

**March 3, 2015**

Mr. Mark Maki  
President  
Enbridge Energy Partners, LP  
1100 Louisiana St., Suite 3300  
Houston, TX 77002

**Re: CPF No. 4-2013-5005M**

Dear Mr. Maki:

Enclosed please find the Order Directing Amendment issued in the above-referenced case. It makes findings of inadequate procedures and requires that your subsidiary, Enbridge Pipelines (Ozark), LLC, amend certain operating and maintenance procedures. When these procedures have been properly amended, as determined by the Director, Southwest Region, this enforcement action will be closed. Service of the Order Directing Amendment by certified mail is effective upon the date of mailing, or as otherwise provided under 49 C.F.R. § 190.5.

Thank you for your cooperation in this matter.

Sincerely,

Jeffrey D. Wiese  
Associate Administrator  
for Pipeline Safety

Enclosure

cc: Mr. Rodrick M. Seeley, Southwest Region Director, OPS  
Mr. Shaun Kavajecz, US Pipeline Compliance, Enbridge Energy,  
26 E. Superior Street, Suite 309, Duluth, Minnesota 55811

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

**U.S. DEPARTMENT OF TRANSPORTATION  
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION  
OFFICE OF PIPELINE SAFETY  
WASHINGTON, D.C. 20590**

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<b>In the Matter of</b>	)	
	)	
<b>Enbridge Pipelines (Ozark), LLC,</b>	)	<b>CPF No. 4-2013-5005M</b>
<b>a subsidiary of Enbridge Energy Partners, LP,</b>	)	
	)	
<b>Respondent.</b>	)	
	)	

**ORDER DIRECTING AMENDMENT**

In November 2011, pursuant to 49 U.S.C. § 60117, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), inspected the operating and maintenance procedures for Enbridge Pipelines (Ozark), LLC (Enbridge or Respondent), a subsidiary of Enbridge Energy Partners, LP,<sup>1</sup> at its facilities in Cushing, Oklahoma. Enbridge Energy Partners, LP, owns and operates approximately 3,386 miles of liquid pipelines running from Oklahoma to Illinois, North Dakota to Illinois, Montana to Minnesota, and across Louisiana and Mississippi.<sup>2</sup>

As a result of the inspection, the Director, Southwest Region, OPS (Director), issued to Respondent, by letter dated March 4, 2013, a Notice of Amendment (Notice). The Notice alleged certain inadequacies in Respondent’s written procedures for operations, maintenance and emergencies and requested, in accordance with 49 C.F.R. § 190.237, that Respondent amend several of them.

Enbridge responded to the Notice by letter dated April 26, 2013 (Response), and submitted amended procedures. Respondent did not request a hearing and therefore has waived its right to one. Upon review of the amended procedures submitted by Respondent and for the reasons discussed below, I find the amendments still do not adequately address Items 1-9 in the Notice.

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<sup>1</sup> See <http://www.sec.gov/Archives/edgar/containers/fix069/880285/000119312509033100/dex211.htm> (last accessed on January 7, 2015).

<sup>2</sup> See <http://enbridgepartners.com/Delivering-Energy/Pipeline-Systems/Liquids-Pipelines/> (last accessed on December 17, 2014).

## **FINDINGS OF INADEQUATE PROCEDURES**

Respondent contested the allegations in the Notice but submitted amended procedures to address the alleged inadequacies. I have reviewed the revised procedures and considered the following: relevant available pipeline safety data; whether the plans or procedures are adequate for Enbridge's unique facilities and in their particular location(s); the reasonableness of the procedures; and the extent to which the procedures contribute to public safety. Upon such review of the revised procedures under 49 C.F.R. § 190.237, I find as follows:

**Items 1 and 2:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they fail to include proper procedures addressing 49 C.F.R. §§ 195.132 and 195.205, which state:

### **§ 195.132 Design and construction of aboveground breakout tanks.**

(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 m<sup>3</sup>) and with internal vapor space pressures that are approximately atmospheric must be designed and constructed in accordance with [American Petroleum Institute (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.

