NOTICE OF AMENDMENT

VIA E-MAIL TO MR. HARRY N. PEFANIS

September 25, 2020

Mr. Harry N. Pefanis
President & Chief Commercial Officer & Director
Plains All-American GP LLC
333 Clay Street, Suite 1600
Houston, TX 77002

CPF 5-2020-5005M

Dear Mr. Pefanis:

During the weeks of January 28 through February 1, March 11 through 15, and April 1 through 5, 2019, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, inspected Plains All-American Pipeline, LP's (PAA) procedures for the Beartooth, Bighorn, and Casper Units in Houston, Texas.

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within PAA's plans or procedures, as described below:

1. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) . . .
(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:

(1) . . .
(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

PAA's written procedures for span inspections are inadequate to assure safe operation of a pipeline facility. Specifically, PAA's Form 515 (Plains2019P-02N_0000509, revised October 2010), used during atmospheric corrosion inspections, is deficient for gathering adequate data for evaluating spans. For example, on Form 515, the total distance of spans is recorded in a specific field, but the distance between supports is recorded in a general comments field. Further, Plains' procedure for span inspections is not explicit regarding any process for evaluating maximum span lengths, data to be documented (e.g., entire span length exposed to the atmosphere and distance between supports), and identification of any immediate hazard(s) that should be addressed in a timely manner pursuant to §195.401(b).

Further, although PAA's procedures identify the areas mentioned in §195.583(b) to pay particular attention to while performing atmospheric corrosion inspections, Form 515 fails to specify these locations to ensure they are inspected during the inspection process. PAA must revise their procedure/form to address the deficiencies noted above.

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

(a) …
(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:
(1) . . .
(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

PAA's written procedure for testing Maximum Operating Pressure (MOP – Operations and Maintenance Manual, Revision 3, January 2019) is inadequate to assure safe operation of a pipeline facility. Specifically, PAA's procedures, Test Maximum Operating Pressure (January 2019, Rev.3), and Determining Hydrostatic Test Pressure, Validation, and Evaluation Pressure Procedure (Document Number 32-500-SD101, Approved August 16, 2018, Rev.1), used for determining MOP, direct the reader to: "[e]stablish the MOP of all existing and new pipeline facilities following 'Determining Hydrostatic Test Pressure, Validation, and Evaluation Pressure Procedure.'"[1] However, this procedure implies that the operator has the option to choose between the pressures listed in §195.406(a)(1)-(5) rather than explicitly stating that the lowest operating pressure must be selected, pursuant to §195.406. PAA should revise the procedure to make clear that MOP is calculated using the lowest criteria set forth in §195.406.

Additionally, Section 6.1 regarding liquid MOP validation includes a provision for using 80% of the factory hydrostatic test pressure, despite the fact that this is only valid for pipeline components, not pipe pursuant to §195.406(a)(4). PAA should ensure this distinction is clear in Section 6.1.

[1] PAA MOP procedure, Section 2.1.

3. §195.452 Pipeline integrity management in high consequence areas.

(a) …
(f) ***What are the elements of an integrity management program?***
(1) A process for identifying which pipeline segments could affect a high consequence area.

PAA's written procedures for identifying which pipeline segments could affect a high consequence area (HCA) are inadequate to assure safe operation of a pipeline facility. Specifically, PAA's Facilities Integrity Management Program (FIMP Manual, dated January 2019, Rev.4) fails to define the frequency of and the process for identifying HCAs for facilities. Section 3.4 "HCA Identification" only consists of a flowchart for "Identifying Pipeline Facilities with Potential HCA Impact" without any narrative or further instruction. Although the flowchart references an HCA spill plume analysis for facilities with tanks and facilities with pipelines only, it does not describe how to conduct this analysis. Nor does the flowchart provide details regarding the initial ¼ mile buffer and flow modeling process.

Finally, during the field inspection, PAA staff discussed several steps that are performed in the field that are not mentioned in PAA's written procedures. For example, PAA staff stated to PHMSA that they review the HCA analysis on an annual basis (not reflected in the written procedures) and use a 35-mile water transport criterion to determine "could affect" to an HCA (also not recorded in their written procedures). PAA should revise its procedures to address the deficiencies noted above and to accurately capture undocumented field practices noted above.

