Enterprise Products

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

ENTERPRISE PRODUCTS OPERATING LLC

June 9, 2017

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

Attn: Ms. Terry J. Binns
Acting Director, Southwest Region, PHMSA

Re: CPF 4-2017-5020M
Notice of Amendment
Enterprise Products Operating, LLC ("Enterprise")

Dear Ms. Binns,

Enterprise is in receipt of the above referenced "Notice of Amendment" dated May 10, 2017. This letter serves as Enterprise's response to the Alleged Violation.

Item 1:

§195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline system commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

EP_MAPCO fails to have a procedure or procedures that deal with In-service Welding regarding the following: pipe wall burn through, weld cooling rate, hydrogen cracking, metallurgy of the materials being welded, proper support of the pipe in the ditch, and delay times prior to inspection of the weld. The Federal Regulations, §195.402(a) states,

> *"Each operator shall, in repairing its pipeline systems, insure that the repairs are made in a safe manner and are made so as to prevent damage to persons or property."*

The EP_MAPCO Engineering Standards and Specifications, *STD.8004 In-service Welding, Pre-assessment, Evaluation, and Approval*, is a form with instructions for completing the Pre-Assessment Letter (PAL). The standard fails to address pipe wall

burn through, weld cooling rate, hydrogen cracking, metallurgy of the materials being welded, proper support of the pipe in the ditch, and delay times prior to inspection of the weld. The standard does reference API 1104 Appendix B In-Service Welding, but fails to elaborate on the processes.

EP_MAPCO must amend their procedures to address pipe wall burn through, weld cooling rate, hydrogen cracking, metallurgy of the materials being welded, proper support of the pipe in the ditch, and delay times prior to inspection of the weld.

Enterprise Response to Item 1:

Enterprise has amended *STD.8004 In-service Welding, Pre-assessment, Evaluation, and Approval* to include the following language in section 4.2.1:

> *"A conservative evaluation shall be made comparing pipeline operating conditions with empirical data to determine acceptable heat input ranges for the in-service welds being performed. This evaluation shall take into consideration the two primary concerns with welding onto in-service pipelines: the first concern being "burn-through" and the second concern of delayed hydrogen cracking "HIC"."*

The evaluation process outlined in STD. 8004 takes into consideration wall thickness, material composition(s), operating flowing conditions (i.e. cooling effects), product type, amongst other pipeline conditions to determine acceptable welding parameters to be utilized within the limits of previously qualified in-service procedures to address the two primary concerns of in-service welding.

Current Enterprise standard *STD.4508 Excavation, Support, and Backfill of Existing Pipelines* addresses proper support of pipe in ditch in Section 6.0. Delay time prior to inspection of the weld is addressed in standards *STD.8005 Maintenance Welding, Inspection, and Repair* and *STD.8012 Welded Hot Taps* in Sections 11.0 and 5.0, respectively.

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,

Graham Bacon
Executive Vice President, Operations & Engineer

Attachments (4)
STD 8004 In-Service Welding, Pre-assessment, Evaluation and Approval
STD 4508 Excavation, Support and Backfill of Existing Pipelines
STD 8005 Maintenance, Welding, Inspection and Repair
STD 8012 Welded Hot Taps