### **§ 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 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 Notice alleged that Respondent's procedures implementing §§ 195.132 and 195.205 are inadequate because they specify that the most recent editions of industry standards API Standards 650 and 653, respectively, shall apply rather than the versions of such standards that PHMSA has incorporated by reference into 49 C.F.R. Part 195. Specifically, the Notice alleges that 49 C.F.R. § 195.3 incorporates API Standard 650, "Welded Steel Tanks for Oil Storage" (11<sup>th</sup> edition, June 2007, addendum 1, November 2008) (API 650, 11<sup>th</sup> Edition) and API Standard 653, "Tank Inspection, Repair, Alteration, and Reconstruction" (3<sup>rd</sup> edition, December 2001, including addendum 1 (September 2003), addendum 2 (November 2005), addendum 3 (February 2008), and errata (April 2008)) (API 653, 3<sup>rd</sup> Edition), but that Enbridge's procedures use the more recent editions of both standards.

In its Response, Enbridge acknowledges that it uses the latest editions of Standards 650 and 653 but argues that by using the more recent editions, Enbridge is "meeting or exceeding the requirements" of Part 195 for the construction and inspection of above-ground breakout tanks.<sup>3</sup> The company puts forth the argument that the current API Standards 650 and 653 have been rigorously vetted through their respective API committees, which are composed of a "cross section of the foremost industry tank experts." According to Enbridge, any changes made to the existing standards must be approved by the majority of the committee and are done with the safety of the public as a top priority.<sup>4</sup> Enbridge argues that the more recent editions of API Standards 650 and 653 move the industry to build and maintain above-ground storage tanks at a more consistent and increased level of safety than previous versions.

For example, the company contends that the 2008 version of API Standard 653 allows for a Risk Based Inspection (RBI) analysis to establish inspection intervals, which, in many cases, "would achieve the same or possibly less conservative results as using the latest version." According to Enbridge, the latest version of API Standard 653 takes this RBI assessment process and

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<sup>3</sup> Response at 2.

<sup>4</sup> *Id.*

translates it “into more tangible criteria as related to the key risk variables (i.e., cathodic protection, linings, leak detection, etc.).”<sup>5</sup>

Respondent further argues that the present case is similar to an earlier PHMSA enforcement action where, in December 2008, PHMSA issued a stay of enforcement regarding API 5L and API 1104, two other standards where the agency had indicated its intention to incorporate the more recent editions of the standards and declared, in the interim, that it would not enforce the then-current standards. Enbridge argues that the latest versions of API Standards 650 and 653 are similarly preferable to API 650, 11<sup>th</sup> Edition, and API 653, 3<sup>rd</sup> Edition, and that the company would prefer to reference the latest editions of both standards.

While PHMSA appreciates the argument that the latest versions of consensus standards often “raise the bar” for safety and call for a higher level of safety than older consensus standards, this is not always the case and is why PHMSA frequently declines to incorporate all parts of newly-revised standards. I cannot agree that a pipeline operator’s adoption of a recently-revised consensus standard is sufficient *per se* to assure the safe operation of a pipeline facility when that new standard has not gone through the formal review and scrutiny of a PHMSA rulemaking, as is true for all standards incorporated by reference into 49 C.F.R. Part 195. Also, the regulation in question here is quite clear insofar as it specifies what edition of a standard must be followed. Accordingly, I find that both of Enbridge’s procedures using the most recent editions of API Standards 650 and 653 were inadequate at the time of the inspection because they did not use the API standards that had been incorporated by reference into 49 C.F.R. Part 195 as of that date.

However, with regard to API Standard 650, 11<sup>th</sup> Edition, circumstances have changed since the time of the 2011 inspection of Enbridge’s facilities. The American Petroleum Institute has continued to update this standard with certain addenda. PHMSA has recently completed its review of this revised standard, along with roughly 21 other updated industry standards, and has decided to incorporate it by reference into the pipeline safety regulations, by final rule published on January 5, 2015 (Final Rule).<sup>6</sup> Therefore, Enbridge may now cite and follow this particular edition of the standard.<sup>7</sup>

On the other hand, PHMSA specifically chose not to incorporate the updated 4<sup>th</sup> Edition of API Standard 653 in this same rulemaking.<sup>8</sup> Therefore, I find that Enbridge’s procedures implementing § 195.132 remain inadequate because the company has continued to use the most recent edition of API Standard 653, rather than the version that has been incorporated by reference into 49 C.F.R. Part 195.

