WARNING LETTER

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 770022

CPF 4-2014-5018W

Dear Mr. Bodenhamer:

Between July 2013 and May 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, 4, 5, 6, and 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.

As a result of the inspection, it appears that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violations are:

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.

Enterprise failed to construct the Seaway Loop Project in accordance with comprehensive written specifications or standards by failing to inspect all external pipe coating just prior to lowering the pipe into the ditch or submerging the pipe as required by §195.561(a).

PHMSA reviewed Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 4.7 *Recoat - Holiday Detection*, Rev. 2, dated May 2013, which states in paragraph (2):

> "… Holiday inspection shall be conducted just prior to lowering the pipe into the ditch… Any coating damage discovered must be repaired. All inspection and repair results must be documented on the Company Coating Inspection form."

On Seaway Loop Segment 5, PHMSA observed that the pipe section at Station 515+00 (the "515 pipe section") was laid into the ditch without being inspected for holidays. The utility inspector stated that the decision to "pre-jeep" the pipe was made and it was inspected for holidays "yesterday."

The Chief Inspector was advised of the incident where the pipe was not tested for holidays just prior to being placed in the ditch. The Chief Inspector stated that he would look into the situation, and assured that all pipe will be tested for holidays "just prior" to being laid-in the ditch.

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.

Enterprise failed to construct the Seaway Loop Project in accordance with comprehensive written specifications or standards by failing to follow its STD.7002, Section 4.7 and use the prescribed voltage settings for the Holiday Detector when jeeping the pipeline.

PHMSA reviewed Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 4.7 *Recoat - Holiday Detection*, Rev. 2, dated May 2013, which states in paragraph (1) and (3):

> *"(1) Holiday inspection shall be in accordance with NACE SP0188, SP0274, or SP0490, as appropriate. … (3) … The minimum voltage output for coating thickness shall be determined according to the following calculation or by consulting the manufacture's product data sheet. As a general minimum rule, at least 100 volts per mil of coating will be required (EXAMPLE: 20 mils DFT x 100 volts/mil = 2,000 volts)."*

The actual voltage set point of the Holiday detectors as applied to the ATEX, Seaway Loop, and WEP III Projects does not conform to STD.7002, *Protective Coatings - Below Ground Steel Surfaces - Field Applied*.

Western Expansion (WEP) III Project: New Mexico area: During a field inspection, PHMSA discovered that Enterprise has been setting the Holiday detector at 1,900 volts for both pipe coated with 14-16 mils of FBE and for field joints coated with 39 mils. The setting of the Holiday detector to 1,900 volts was confirmed with a field utility Inspector at station 659+ 79. Again, the Enterprise construction standard, STD.7002, Section 4.7, is not followed by Enterprise contract personnel.

Seaway Loop and ATEX Projects: Texas and Oklahoma areas: During the field inspection, PHMSA observed Enterprise using a setting of 4,000 volts for Holiday detection ("jeeping") for pipe coating thicknesses in the range of 25 mils to 80 mils. Also, PHMSA observed Enterprise using a setting of 2,500 volts for pipe coating thicknesses in the range of 15 mils to 70 mils. Thus, the Enterprise construction standard, STD.7002, Section 4.7, is not followed by Enterprise or its contract personnel.

On October 21, 2013, a conference call was held with a PHMSA representative, several Enterprise field personnel, and the Enterprise Corrosion Group (HQ office) to discuss the relationship between the voltage setting of the Holiday detector and the thickness of the coating on the pipe. Also discussed was amending the Enterprise construction specification, STD.7002, Section 4.7.

During the conference call, Enterprise revealed that it was using a June 4, 2013 email as its standard. Further, Enterprise revealed that the email was sent to its field personnel prior to the beginning of construction. The email provided for using 4,000 volts for "40 to 70 mil Abrasion Resistant standard," and 2,500 volts for "20 to 50 mil corrosion protection standard." PHMSA requested that STD.7002, *Protective Coatings - Below Ground Steel Surfaces - Field Applied*, be amended to conform to the requirements provided in the June 4, 2013 email that was represented to have been used in the field.

On the Seaway Loop project, Segment 6, on March 11, 2014, a test of sensitivity was conducted at Sta. 682+39, adjacent to weld number 6MLB0045 by the coating crew. During the normal course of detecting holidays, a holiday was visually located. A SPY 785 Holiday Detector, which had been previously calibrated, was used. The holiday was a large gouge on the line pipe with the pipe having 15 mils of FBE coating. Measurements were taken with the Holiday Detector set at varying voltages, and the results were recorded. The test established that any measurement made at a voltage below 2,000 volts is unreliable when using a SPY 785 Holiday Detector calibrated pursuant to the Enterprise calibration methodology.

The sensitivity test was confirmed the next day using an Enterprise calibration method. The Enterprise calibration method provided for the detection of the bare metal circumference at the end of a joint of pipe as a holiday. The inspector set the holiday detector at 1,800 volts, as

represented to be normally done. The test was conducted near Sta. 370+36 on Segment 6 of the Seaway Loop Project. The Holiday Detector was tested on the bare, uncoated end of a pipe using 1,800 volts, and the unit detected the presence of a holiday. The inspector confirmed that the holiday detector was considered to be functioning properly based upon the detection of the uncoated end of pipe using 1,800 volts. When asked to prove the calibration was accurate, a holiday was fabricated several feet from the uncoated end by the inspector, i.e., a hole was made in the coating. The Holiday Detector was run down the coated pipe with the voltage unchanged at 1,800 volts to the fabricated holiday. The holiday was not detected. The Enterprise calibration method corroborated the sensitivity test that was run the previous day, i.e., any measurement made at a voltage below 2,000 volts is unreliable.

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.

Enterprise failed to construct the Seaway Loop Project in accordance with comprehensive written specifications or standards by failing to follow the Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 3.4.2(f) *Liquid Coatings* and check the film hardness in accordance with manufacturer's recommendations.

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."*

During the records review, PHMSA identified that Enterprise is not documenting and/or measuring the hardness of the field applied coating.

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.

Enterprise failed to construct the Seaway Loop Project in accordance with comprehensive written specifications or standards by failing to apply field coating at joints to a maximum of 50 mils DFT (Dry Film Thickness) or more appropriately, match the total mill-applied coating thickness as required by Enterprise Engineering Standards & Specifications, STD.7002,

Protective Coatings - Below Ground Steel Surfaces-Field Applied, Sec. 3.3.3(6) *Liquids over mill applied ARO liquids*.

PHMSA reviewed Enterprise Engineering Standards & Specifications, STD.7002, *Protective Coatings - Below Ground Steel Surfaces-Field Applied*, Sec. 3.3.3(6) *Liquids over mill applied ARO liquids*, Rev. 2, dated May 2013, which states:

> *"Contractor shall apply liquid coatings by brushing, rolling, or spray application in accordance with manufacturer's recommendation to achieve the same coating thickness as the original pipe coating thickness. 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."*

During the field inspections, it was observed on numerous occasions that the field applied coating of joints had areas where the DFT was greater than 50 mils.

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed $200,000 per violation per day the violation persists up to a maximum of $2,000,000 for a related series of violations. For violations occurring prior to January 4, 2012, the maximum penalty may not exceed $100,000 per violation per day, with a maximum penalty not to exceed $1,000,000 for a related series of violations. We have reviewed the circumstances and supporting documents involved in this case, and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the item(s) identified in this letter. Failure to do so will result in Enterprise Crude Pipeline, LLC being subject to additional enforcement action.

No reply to this letter is required. If you choose to reply, in your correspondence please refer to **CPF 4-2014-5018W.** 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).

Sincerely,

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