4. §195.452 Pipeline integrity management in high consequence areas.

(a) . . .
(f) ***What are the elements of an integrity management program?***
(1) . . .
(3) An analysis that integrates all available information about the integrity of the entire pipeline and the consequences of failure (see paragraph (g) of this section).

PAA's written procedures for an analysis that integrates all available information about the integrity of the entire pipeline and consequences of a failure are inadequate to assure safe operation of a pipeline facility. Specifically, PAA's FIMP, Section 4.2 "Data Integration" fails to provide adequate detail to sufficiently describe all available information about integrity, including necessary factors affecting the overall risk and how often risk analysis is performed.[2] PAA uses a Facility Risk Assessment Model (FRAM – internal model created by PAA) which, by verbal communication, seems to correctly integrate many risk factors. That process, however, is not clearly stated in the FIMP. For example, Section 4.2 generally states that data integrations "use data from various sources such as incident data, asset data, drawings, previous inspection data, aerial and 3D imagery, historical imagery, and HCA data to evaluate potential areas for risk reduction within a facility." It provides no specific details on, for example, what specific "incident data" or "asset data" is utilized or what "drawings" are considered. Further, during the

[2] PAA staff stated during the inspection that risk analysis is performed annually, but this is not included in the written procedures.

inspection, PHMSA learned that data integration is done differently based on which integrity engineer performs the assessment. PAA should revise its written procedures to document a clear process to address the deficiencies noted above.

5. §195.452 Pipeline integrity management in high consequence areas.

(a) . . .

(f) ***What are the elements of an integrity management program?***

(1) . . .

(6) Identification of preventative and mitigative measures to protect the high consequence area (see paragraph (i) of this section);

PAA's written procedures for identification of preventative and mitigative (P&M) measures to protect HCAs are inadequate to assure safe operation of a pipeline facility. Specifically, PAA's FIMP Section 10 "Identification of Preventative and Mitigative Measures," when compared to API 1160, Section 12.7, and §195.452(i), are minimal and broad in scope. For example, Section 10.3 "Conducting P&M Evaluations" lists several P&M measures that should be considered, but does not specifically mention EFRDs, equipment to minimize mechanical damage from vehicles/machinery, equipment to minimize damage from weather and outside forces, increasing pipe/vessel design safety factors, dikes/sumps/drains to contain or direct spills, etc. Providing a general list and a catch-all provision for "other P&M measures… as appropriate" is insufficient for PHMSA to determine which measures are being considered.

PAA should revise their procedures to address more P&M measures, or at least provide more detail under the current measures to provide more clarity on the range of P&M options PAA considers in relation to their facilities.[3]

6. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) . . .

(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:

(1) . . .

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

PAA's written procedures for monitoring external corrosion are inadequate to assure safe operation of a pipeline facility. Specifically, PAA's procedure for Corrosion Control, Section 2.7 Pump Station, uses pipe-to-soil "on" criteria or 100Mv shift criteria. However, the pipe-to-soil "on" criteria does not adequately consider IR drop, and there is no statement consistent with NACE SP 0169, incorporated by reference for §§ 195.571 and 195.573(a). PAA must revise the procedure to adequately address this deficiency.

[3] PAA is encouraged to incorporate the changes it has made and plans to make to its IMP regarding P&M measures into its FIMP, as appropriate.

Response to this Notice

This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.206. Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. 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).

Following the receipt of this Notice, you have 30 days to submit written comments, revised procedures, or a request for a hearing under §190.211. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue an Order Directing Amendment. If your plans or procedures are found inadequate as alleged in this Notice, you may be ordered to amend your plans or procedures to correct the inadequacies (49 C.F.R. § 190.206). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 30 days of receipt of this Notice. This period may be extended by written request for good cause. Once the inadequacies identified herein have been addressed in your amended procedures, this enforcement action will be closed.

It is requested (not mandated) that Plains All-American maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Dustin Hubbard, Director, Western Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 5-2020-5005M** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Dustin Hubbard
Director, Western Region
Pipeline and Hazardous Materials Safety Administration

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

cc: PHP-60 Compliance Registry
PHP-500 D. Fehling (#163431)
Mr. Dean Gore, Vice President, Environmental & Regulatory Compliance
Plains All-American Pipeline, LP