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<sup>5</sup> *Id.*

<sup>6</sup> Pipeline Safety: Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments, Final Rule, 80 Fed. Reg. 168 (January 5, 2015).

<sup>7</sup> API Standard 650, “Welded Tanks for Oil Storage” (11th edition, June 2007, effective February 1, 2012), includes addendum 1 (November 2008), addendum 2 (November 2009), addendum 3 (August 2011), and errata (October 2011).

<sup>8</sup> *Id.* at 171.

Accordingly, Enbridge is hereby ordered to amend its procedures implementing 49 C.F.R. § 195.132 to use the versions of API Standards 650 and 653 currently incorporated by reference into Part 195.

**Item 3:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they fail to include proper procedures addressing 49 C.F.R. § 195.264, which states, in relevant part:

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

(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 [National Fire Protection Association (NFPA)] 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 Notice alleged that Respondent's procedure, *DO5-101-2008, Facility and Tank Containment Systems*, is inadequate because it does not indicate that breakout tank impoundments are governed by 49 C.F.R. § 195.264; instead, it merely states that "tank containment is regulated by NFPA." Specifically, the Notice alleges that because 49 C.F.R. Part 195 incorporates NFPA 30 by reference, Enbridge's procedures should reference the particular edition of NFPA 30 that has been approved by PHMSA and not suggest that tank containment procedures are determined by the NFPA. In addition, the Notice alleged that Enbridge's procedure specifies the most recent edition of NFPA 30 shall apply, rather than the version incorporated by reference into Part 195.

Enbridge stated in its Response that it would modify *DO5-101-2008* to reflect that PHMSA is the regulating body for tank impoundment and that NFPA 30 is incorporated by reference. As in its Response for Items 1 and 2 above, Enbridge indicated that the latest version of NFPA 30 should apply, as opposed to the 2008 edition incorporated by reference into Part 195.<sup>9</sup>

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<sup>9</sup> Enbridge also noted that certain sections of NFPA 30 cited in § 195.264(b)(i) and (ii) are incorrect as they pertain to impoundment. According to Enbridge, previous editions of this standard addressed impoundment in Chapter 4, while the 2008 and later editions have moved this information to Chapter 22.

As with API Standard 650 discussed above, circumstances have changed regarding NFPA 30 since the date the Notice was issued. PHMSA has recently reviewed the latest edition of NFPA 30 and decided in the Final Rule to incorporate it by reference into Part 195. Therefore, I find that Enbridge's procedures referencing "the most recent edition of NFPA 30" were inadequate at the time of the inspection because they did not use the correct edition of the NFPA standard that had been incorporated by reference into 49 C.F.R. Part 195 as of that date. Accordingly, Enbridge is hereby ordered to amend its procedures implementing 49 C.F.R. § 195.264 to use the version of NFPA 30 that is now incorporated by reference into Part 195.<sup>10</sup>

**Item 4:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they fail to include proper procedures addressing 49 C.F.R. § 195.264, which states, in relevant part:

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

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

The Notice alleged that Enbridge's procedure, *01-02-01, General Site Security*, is inadequate because it does not specify that breakout tanks areas will be protected from unauthorized entry. Specifically, it alleged that the procedure does not identify the security measures that can be employed or provide a methodology for determining what security measures are needed at a given site.

In its Response, Enbridge stated that it provides gated access control and fencing around the perimeter of its facilities, including breakout tank areas. Also, security is established through signage, camera systems and/or security guards. The Corporate Security Management Department evaluates threats, vulnerabilities, and consequences on a continuous basis. Enbridge stated that its Region Specific Security Plan categorizes baseline requirements and preparedness should there be an imminent threat. According to Enbridge, this Plan was in the process of being reviewed and updated and, when completed, a copy would be provided to PHMSA.

