



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

8701 South Gessner, Suite 1110
Houston, TX 77074

NOTICE OF AMENDMENT

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 4, 2013

Mr. Richard Adams
Vice President, U.S. Operations
Enbridge Pipelines, LLC
City Center Office
1409 Hammond Ave.
Superior, WI 54880-5247

CPF 4-2013-5005M

Dear Mr. Adams:

In November 2011, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code inspected Enbridge Pipelines, LLC procedures for breakout tanks in Cushing, OK.

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within Enbridge Pipelines LLC plans or procedures, as described below:

1. §195.132 Aboveground breakout tank.

- (a) Each aboveground breakout tank must be designed and constructed to withstand the internal pressure produced by the hazardous liquid to be stored therein and any anticipated external loads.**
- (b) For aboveground breakout tank first placed in service after October 2, 2000, compliance with paragraph (a) of this section requires one of the following:**
 - (1) Shop-fabricated, vertical, cylindrical, closed top, welded steel tanks with nominal capacities of 90 to 750 barrels (14.3 to 119.2 m³) and with internal vapor space pressures that are approximately atmospheric must be designed and constructed in accordance with API Specification 12F.**

- (2) **Welded, low-pressure (i.e., internal vapor space pressure not greater than 15 psig (103.4 kPa)), carbon steel tanks that have wall shapes that can be generated by a single vertical axis of revolution must be designed and constructed in accordance with API Standard 620.**
- (3) **Vertical, cylindrical, welded steel tanks with internal pressures at the tank top approximating atmospheric pressures (i.e., internal vapor space pressures not greater than 2.5 psig (17.2 kPa), or not greater than the pressure developed by the weight of the tank roof) must be designed and constructed in accordance with API Standard 650.**
- (4) **High pressure steel tanks (i.e., internal gas or vapor space pressures greater than 15 psig (103.4 kPa)) with a nominal capacity of 2000 gallons (7571 liters) or more of liquefied petroleum gas (LPG) must be designed and constructed in accordance with API Standard 2510.**

The Enbridge procedure specifies that the most recent edition of industry standards API Standard 650 and API Standard 653 will apply rather than the version of the standard incorporated by reference as listed in 49 CFR 195.3. Enbridge must modify its procedure to require the use of the versions of the standards incorporated by reference into Part 195.

2. **§195.205 Repair, alteration and reconstruction of aboveground breakout tanks that have been in service.**
 - (a) **Aboveground breakout tanks that have been repaired, altered, or reconstructed and returned to service must be capable of withstanding the internal pressure produced by the hazardous liquid to be stored therein and any anticipated external loads.**
 - (b) **After October 2, 2000, compliance with paragraph (a) of this section requires the following for the tanks specified:**
 - (1) **For tanks designed for approximately atmospheric pressure constructed of carbon and low alloy steel, welded or riveted, and non-refrigerated and tanks built to API Standard 650 or its predecessor Standard 12C, repair, alteration, and reconstruction must be in accordance with API Standard 653.**
 - (2) **For tanks built to API Specification 12F or API Standard 620, the repair, alteration, and reconstruction must be in accordance with the design, welding, examination, and material requirements of those respective standards.**
 - (3) **For high pressure tanks built to API Standard 2510, repairs, alterations, and reconstruction must be in accordance with API 510.**

The Enbridge procedure specifies that the most recent edition of industry standards API Standard 650 and API Standard 653 will apply rather than the version of the standard

incorporated by reference as listed in 49 CFR 195.3. Enbridge must modify its procedure to require the use of the version of the standard incorporated by reference into Part 195.

3. §195.264 Impoundment, protection against entry, normal/emergency venting or pressure/vacuum relief for aboveground breakout tanks. Impoundment, protection against entry, normal/emergency venting.

(a) **A means must be provided for containing hazardous liquids in the event of spillage or failure of an aboveground breakout tanks.**

(b) **After October 2, 2000, compliance with paragraph (a) of this section requires the following for the aboveground breakout tanks specified:**

(1) **For tanks built to API Specification 12F, API Standard 620, and others (such as API Standard 650 or its predecessor Standard 12C), the installation of impoundment must be in accordance with the following sections of NFPA 30:**

(i) **Impoundment around a breakout tank must be installed in accordance with section 4.3.2.3.2; and**

(ii) **Impoundment by drainage to a remote impounding area must be installed in accordance with section 4.3.2.3.1.**

(2) **For tanks built to API 2510, the installation of impoundment must be in accordance with section 5 or 11 of API 2510 (incorporated by reference, see §195.3).**

The Enbridge procedure Facility and Tank Containment Systems, paragraph 2.2 Tank Containment states “Tank containment is regulated by the NFPA.” The NFPA is an organization that develops codes and standards but is not a regulatory agency. While Part 195 incorporates NFPA 30 by reference, breakout tank impoundment requirements are specified by 49 CFR 195.264 and regulated by PHMSA. Enbridge must modify its procedure to specify the correct regulatory authority for breakout tanks involved in interstate commerce. In addition, the Enbridge procedure also specifies that the most recent edition of NFPA 30 shall apply. The Operator must modify its procedures to specify the version of NFPA 30 incorporated by reference into Part 195 shall be used for breakout tanks built to API 12F, API 620 or API 650. The Enbridge Facility and Tank Containment Systems procedure must also be modified, if applicable, to specify that for breakout tanks built to the API 2510 standard, impoundment must be in accordance with section 5 or 11 of the version of this standard incorporated by reference into Part 195.

