

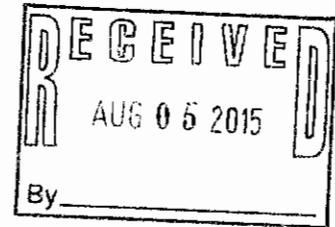


ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

August 4, 2015

Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
8701 South Gessner, Suite 1110
Houston, TX 77074



Attn: Mr. R. M. Seeley
Director, Southwest Region, PHMSA

Re: Notice of Amendment CPF 4-2015-5015M

Dear Mr. Seeley,

Enterprise Crude Pipeline LLC ("Enterprise") is in receipt of the above referenced "Notice of Amendment" dated July 10, 2015. This letter constitutes Enterprise's timely response to the request.

Item 1:

§195.402 Procedural manual for operations, maintenance and emergency response.

(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.

§195.579 What must I do to mitigate internal corrosion?

(a) General. If you transport any hazardous liquid or carbon dioxide that would corrode the pipeline, you must investigate the corrosive effect of the hazardous liquid or carbon dioxide on the pipeline and take adequate steps to mitigate internal corrosion.

(b) Inhibitors. If you use corrosion inhibitors to mitigate internal corrosion, you must—

- (1) Use inhibitors in sufficient quantity to protect the entire part of the pipeline system that the inhibitors are designed to protect;*
- (2) Use coupons or other monitoring equipment to determine the effectiveness of the inhibitors in mitigating internal corrosion; and*
- (3) Examine the coupons or other monitoring equipment at least twice each calendar year, but with intervals not exceeding 7 1/2 months.*

(c) *Removing pipe. Whenever you remove pipe from a pipeline, you must inspect the internal surface of the pipe for evidence of corrosion. If you find internal corrosion requiring corrective action under Sec. 195.585, you must investigate circumferentially and longitudinally beyond the removed pipe (by visual examination, indirect method, or both) to determine whether additional corrosion requiring remedial action exists in the vicinity of the removed pipe.*

Enterprise's Internal Corrosion Procedures, Section 1502, contained within their Operations and Maintenance manual fail to include all procedures utilized by Enterprise in their Internal Corrosion Control Program. Enterprise procedures do not reference the procedure CPP-ICP-00 Control of Internal Corrosion Steel and Piping Systems within the company Operations and Maintenance Manual. This document should be referenced, as it contains details for the control of internal corrosion for all gas and liquid pipeline facilities.

Enterprise's Response to Item 1:

Enterprise has amended O&M Section 1502 to reference procedure CPP-ICP-00 Control of Internal Corrosion in Steel Pipelines and Piping Systems. The revised Section 1502 date 7/24/2015 is attached.

Should you have any questions, require additional information or wish to discuss this matter in greater detail, please do not hesitate to contact our office. Enterprise welcomes the opportunity to work with PHMSA regarding the safe construction and operation of our pipelines.

Sincerely,



Jeff Morton
Director, Transportation Compliance

**PROCEDURES MANUAL FOR HAZARDOUS LIQUIDS PIPELINE OPERATIONS,
MAINTENANCE, AND EMERGENCIES**

Corrosion Control Procedures

Subject: Internal Corrosion
References: 49CFR§§195 Subpart H – Corrosion Control

Section: 1502
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195.551
Applicability

All the Company's steel pipelines will be protected against corrosion by means of the corrosion prevention program, which includes this document and the specifications and procedures as specifically referenced herein. The corrosion prevention program will be instituted, operated, and maintained to insure adequate protection.

195.555
Qualifications of Supervisors

The Corrosion Prevention Group Supervisors must have thorough knowledge of the corrosion control procedures associated with the program and their professional activities shall include suitable experience in the field of corrosion control. The training may be accomplished through the National Association of Corrosion Engineers educational and training programs, in-house training or comparable industry training programs. Corrosion Prevention Group Supervisor resumes are maintained as a part of the Hazardous Liquid Pipeline Integrity Management Program. Verification of training and certification can also be made directly through the National Association of Corrosion Engineers

195.579
Internal Corrosion

Standardized methods for the control of internal corrosion in steel pipelines and piping systems used to gather, transport or distribute hazardous liquids or carbon dioxide should be as specified in *Company specification and procedure EPCO CPP-ICP-00 "Control of Internal Corrosion in Steel Pipelines and piping Systems"*.