I have reviewed the Response and find that while it provides information about the security measures employed generally by Enbridge, it does not specifically state how the company will update its Operations and Maintenance procedures or indicate a specific procedure where this information can be found. In addition, PHMSA has yet to receive a copy of the updated procedures. Therefore, Enbridge is ordered to amend its procedures indicating that breakout tanks will be protected from unauthorized entry, what security measures can be employed, and a

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<sup>10</sup> The Final Rule adopted NFPA 30 (2012), "Flammable and Combustible Liquids Code," includes Errata 1, Errata 2 (2012 edition, June 20, 2011), into 49 CFR §§ 192.7, 192.735(b), 195.3, and 195.264(b)(1). Enbridge's *Facility and Tank Containment Systems* procedure must also be modified, if applicable, to specify that for breakout tanks built to API Standard 2510, impoundment must be in accordance with section 5 or 11 of the version of that standard incorporated by reference into Part 195.

methodology or process for determining what security measures are needed at a given site to ensure that breakout tanks are adequately protected against unauthorized entry.

**Item 5:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they do not include proper procedures addressing 49 C.F.R. § 195.307, which states, in relevant part:

**§ 195.307 Pressure testing aboveground breakout tanks.**

(a) . . .

(d) 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.

(e) For aboveground breakout tanks built to API Standard 2510 and first placed in service after October 2, 2000, pressure testing must be in accordance with ASME Boiler and Pressure Vessel Code, Section VIII, Division 1 or 2.

The Notice alleged that Enbridge's procedures covering the hydrostatic testing of above-ground breakout tanks, *CQS001-2006, Tank Hydrostatic Test Specifications* and *D03-102-2001, Integrity Assessment, Oil Tank*, are inadequate because they specify that the most recent edition of industry standards will apply, rather than the one incorporated by reference in 49 C.F.R. § 195.3. In addition, the Notice alleged that Enbridge's hydrostatic testing procedures do not state that the test records for breakout tanks must be maintained for the life of the tanks, as required by 49 C.F.R. § 195.310.

In its Response, Enbridge stated again that using the most recent versions of API Standard 650 and API Standard 653 meets or exceeds the requirements incorporated in 49 C.F.R. § 195.3. However, the company did indicate that it would modify its procedures to reflect that hydrostatic test records for breakout tanks must be maintained for the life of the tank and that it would send a copy of the revised procedures to PHMSA.

As discussed in Items 1 and 2 above, PHMSA has now incorporated by reference the revised API Standard 650, so Enbridge may now refer to the most recent edition in its procedures. However, Enbridge is ordered to modify its procedures to reference the edition of API Standard 653 that has been incorporated by reference into Part 195 and send a copy of the revised test record procedures to PHMSA.

**Item 6:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they fail to include adequate procedures addressing 49 C.F.R. § 195.405(a), which states:

**§ 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 Notice alleged that the Enbridge's procedure, *D10-202-1999, Grounding Methods*, is inadequate because it lists the latest version of API Recommended Practice (RP) 2003 as a referenced industry standard but does not specifically require that the grounding of breakout tanks be in accordance with this standard, nor does it indicate, in the alternative, why compliance with this standard is unnecessary. The Notice also alleged that Enbridge's procedure states the most recent edition of API RP 2003 shall apply, rather than the one that has been incorporated by reference into Part 195.