4. §195.264 Impoundment, protection against entry, normal/emergency venting or pressure/vacuum relief for aboveground breakout tanks.

(c) **Aboveground breakout tanks areas must be adequately protected against unauthorized entry.**

The Enbridge procedure, General Site Security, deals with coordinating security, inspecting security, and security awareness, but does not specify that breakout tank areas must be protected against unauthorized entry. Also, the procedure does not specify the security measures that will be employed or the methodology of determining what security measures are needed for a given location. Enbridge must modify its procedures to specify that breakout tank areas will be protected from unauthorized entry, identify the security measures that can be employed, and identify the methodology of determining the security measures that are needed at a given site so that it is clear how Enbridge consistently determines and implements security measures at all of its locations.

5. §195.307 Pressure testing aboveground breakout tanks.

- (d) **For aboveground breakout tanks built to API Standard 650 (incorporated by reference, see § 195.3 and first placed in service after October 2, 2000, testing must be in accordance with Section 5.2 of API Standard 650 (incorporated by reference, see § 195.3).**
- (e) **For aboveground atmospheric pressure breakout tanks constructed of carbon and low alloy steel, welded or riveted, and non-refrigerated and tanks built to API Standard 650 or its predecessor Standard 12C that are returned to service after October 2, 2000, the necessity for the hydrostatic testing of repair, alteration, and reconstruction is covered in section 10.3 of API Standard 653.**

The Enbridge procedures covering hydrostatic testing of tanks (CQS001-2006, D03-102-2001) specify that the most recent edition of industry standards (API Standard 650, API Standard 653) will apply rather than the version of the standard incorporated by reference as listed in 49 CFR 195.3. Enbridge must modify its procedures to require the use of the version of the standard incorporated by reference into Part 195. The references to paragraphs in API Standard 650 and API Standard 653 in the Enbridge standard, Integrity Assessment, Oil Tank, paragraph 4, Hydrostatic Testing must also be corrected. In addition, the Enbridge procedures for hydrostatic testing must state that the hydrostatic test records for breakout tanks must be maintained for the life of the tanks.

6. §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.**

The Enbridge procedure, Grounding Methods, lists API RP 2003 as a referenced industry standard but does not specifically require that breakout tank grounding be in accordance with this standard and has not noted why compliance with the standard is not necessary. Also, the Operator specifies that the most recent edition of the procedure shall apply. Enbridge must

modify its procedures to require that breakout tank grounding be done according AP RP 2003 and that the version incorporated by reference into Part 195 is specified.

7. §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;**
- (b) Plainly marked so that its identity as firefighting equipment is clear; and,**
- (c) Located so that it is easily accessible during a fire.**

The Enbridge standard, Firefighting Equipment, lists several OSHA regulations as a reference but does not refer to the requirements of 49 CFR 195.430. The operator must modify its procedures to include the requirements or reference 195.430.

8. §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).

The Enbridge procedure, Cathodic Protection, specifies on page 4-2 (and on other pages such as 4-4 and 4-7) NACE SP0169-2007 (or latest revision) is to be used. Enbridge must modify its procedures to specify that the version of NACE SP0169 incorporated by reference into Part 195 be used. Also, in section 4.3, the Operator lists some allowable cathodic protection criteria that are not specifically included in NACE SP0169 or NACE RP651 (for breakout tanks), such as E-Log-I and net protective current. While these criteria are allowed by Part 192, they are not allowable criteria for hazardous liquids pipelines unless the operator has already been using them on a specific pipeline and can show that the results are comparable to that attained by the criteria specified in NACE SP0169. Since Enbridge could not specify where these criteria were in use on any of their hazardous liquids pipelines, the operator must modify their procedures to exclude the use of these criteria on pipelines regulated under Part 195.

9. §195.573 What must I do to monitor external corrosion control?

- (c) Breakout tanks. You must inspect each cathodic protection system used to control corrosion on the bottom of an aboveground breakout tank to ensure that operation and maintenance of the system are in accordance with API Recommended Practice 651. However, this inspection is not required if you note in the corrosion control procedures established under Sec. 195.402(c)(3) why compliance with all or certain operation and maintenance provisions of API Recommended Practice 651 is not necessary for the safety of the tank.**

The Enbridge procedure, Corrosion Control Guidelines, Cathodic Protection, Chapter 4, lists API RP651 as a referenced standard on page 4-4 but does not specifically require that operation and maintenance of cathodic protection systems on breakout tanks is in accordance with API RP651. Enbridge must modify its procedures to specify that corrosion control systems to protect the bottom of breakout tanks must be operated and maintained in accordance with API RP651.

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 30 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 Enbridge 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, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPE 4-2013-5005M** 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*