



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

May 1, 2013

Mr. Terry Hurlburt  
Senior Vice President of Operations  
Enterprise Products Operating, LLC  
1100 Louisiana Street  
Houston, TX 77002

Dear Mr. Hurlburt:

**CPF 4-2013-5012M**

During the months of April through August 2012, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) inspected Enterprise Products Operating LLC procedures, records, and pipeline facilities in Texas, Louisiana, and Arkansas operating areas pursuant to Chapter 601 of 49 United States Code.

As a result of the inspection, the requirements for which are set forth in Title 49 Code of Federal Regulations, Part 195, the following inadequate procedures are noted:

**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:**

**(13) Periodically reviewing the work done by operator to determine the effectiveness of the procedures used in normal operation and maintenance and taking corrective action where deficiencies are found.**

Enterprise O&M procedure, Sec 601 (Manual Reviews and Periodic Review of Work Done by Operating Personnel) does not reflect a timeframe the field personnel are obligated to submit their field review Form 601A within the specified time.

During the record audit at Baytown, TX, PHMSA requested Enterprise to provide the effectiveness review of the O&M procedure for the year 2011. Enterprise provided the company's reviews Form 601A where all the annual reviews have been documented by collecting all proposed changes or modifications to existing procedures, as well as any new procedures that need developing from the operating areas across the company. Enterprise O&M Procedure, Sec 601 states "As a result of this review, local management and or/area supervisor shall transmit the proposed changes to the Pipeline Compliance Group. When changes are required to assure the effectiveness and the adequacy of the procedure reviewed, the Pipeline Compliance Group will submit the changes in accordance to the manual review process."

The PHMSA representative randomly selected one O&M procedure review that was conducted on July 8, 2011, by the Southwest Region - South (IU# 2854) Operating area (Line P- 62, 16" and P- 2, 20"). The lines are HVL and refined product carrier. PHMSA representative asked the field supervisor when this review Form 601A was sent to Compliance Group. Field supervisor responded that the review was sent on around June 2012 which was almost a year. The submittal of periodic review of O&M manual to the Compliance Group should be within a reasonable time so that the Compliance Group has enough time to recognize the deficiencies and revise the procedure accordingly.

Enterprise revised the O&M Procedure, Sec 601 (Manual Reviews and Periodic Review of Work Done by Operating Personnel) to reflect the 90 days submittal timeframe, and submitted the revised procedure to PHMSA on October 25, 2012. PHMSA reviewed the revised procedure and found acceptable.

## **2. §195.402 Procedural manual for operations, maintenance, and emergencies. General.**

**(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:**

**(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.**

Enterprise procedure is inadequate that it does not mention "polarized potential." Enterprise O&M procedure CP 13(Onshore Pipeline and Facility Annual Cathodic Protection Survey), Section 2.8.1 states "Pipe to soil potential measurements more negative than -1250mV need to be investigated to insure that all influencing current sources have been interrupted." Enterprise must amend its O&M procedure, CP-13 (Onshore Pipeline and Facility Annual Cathodic Protection Survey) stating "polarized potential," and not just potential.

Enterprise revised the O&M Procedure, CP 13 (Onshore Pipeline and Facility Annual Cathodic Protection Survey) on February 4, 2013, to reflect the “polarized potential” in Section 2.9.4 and submitted to PHMSA. PHMSA reviewed the revised procedure and found acceptable.

**3. §195.402 Procedural manual for operations, maintenance, and emergencies. General.**

**(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:**

**(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.**

Enterprise procedure is inadequate that it does not mention the using of zinc reference electrode underneath the breakout tank bottom, and its conversion of the voltage equivalent to -850mV referred to saturated Copper/Copper sulfate reference electrode.

Enterprise must amend their O&M Procedure, CP-13 (Onshore Pipeline and Facility Annual Cathodic Protection Survey) to include the zinc reference electrode and its conversion of the voltage equivalent to -850mV referred to saturated Copper/Copper sulfate reference electrode.

Enterprise revised the O&M Procedure, CP 13 (Onshore Pipeline and Facility Annual Cathodic Protection Survey) to reflect the zinc and its conversion, and submitted to PHMSA on February 4, 2013. PHMSA reviewed the revised procedure and found acceptable.

**4. §195.573 What must I do to monitor external corrosion control?**

**(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.**

Enterprise O&M Procedure, CP-13 (Onshore Pipeline and Facility Annual Cathodic Protection Survey) does not indicate either permanently installed reference electrodes, or by temporarily inserting a waterproof, portable reference electrode under the breakout tank bottom through a perforated nonmetallic tube. Enterprise has several breakout tanks that have this provision.