In its Response, Enbridge stated that while it agrees protection from static electricity, lightning, and stray currents is "mandatory," it does not believe that API RP 2003 should be. The company also contends that "API RP 2003 is a broad standard and only a small portion applies to aboveground storage tanks." According to Enbridge, its subject matter experts have deemed that lightning protection is not required for new tanks (TSP-009-2004) because the ground shunts on the floating roof provide adequate protection from lightning strikes. Moreover, Enbridge stated that API has issued a more recent recommended practice (API RP 545) in 2009 that may be more applicable to aboveground storage tanks than API RP 2003. Finally, Enbridge reiterated its belief that the latest edition of API RP 2003 should apply.<sup>11</sup>

I do not find Respondent's arguments persuasive. First, 49 C.F.R. § 195.405(a) does not state that adherence to API RP 2003 is mandatory in every instance. On the contrary, it states that an operator may note in its manual of written procedures why compliance with all or certain provisions of API RP 2003 is not necessary for the safety of a particular breakout tank. In the present case, if Enbridge does not believe that it needs to follow certain provisions of API RP 2003, it must explain why those provisions are not necessary for the safety of each particular tank.

Second, as discussed above, Enbridge does not have the flexibility to decide whether it wants to follow the edition of an industry standard that has been incorporated by reference into Part 195 or whether it wants to follow a more recent edition. Where an operator is required under Part 195 to follow a specific edition of a consensus standard, then that standard assumes the force of a law or regulation and constitutes a legal requirement until abandoned or updated by PHMSA,

Accordingly, based upon a review of all of the evidence, Enbridge is ordered to modify its procedures either to follow API RP 2003 or explain why it is unnecessary, for the safety of each

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<sup>11</sup> Response at 6.

particular tank, to follow the standard. In addition, Enbridge must amend its procedures to reflect that breakout-tank grounding must be done in accordance with the edition of API RP 2003 that has been incorporated by reference into Part 195.

**Item 7:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they fail to include proper procedures addressing 49 C.F.R. § 195.430, which states:

**§ 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 Notice alleged that the Enbridge's procedure, *14-02-04, Firefighting Equipment*, is inadequate because it lists several OSHA regulations as a reference but does not refer to the requirements of 49 C.F.R. § 195.430.

Enbridge responded that during the PHMSA inspection, a version of its Operations & Maintenance Procedures Manual Book 6 was reviewed and that within Book 6, *Procedure 04-03-02, Fire Extinguishers – Inspection*, references a related Enbridge standard in Book 2, *Procedure 14-02-04, Safety*. According to the company, the requirements of 49 C.F.R. § 195.430 are spelled out in *14-02-04*.

I have reviewed the procedure provided to PHMSA during the inspection (Book 2, *Procedure 14-02-04, Firefighting Equipment Standard*) dated July 15, 2010, and find that it includes only references to OSHA regulations and does not refer to the requirements of 49 C.F.R. § 195.430. In its Response, Enbridge provided a revised Book 2 procedure, dated March 1, 2013. Contrary to Enbridge's assertion, this standard still does not address the performance requirements of 49 C.F.R. § 195.430. It does list the firefighting equipment each pump station and compressor building must have, but does not adequately address the need to maintain such equipment at each pump station and breakout tank area. Further, it fails to meet the performance-based requirement of 49 C.F.R. § 195.430 that the firefighting equipment be *adequate* for each such area. Specifically, the list of equipment in Enbridge's procedure is not dependent on the type and size of the facility, the number of pumping or compressor units, the number of breakout tanks, the commodities present, or other factors that could influence the type and quantity of firefighting equipment needed.

Finally, the additional procedure from Book 6 included in the Response does not specify the requirements of 49 C.F.R. § 195.430, but simply provides a cross-reference to Book 2, *14-02-04, Firefighting Equipment*. The additional procedure from Book 6 and the revised procedure from Book 2 still do not completely address the procedural deficiencies; therefore, Enbridge is ordered to amend its procedures to include or refer to the requirements of § 195.430, as discussed above.

**Item 8:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they fail to include proper procedures addressing 49 C.F.R. § 195.571, which states:

**§ 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 Notice alleged that Enbridge's procedure, *Corrosion Control Guidelines, Chapter 4, Cathodic Protection*, is inadequate because it specifies that NACE SP0169-2007 (or latest revision) is to be used instead of the version of NACE SP0169 incorporated by reference into Part 195. The Notice further alleged that in section 4.3 of that procedure, Enbridge lists certain allowable cathodic protection criteria that are not specifically included in NACE SP0169 or NACE RP651 (for breakout tanks), such as E-Log-1 and net protective current. According to PHMSA, these criteria are not allowed for hazardous liquid pipelines unless the operator has already been using them on specific pipelines and can show that the results are comparable to those attained by the criteria specified in NACE SP0169. Enbridge, however, did not specify where these criteria were in use on any of its hazardous liquid pipelines.

