



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

August 12, 2014

Mr. Kevin Bodenhamer
Senior Vice President, Liquid Pipeline Operations
Enterprise Crude Pipeline LLC
1100 Louisiana Street
Houston, TX 77002

CPF 4-2014-5019M

Dear Mr. Bodenhamer:

Between July 2013 and March 2014, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) inspected several Enterprise Crude Pipeline, LLC ("Enterprise") construction projects including: ATEX (spread 6 in TX), Seaway Loop (Spread 1 in OK, Spreads 2, 3, 4, 5, 6 & 7 in TX), and Western Expansion (WEP) III in the Texas and New Mexico area pursuant to Chapter 601 of 49 United States Code. The inspections included a review of construction records, procedures, and field site visits.

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

1. §195.202 Compliance with specifications or standards.

Each pipeline system must be constructed in accordance with comprehensive written specifications or standards that are consistent with the requirements of this part.

The Enterprise Engineering Standards & Specifications, STD. 7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 3.4.2(f) *Liquid Coatings* is confusing and fails to include the process details provided to PHMSA in an email.

During the inspection of the construction projects, Enterprise provided PHMSA a clarification of STD.7002 in the form of an email that stated,

"STD 7002 - Protective Coatings - Below Ground Steel Surfaces - Field Applied

Topics Clarified:

- Durometer measurements (Shore D hardness) shall be performed before handling or backfilling the material. A shore D reading of 80 shall be achieved to ensure an adequate mixing ratio was used and proper cure of the material is achieved. The Shore D test shall be performed over the abraded tie-in area to ensure a non-destructive test.”

PHMSA reviewed Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 3.4.2(f) *Liquid Coatings*, Rev. 2, dated May 2013, which states:

“Coating shall be allowed to cure adequately before the structure is handled or backfilled. Wet and dry film thickness and hardness shall be in accordance with manufacturer's recommendations.”

Enterprise must amend the Enterprise Engineering Standards & Specifications, STD. 7002 to accurately detail the procedure that Enterprise relies upon with respect to the hardness of the field applied coating used.

2. §195.202 Compliance with specifications or standards.

Each pipeline system must be constructed in accordance with comprehensive written specifications or standards that are consistent with the requirements of this part.

The Enterprise Engineering Standards & Specifications, STD. 7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 5.2.1(3)(b) *Repairs to Single-Layer Fusion-Bonded Epoxy* makes reference to a section of STD. 7002 that is non-existent.

PHMSA reviewed Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 5.2.1(3)(b) *Repairs to Single-Layer Fusion-Bonded Epoxy*, dated May 2013 which states:

“Large area defects (not to exceed requirements set out in Section 4.9 of this standard) shall be repaired with liquid epoxy...”

Section 4.9 does not exist in the standard. Enterprise must amend the Enterprise Engineering Standards & Specifications, STD. 7002 to eliminate the reference error.

3. §195.202 Compliance with specifications or standards.

Each pipeline system must be constructed in accordance with comprehensive written specifications or standards that are consistent with the requirements of this part.

The Enterprise Engineering Standards & Specifications, STD. 7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 5.2.1(3)(e) *Repairs to Single-Layer Fusion-Bonded Epoxy* makes reference to a section of STD. 7002 that is non-existent.

PHMSA reviewed Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 5.2.1(3)(e) *Repairs to Single-Layer Fusion-Bonded Epoxy*, dated May 2013 which states:

“Liquid epoxy shall be prepared for application in accordance with Section 4.5.1 of this standard”

Thus, §5.2.1(3)(e) references Section 4.5.1, but Section 4.5.1 does not exist in the standard. There is a section 4.5(1) that addresses Cure Time, not Preparation for Application.

Enterprise must amend the Enterprise Engineering Standards & Specifications, STD. 7002 to eliminate the reference error.

4. §195.202 Compliance with specifications or standards.

Each pipeline system must be constructed in accordance with comprehensive written specifications or standards that are consistent with the requirements of this part.

The Enterprise Engineering Standards & Specifications, STD. 7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 2.2(8) *General* and Sec. 3.3.3(6) *Liquids over mill applied ARO liquids (SPC 2888 and Powercrete J products only)* conflict with statements in each.

PHMSA reviewed Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 2.2(8) *General*, dated May 2013 which states,

“For liquid epoxies,... Each gauge reading shall be at least 100 percent of the specified minimum thickness and less than 120 percent of the specified maximum...”

Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec.STD.7002, 3.3.3(6) *Liquids over mill applied ARO liquids (SPC 2888 and Powercrete J products only)*, dated May 2013 states,

“Contractor shall apply liquid coatings... The ARO should achieve a minimum of 20 mils and a maximum of 50 mils dry-film thickness, or more appropriately, match the total mill-applied coating thickness.”

Section 2.2(8) and Section 3.3.3(6) contain statements that conflict with each other. Section 3.3.3(6) states that the maximum thickness is 50 mils for field applied liquid epoxies. Section 2.2(8) states the maximum thickness of the field applied coating should be less than 120% of the maximum or 60 mils. Thus, when the mill applied coating is 50 mils, the field applied coating can be a value greater than 50 mils and less than 60 mils DFT. Therefore, the “maximum” permitted by §3.3.3(6) can be exceeded by use of §2.2(8).

Enterprise must amend the Enterprise Engineering Standards & Specifications, STD. 7002 to eliminate the conflicting statements.

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 Enterprise Crude Pipeline LLC 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, SW Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 4-2014-5019M** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,



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

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