



CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 17, 2022

Mary L. McDaniel
Director, Office of Pipeline Safety
PHMSA Southwest Region
8701 S. Gessner, Suite 630
Houston, TX 77074

Re: CPF 4-2022-021-NOA

Dear Ms. McDaniel:

Denbury Onshore, LLC (Denbury) is writing in response to the April 19, 2022, Notice of Amendment, received on April 19, 2022. The Notice of Amendment listed certain items of concern based upon an Integrity Management Plan inspection conducted March 22, 2021 through March 26, 2021. As was discussed with your staff during the inspection process, Denbury is committed to the safe and compliant operation of its pipelines, and we appreciate your efforts in helping us to achieve this goal. Within this response, Denbury is providing acknowledgement of listed items and a plan of action concerning those items.

This response is organized in a similar format to the Notice of Amendment with reference to the number of each item of concern set forth in bold text below with the Denbury response immediately following.

Item 1. §195.452 Pipeline integrity management in high consequence areas.

Denbury's Integrity Management Program, IMP0100, Integrity Management Plan (Revised: 2/15/2021) did not consider topography for overland spread and water transport of CO₂ for its pipelines and facilities to determine the extent of commodity spread and its effects on HCAs.

Denbury's Integrity Management Program, IMP0100, Integrity Management Plan, 3.5.5.3 Potential Transportation Zones states, "Denbury pipelines transport CO₂, which vaporizes upon release to air or water, and dissipates or dissociates upon release to water. As such, overland and waterway transport mechanisms do not have the potential to affect an HCA" and 3.5.6 Identification of "Could Affect" Facilities states, "Due to the nature of CO₂ releases, a facility is determined to be a "Could Affect" facility if the pipeline into or out of the facility is a "Could Affect" segment, or a "Could Affect" facility boundary intersects an HCA or HCA buffer." Additionally, Denbury personnel stated that its pipelines

transport CO₂, which vaporizes upon release to air or water, and dissipates or dissociates upon release to water. As such, overland and waterway transport mechanisms do not have the potential to affect an HCA. Denbury's process does not adequately consider the nature and characteristics of the product transported or document an adequate air dispersion analysis in the event a release results in a CO₂ gas plume.

Denbury must amend its procedures to include a quantitative analysis of the overland spread and a water transport analysis, including differences in spill volume, between line pipe and other pipeline facilities, which usually have a greater potential release volume.

Denbury acknowledges this item and has amended Sections 3.5.5.3, 3.5.5.4, and 3.5.5.5 of procedure *IMP0100 – Integrity Management Plan* to address this concern. The amended procedure was approved through Denbury's procedure revision process with an effective date of June 1, 2022 and has been included with this response.

Item 2. §195. 452 Pipeline integrity management in high consequence areas.

Denbury's Integrity Management Program, IMP0100 (Revised: 2/15/2021), Section 3.9 Process for Identification of Preventive and Mitigative Measures is inadequate because it does not consider all relevant risk factors in the risk analysis process. At the time of the inspection, Denbury's procedure did not include the basis for an exclusion or any of the relevant risk factors listed in 195.452(i)(2)(i) through (ix).

Denbury must amend its written procedure to consider all relevant risk factors listed in 195.452(i)(2) or document a basis for an exclusion.

Denbury acknowledges this item and has amended Section 3.9 of procedure *IMP0100 – Integrity Management Plan* to address this concern. The amended procedure was approved through Denbury's procedure revision process with an effective date of June 1, 2022 and has been included with this response.

Item 3. §195. 452 Pipeline integrity management in high consequence areas.

Denbury's O&M Procedure, O&M 0916, In-Line Inspections (Revised: 2/15/2021) procedure is inadequate because it does not provide the requirements listed in NACE SP0102-2010, Section 5: Logistical Guidelines, 5.1.5 Survey-acceptance criteria for conducting in-line inspection of its pipelines.

On January 3, 2022, Denbury submitted to PHMSA a revised procedure to address the requirements of §195.452(j)(5)(i) and §195.591 by adding survey-acceptance criteria as described in NACE SP0102-2010. Denbury's updated O&M Procedure, O&M 0916, InLine Inspections (Revised: 10/13/2021) procedure was reviewed by PHMSA and determined to be adequate.

As procedure O&M 0916 has previously been revised, submitted, and reviewed, Denbury understands this item to be complete and no further action is required.

Denbury appreciates your consideration of the information in this letter, and we believe that we have begun to take adequate steps to resolve the items listed in CPF-4-2022-021-NOA. Please do not hesitate to contact me if you have any questions or need additional information.

Sincerely,



David Sheppard
SVP – Operations
Denbury Onshore, LLC

cc: Juan Mendoza, Operations Supervisor, Office of Pipeline Safety, Southwest Region
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Attachments: *IMP0100 – Integrity Management Plan*