Monitoring techniques can include but are not limited to:

- In-line inspection
- Hydro-static testing
- Weight loss coupon
- Corrosion rate probes
- Product analysis (liquids, solids, microbiological activity, etc.)
- Copper strip testing
- Direct measurement
- Visual examination

Sampling locations shall be carefully chosen so that a sample collected, represents the majority of liquids within a system, and/or represents the location where corrosion is expected to be most aggressive. If an upset condition is known to have occurred, a reasonable effort should be made to collect a liquid sample.

When monitoring results indicate, steps will be taken to mitigate internal corrosion of the pipeline system. The design, selection and installation of

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internal corrosion control and monitoring systems should be in accordance with the *Company specification and procedure EPCO CPP-ICP-00 "Control of Internal Corrosion in Steel Pipelines and piping Systems"*. Mitigation techniques can include but are not limited to:

- Elimination/control of corrosive constituents
- Maintenance pigging
- Chemical treatment
- Changes to pipe configurations
- Changes to operating conditions

If chemical mitigation is used, coupons or other monitoring equipment will be utilized to determine the effectiveness of the chemical mitigation. Coupons or other types of monitoring equipment shall be examined at intervals not exceeding seven and a half months, but at least twice each calendar year, to determine the effectiveness of the chemical mitigation or the extent of any corrosion. The Corrosion Prevention Group will determine the coupon locations. As a general rule, coupons should be placed in 1) locations available that can provide representative data of the system and/or 2) in locations with significant potential for internal corrosion. Many operational and environmental conditions influence the optimal selection of locations for coupon installations. Since it is normally impractical to locate internal corrosion monitoring devices at natural low points of the pipe line system, monitoring locations and equipment type will be utilized in a manner to best simulate such areas.

The results shall be documented on the appropriate form or database.

**195.585 and
195.587
Corroded Pipe
Evaluation and
Repair**

When circumstances allow for the inspection of the internal surface of pipe for any reason, the internal surface of the pipe and adjacent pipe shall be inspected both circumferentially and longitudinally, for internal corrosion. If internal corrosion is found requiring corrective action under §195.585, the extent of corrosion will be determined, and appropriate steps taken to maintain pipe integrity.

Internal corrosion shall be evaluated and the strength of corroded pipe determined in accordance with the Company Standard STD.9006 *"Pipeline Defect Evaluation and Repair Procedure"*.

If the strength of the corroded pipe is less than required for the MOP, the following shall be performed:

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1. Reduce the MOP commensurate with the strength of the corroded pipe needed for serviceability in accordance with the Company Operating Pressure Procedure.
2. Repair the pipe in accordance with the Company Standard STD.9006 "Pipeline Defect Evaluation and Repair Procedure".

All examination, evaluation, and repair information shall be documented on the appropriate Company form or in the appropriate database and shall be forwarded to the Asset Data Management Group. Contact the Liquid Pipeline Integrity Group, as necessary, for assistance with the evaluation of anomalies. Contact the Corrosion Prevention Group for assistance with evaluating corrosion control deficiencies.

Any linings installed in breakout tanks shall be installed in accordance with API RP 652.

**195.589
Records:**

Records shall be maintained for each test or inspection for internal corrosion utilizing the appropriate form(s) and or database.

These records may be supplemented by additional information or data at any time, as well as by laboratory reports from outside laboratories.

Internal corrosion records shall be retained for no less than 5 years and those records outlined in 195.589(c) must be retained for the life of the pipeline as long as it is in service.

Records Retention information is located in the Enterprise Records Retention Schedule available through the Enterprise Internet Portal.

**Associated
Operator
Qualification
Tasks**

- 10.1 Insert and Remove Coupons
- 10.2 Monitor Probes (online)
- 11 Perform Internal Corrosion Remediation
- 12 Inspect Internal Pipe Surface

Responsibilities:

It shall be the responsibility of the Corrosion Prevention Group to establish and coordinate an adequate and effective Corrosion Prevention Program, provide procedures for implementing the program, arrange for any necessary tests and analysis by outside parties, provide technical guidance, and maintain corrosion control records except for those records related to 195.579(c) and 195.587 or any other record not exclusively generated by the Corrosion Prevention Group.

It shall be the responsibility of the Corrosion Prevention Group supervision to

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see that the Corrosion Prevention Program and procedures are implemented, that the required field tests are conducted, and the proper records are prepared and submitted.

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