Enterprise must amend their O&M Procedure, CP-13 (Onshore Pipeline and Facility Annual Cathodic Protection Survey) to include a plan of action how to inspect the breakout tanks bottom that have either permanently installed reference electrodes, or by temporarily inserting a waterproof, portable reference electrode under the tank through a perforated nonmetallic tube.

Enterprise revised the O&M Procedure CP-13(Onshore Pipeline and Facility Annual Cathodic Protection Survey) to reflect the plan of action in Section 2.3.3.11, and submitted the revised procedure to PHMSA on February 6, 2013. PHMSA reviewed the procedure and found acceptable.

**5. §195.573 What must I do to monitor external corrosion control-**

**(a) Protect pipelines. You must do the following to determine whether cathodic protection required by this subpart complies with §195.571:**

**(2) Identify not more than 2 years after cathodic protection is installed, the circumstances in which a close-interval survey or comparable technology is practicable and necessary to accomplish the objectives of paragraph 10.1.1.3 of NACE SP 0169 (incorporated by reference, see § 195.3).**

Enterprise O&M Procedure, CPP-CIS-02 (Close-Interval Survey Consideration Procedure) is inadequate that it does not establish the sound engineering justification and/ or a standard method for identifying the circumstances in which a Close-interval Cathodic Protection Potential Survey (CIS) or comparable technology is practicable and necessary for hazardous liquid pipelines.

Enterprise has been using a CIS consideration algorithm in the past several years in order to evaluate the practicality and necessity of a close-interval survey or comparable technology. During the inspection in 2012, PHMSA revealed that the CIS consideration algorithm program was not described in details in their O&M procedure. When questioned, Enterprise included the details of the algorithm on February 4, 2013, and submitted it to PHMSA. By going through algorithm development, the process, weighting factors, variable inputs, and the values of variable inputs, PHMSA found all the factors, variable inputs and its values inconsistent that does not establish a sound engineering practice.

According to CPP-CIS-02 (Close-Interval Survey Consideration Procedure), Section 4.5.2 “CIS is determined to be necessary and practicable if the results of the algorithm (P&N Score) are  $\geq$  25. This score has been chosen through the comparison of the algorithm results with practical field knowledge and experience.”

PHMSA notes that the score (25) of algorithm (P&N Score) result is so high that if considering a segment with poor coating, visible holidays, poor P/S readings, poor IRF readings, HCAs, leaks and other variable inputs with minimum values or zero in the algorithm formula, the total output of the algorithm consideration (P&N Scores) does not qualify the CIS practicality.

Enterprise must amend the O&M Procedure, CPP-CIS-02 (Close-Interval Survey Consideration Procedure) to reflect the CIS consideration algorithm to an acceptable sound engineering method for identifying the circumstances in which a close-interval cathodic protection potential Survey (CIS) or comparable technology is practicable and necessary for hazardous liquid pipelines.

**6. §195.575 Which facilities must I electrically isolate and what inspections, tests, and safeguards are required?**

**(a) You must electrically isolate each buried or submerged pipeline from other metallic structures, unless you electrically interconnect and cathodically protect the pipeline and the other structures as a single unit.**

Enterprise O&M Procedure, CP 14 (Testing for the electrical Isolation of Casings), revised on October 21, 2008, does not reflect the plan of action for shorted casings. A plan of action needs to be developed whenever electrolytic and/or metallic shorted casings are identified. The plan of action should be initiated within six months of completion of a survey.

Procedure CP-14 describes several testing procedures to identify whether the casing is shorted or not. But the testing procedure does not include a plan of action by the operator. The testing procedure identifies whether there is a shorted casing, but the procedures do not go into detail of what type of short exists and what action is to be taken to clear the short.

Enterprise must amend their O&M procedure, CP-14 (Testing for the Electrical Isolation of Casings) to include a plan of action to be taken for clearing the shorted casings.

In regards to items above when it is found that an operator's procedures are inadequate, §195.402(b) provides that the operator, after notice and opportunity for hearing, as provided in 49 CF §190.237, may be required to amend its plans and procedures. This letter serves to provide you with that notice of inadequate procedures and response options, as prescribed under §190.237. The operator is allowed thirty (30) days after receipt of such notice to submit written comments or to request an informal hearing. After considering the material presented, the Office of Pipeline Safety is required to notify the operator of the required amendment or to withdraw the notice proposing the amendment. If you do not desire to contest the notice, you must prepare the revised procedures and provide a copy to the Director, Southwest Region, within thirty (30) days of receipt of this notice.

Please refer to **CPF No 4-2013-5012M** for any correspondence on this matter.

Sincerely,



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

Enclosures: *Proposed Compliance Order*  
*Response Options for Pipeline Operators in Compliance Proceedings*