In its Response, Enbridge indicated that it has revised its *Corrosion Control Guidelines, Chapter 4, Cathodic Protection*, in 2012 to remove the E-Log-I reference and net protective current criteria because they are no longer being used in the Enbridge system. In addition, Enbridge indicated that it has created an *Engineering Standard, Cathodic Protection – Tanks, D04-103*, which was slated for final review by the end of April 2013.

Enbridge attached a draft of its *Cathodic Protection - Tanks* procedures, but it still states in Section 3.3 that the cathodic protection criteria will be in accordance with the latest edition of NACE SP0169. For the reasons discussed in Items 1 and 2 above, Enbridge is hereby ordered to amend its procedures implementing 49 C.F.R. § 195.571 to use the version of NACE SP016930 that is currently incorporated by reference into Part 195.

**Item 9:** The Notice alleged that Respondent's procedures are inadequate to ensure safe operation of its pipeline facilities because they fail to include proper procedures addressing 49 C.F.R. § 195.573, which states, in relevant part :

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

(a) ...

(d) *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 Notice alleged that Enbridge's procedure, *Corrosion Control Guidelines, Cathodic Protection, Chapter 4*, is inadequate because it lists API RP 651 as a referenced standard but does not specifically require that operation and maintenance of cathodic protection systems on breakout tanks must be in accordance with API RP 651.

As with Item 8 above, Enbridge indicated in its Response that it had revised its *Corrosion Control Guidelines* in 2012 to specify that the cathodic protection systems on breakout tanks must be operated and maintained in accordance with API RP 651. The company stated that the requirements were also outlined in the General Requirements found in its Draft Engineering Standard, *Cathodic Protection – Tanks, D04-103, Section 1.0, Scope*.

PHMSA has reviewed both documents included with the Response and found that the documents still show that API RP 651 is listed simply as a referenced standard. In addition, the Enbridge procedure, *Corrosion Control Guidelines*, includes the following note: "In the USA, tanks moved or constructed on a new location after October 2, 2000 shall have cathodic protection system installed in accordance with API Recommended Practice 651."<sup>12</sup> Under 49 C.F.R. § 195.573(d), all corrosion control systems on the bottoms of breakouts tanks must be inspected "to ensure that operation and maintenance of the system are in accordance with API Recommended Practice 651." There are no exceptions for tanks installed prior to October 2, 2000. Enbridge has apparently confused the Part 195 construction requirements with its inspection requirements. Accordingly, it is ordered that Enbridge amend its procedures to specify that corrosion control systems to protect the bottoms of breakout tanks must be operated and maintained in accordance with API RP 651 and to delete any exception for tanks moved or constructed prior to October 2, 2000.

Under 49 C.F.R. § 190.243, Respondent has a right to submit a Petition for Reconsideration of this Order Directing Amendment. The petition must be sent to: Associate Administrator, Office of Pipeline Safety, PHMSA, 1200 New Jersey Avenue, SE, East Building, 2<sup>nd</sup> Floor, Washington, DC 20590, with a copy sent to the Office of Chief Counsel, PHMSA, at the same address. PHMSA will accept petitions received no later than 20 days after receipt of service of this Order Directing Amendment by the Respondent, provided they contain a brief statement of the issue(s) and meet all other requirements of 49 C.F.R. § 190.243. Unless the Associate Administrator, upon request, grants a stay, all other terms and conditions of this Order Directing Amendment are effective upon service in accordance with 49 C.F.R. § 190.5.

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Jeffrey D. Wiese  
Associate Administrator  
for Pipeline Safety

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Date Issued

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<sup>12</sup> Response, at Attachment, *Corrosion Control Guidance, Chapter 4.1 Scope*, p. 4-3.