



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

8701 South Gessner, Suite 1110
Houston, TX 77074

WARNING LETTER

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 10, 2014

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

CPF 4-2014-5035W

Dear Mr. Bodenhamer:

On December 1-4, 2014; representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) inspected procedures, records and field construction on breakout tanks in Enterprise Crude Houston (ECHO) Terminal Houston, TX. On the basis of the inspection, PHMSA has identified apparent inadequacies found within Enterprise's construction practices, as described below:

1. 195.132 Aboveground breakout tank.

(a) Each aboveground breakout tank must be designed and constructed to withstand the internal pressure produced by the hazardous liquid to be stored therein and any anticipated external loads.

(b) For aboveground breakout tank first placed in service after October 2, 2000, compliance with paragraph (a) of this section requires one of the following: (1) Shopfabricated, vertical, cylindrical, closed top, welded steel tanks with nominal capacities of 90 to 750 barrels (14.3 to 119.2 m³) and with internal vapor space pressures that are approximately atmospheric must be designed and constructed in accordance with API Specification 12F.

(2) Welded, low-pressure (i.e., internal vapor space pressure not greater than 15 psig (103.4 kPa)), carbon steel tanks that have wall shapes that can be generated by a single

vertical axis of revolution must be designed and constructed in accordance with API Standard 620.

(3) Vertical, cylindrical, welded steel tanks with internal pressures at the tank top approximating atmospheric pressures (i.e., internal vapor space pressures not greater than 2.5 psig (17.2 kPa), or not greater than the pressure developed by the weight of the tank roof) must be designed and constructed in accordance with API Standard 650.

(4) High pressure steel tanks (i.e., internal gas or vapor space pressures greater than 15 psig (103.4 kPa)) with a nominal capacity of 2000 gallons (7571 liters) or more of liquefied petroleum gas (LPG) must be designed and constructed in accordance with API Standard 2510.

Enterprise failed to achieve compliance with API-650 Section 5.7.4.3 and its own Engineering Standards and Specifications, STD.5600 Section 5.7.4.1, by welding name plate bracket assemblies to thickened, post weld heat treated (PWHT) shell inserts after they were installed into the shell of tanks 3901, 3902, 3903, 3904, 3905, and 3906. Small attachments are allowed to be welded to PWHT assemblies under API-650 Section 7.2.1.11, but the name plate assemblies were attached to the inserts by welding reinforcing plates that are approximately 4" wide by 8" long. These reinforcing plates do not fit the description of small attachments as described in API-650 Section 7.2.1.11. By welding the name plate assemblies to the inserts after heat treatment the inserts can no longer be considered thermally stress relieved as an assembly prior to installation into the tank shell, which is required by the aforementioned standards. Enterprise must discontinue the practice of welding of large attachments to thickened, post weld heat treated (PWHT) shell inserts and abide by the requirements of Part 195, API-650 and its own Engineering Standards and Specifications.

2. 195.132 Aboveground breakout tank.

(a) Each aboveground breakout tank must be designed and constructed to withstand the internal pressure produced by the hazardous liquid to be stored therein and any anticipated external loads.

(b) For aboveground breakout tank first placed in service after October 2, 2000, compliance with paragraph (a) of this section requires one of the following: (1) Shopfabricated, vertical, cylindrical, closed top, welded steel tanks with nominal capacities of 90 to 750 barrels (14.3 to 119.2 m³) and with internal vapor space pressures that are approximately atmospheric must be designed and constructed in accordance with API Specification 12F.

(2) Welded, low-pressure (i.e., internal vapor space pressure not greater than 15 psig (103.4 kPa)), carbon steel tanks that have wall shapes that can be generated by a single vertical axis of revolution must be designed and constructed in accordance with API Standard 620.

(3) Vertical, cylindrical, welded steel tanks with internal pressures at the tank top approximating atmospheric pressures (i.e., internal vapor space pressures not greater than 2.5 psig (17.2 kPa), or not greater than the pressure developed by the weight of the tank roof) must be designed and constructed in accordance with API Standard 650.

(4) High pressure steel tanks (i.e., internal gas or vapor space pressures greater than 15 psig (103.4 kPa)) with a nominal capacity of 2000 gallons (7571 liters) or more of liquefied

petroleum gas (LPG) must be designed and constructed in accordance with API Standard 2510.

Enterprise failed to provide reports of all nondestructive examinations (NDE) of tank shell attachments for tanks 3901, 3902, 3903, 3904, 3905 and 3906. API 650 Section 7.2.3.5 requires: "... The welds of permanent attachments (not including shell-to-bottom welds) and areas where temporary attachments are removed, shall be examined visually and by either the magnetic particle method or by the liquid penetrant method". Furthermore, Appendix W.1.5 of the same standard requires that the post-construction document package should contain reports of all NDE. The Operator provided an IRIS NDT Magnetic Particle report # 31390 which cited: "All temporary attachments, + permanent attachments has been inspected and meet requirements of Code and Customer's request"; however, reports of all NDE on tank shell attachments for tanks 3901, 3902, 3903, 3904, 3905 and 3906 were not provided. Enterprise must provide reports of all NDE on tank shell attachments in order to abide with the requirements of API-650 and Part 195.

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 take the required actions 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 4-2014-5035W**. 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

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