout tanks references the wrong section of API 653. The correct reference is API 653 Standards which deals with inspection of in-service breakout tanks.

TransCanada must amend their procedures to require breakout tank inspections be performed in accordance to the requirements of API 653 Standard and reference the version of API Standard 653 incorporated in Part 195.

3. § 195.430 Firefighting equipment.

Each operator shall maintain adequate firefighting equipment at each pump station and breakout tank area. The equipment must be—

(a) In proper operating condition at all times;

TransCanada's procedure 195.430, "Firefighting Equipment", revision 8, dated 2015/02/16, section 4.0, "General" does not include the requirement that firefighting equipment be, "in proper operating condition at all times".

TransCanada must revise their procedure to specify how and when maintenance will be performed on the firefighting equipment at each pump station and breakout tank area.

4. § 195.405 Protection against ignitions and safe access/egress involving floating roofs.

(a) After October 2, 2000, protection provided against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities involving aboveground breakout tanks must be in accordance with API Recommended Practice 2003, unless the operator notes in the procedural manual (§ 195.402(c)) why

compliance with all or certain provisions of API Recommended Practice 2003 is not necessary for the safety of a particular breakout tank.

TransCanada's O&M procedure 195.405, –“Protection Against Ignitions...”, 3.0 Reference, does not indicate which edition (7th edition, January 2008) of API 2003 as the referenced standard incorporated by 49 CFR 195.3.

TransCanada must amend their procedures to reference the version of API RP 2003 incorporated in Part 195.

5. § 195.405 Protection against ignitions and safe access/egress involving floating roofs.

(b) The hazards associated with access/egress onto floating roofs of in-service aboveground breakout tanks to perform inspection, service, maintenance or repair activities (other than specified general considerations, specified routine tasks or entering tanks removed from service for cleaning) are addressed in API Publication 2026. After October 2, 2000, the operator must review and consider the potentially hazardous conditions, safety practices and procedures in API Publication 2026 for inclusion in the procedure manual (§ 195.402(c)).

TransCanada's O&M procedure 195.405, –“Protection Against Ignitions...”, 3.0 Reference, does not indicate which edition (2nd edition, April 1998, reaffirmed June 2006) of API 2026 as the most current referenced standard as incorporated by 49 CFR 195.3.

TransCanada must amend their procedures to reference the version of API RP 2026 incorporated in Part 195.

6. § 195.54 Accident reports.

(a) Each operator that experiences an accident that is required to be reported under § 195.50 must, as soon as practicable, but not later than 30 days after discovery of the accident, file an accident report on DOT Form 7000-1.

TransCanada's Procedure 195.50 and 195.54 Reporting Accidents, does not meet the requirements of 105.54(a) which states that an operator must, as soon as practicable, but not later than 30 days after discovery of the accident, file an accident report on DOT Form 7000-1. TransCanada's procedure does not require the filing of an accident report not later than 30 days after discovery of the accident.

TransCanada must revise their procedures to require a DOT Form 7000-1 be filed not later than 30 days after discovery of the accident.

7. Per PHMSA Recommended Conditions for Keystone XL State Department Presidential Permit, Condition 50 states,

Reporting – Immediate: Keystone must provide immediate notification of all reportable incidents in accordance with 49 CFR 195, and shall notify the appropriate PHMSA regional office within twenty-four (24) hours of any non-reportable leaks occurring on the pipeline.

TransCanada's Procedure 195.52 – “Immediate Notice of Certain Accidents”, Section 4.0 General, #3, and does not meet the requirements of Special Permit Item #50. The permit states that TransCanada must provide immediate notification of all reportable incidents in accordance with 49 CFR 195, and non-reportable leaks within 24 hours. TransCanada's procedure does not require the immediate notification of incidents that meet the requirements per 195.50, 195.54, 195.55, and 195.56. Procedure requires only the immediate notification of incidents meeting the criteria of 195.52.

TransCanada must revise their procedures to require immediate notification of all reportable incidents as defined by Part 195 and the occurrence of any non-reportable leaks within 24 hours.

8. § 195.567 Which pipelines must have test leads and what must I do to install and maintain the leads?

(c) Maintenance. You must maintain the test lead wires in a condition that enables you to obtain electrical measurements to determine whether cathodic protection complies with § 195.571.

§ 195.571 What criteria must I use to determine the adequacy of cathodic protection?

Cathodic protection required by this Subpart must comply with one or more of the applicable criteria and other considerations for cathodic protection contained in paragraphs 6.2 and 6.3 of NACE SP 0169 (incorporated by reference, see § 195.3).

TransCanada’s O&M procedure 195.567 – “Test Leads” does not specify a process for taking cathodic protection readings when a test lead is found to be broken. Additionally, procedure does not require broken test leads to be repaired before the next monitoring cycle.

TransCanada must revise their procedures to specify the actions for taking cathodic protection readings when a test lead is broken, and requires repairs be made to that test lead prior to the next required monitoring cycle.

9. § 195.583 What must I do to monitor atmospheric corrosion control?

(a) You must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:

If the pipeline is located:	Then the frequency of inspection is:
Onshore	At least once every 3 calendar years, but with intervals not exceeding 39 months.
Offshore	At least once each calendar year, but with intervals not exceeding 15 months.

(b) During inspections you must give particular attention to pipe at soil-to-air interfaces, under thermal insulation, under disbonded coatings, at pipe supports, in splash zones, at deck penetrations, and in spans over water.

TransCanada’s O&M procedure 195.583 – “Atmospheric Corrosion Monitoring” does not specifically include requirements for the inspection of piping under thermal insulation once every three calendar years, but with intervals not exceeding 39 months. A significant portion of TransCanada’s above ground piping on the Gulf Coast is insulated manifold piping. Due to the increase in viscosity the temperature of the commodity drops. TransCanada made no provisions for atmospheric corrosion inspections of this piping that is subject to a specialized type of atmospheric corrosion termed corrosion under insulation or CUI.

TransCanada must provide procedures to inspect the insulated piping for atmospheric corrosion as required by 195.583.

10. § 195.579 What must I do to mitigate internal corrosion?

(c) Removing pipe. Whenever you remove pipe from a pipeline, you must inspect the internal surface of the pipe for evidence of corrosion. If you find internal corrosion requiring corrective action under § 195.585, you must investigate circumferentially and longitudinally beyond the removed pipe (by visual examination, indirect method, or both) to determine whether additional corrosion requiring remedial action exists in the vicinity of the removed pipe.

TransCanada’s O&M procedure 195.579 – “Internal Corrosion Control” does not require removed pipe found with internal corrosion to be investigated circumferentially and longitudinally beyond the removed the pipe.

TransCanada must revise their procedures to include requirements to investigate circumferentially and longitudinally remove pipe remove pipe from a pipeline for evidence of corrosion. The operator must take appropriate corrective action if corrosion is found.

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 45 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 TC Oil Pipeline Operations Inc. maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to R. M. Seeley, Director, Southwest Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 4-2016-5013M** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

R. M. Seeley
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration

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