



U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials Safety  
Administration**

233 Peachtree Street Ste. 600  
Atlanta, GA 30303

## NOTICE OF AMENDMENT

### CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 9, 2011

Mr. John Filiatrault  
Vice President CO2 Supply and Pipelines  
Denbury Onshore, LLC  
5100 Tennyson Parkway, Suite 3000  
Plano, TX 75024

**CPF 2-2011-5011M**

Dear Mr. Filiatrault:

On June 13-17, 2011, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, inspected the Denbury Onshore, LLC (Denbury) Liquid Integrity Management Program (IMP) in Flowood, Mississippi.

On the basis of this inspection, PHMSA has identified the apparent inadequacies found within the Denbury IMP as described below:

1. **§195.452 Pipeline integrity management in high consequence areas.**
  - ....(b) *What program and practices must operators use to manage pipeline integrity?*  
**Each operator of a pipeline covered by this section must:**
    - ... (4) **Include in the program a framework that---**
      - (i) **Addresses each element of the integrity management program under paragraph (f) of this section, including continual integrity assessment and evaluation under paragraph (j) of this section; and**
      - (ii) **Initially indicates how decisions will be made to implement each element.**
  - **Item 1A: §195.452(b)(4)(i)**

The Denbury IMP framework did not address all elements of the integrity management regulation under paragraph (f) of this section (i.e. §195.452).

For example, Denbury's IMP procedures IMP-440 and IMP-410 for identifying and documenting high consequence area (HCA) changes use the management of change (MOC) process defined in Denbury's operations and maintenance (O&M) manual but the procedures had no instructions or reference to the MOC process for documenting HCA changes.

- **Item 1B: §195.452(b)(4)(ii)**

The Denbury IMP framework did not address all elements in how decisions will be made to implement each element.

For example,

1. Denbury's *Direct Assessment & Corrosion Control (DACCP), Revision 4.0 dated July 2009*, did not include instructions to meet the NACE SP0502, Section 5.7.1 Mitigation requirement to "take remediation activities to mitigate or preclude future external corrosion resulting from significant root causes."
2. Denbury's *Corrosion Manual, Section 3.6 Coating*, did not instruct employees to follow the manufacturer's specifications and recommendations for coating the pipeline.

2. **§195.452 Pipeline integrity management in high consequence areas.**

.... (f) *What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:*

(1) A process for identifying which pipeline segments could affect a high consequence area;

- **Item 2: §195.452(f)(1)**

Denbury's IMP did not include formalized written procedures for training field personnel to identify an HCA or changes to an HCA using the National Pipeline Mapping System (NPMS) and other information sources as necessary.

3. **§195.588 What standards apply to direct assessments?**

(b) **The requirements for performing external corrosion direct assessment are as follows:**

.... (2) *Pre-assessment.* In addition to the requirements in Section 3 of NACE SP0502 (incorporated by reference, see §195.3), the ECDA plan procedures for pre-assessment must include—

(i) Provisions for applying more restrictive criteria when conducting ECDA for the first time on a pipeline segment;

.... (3) *Indirect examination.* In addition to the requirements in Section 4 of NACE SP0502 (incorporated by reference, see §195.3), the procedures for indirect examination of the ECDA regions must include—

(i) Provisions for applying more restrictive criteria when conducting ECDA for the first time on a pipeline segment;

.... (4) *Direct examination.* In addition to the requirements in Section F of NACE SP0502 (incorporated by reference, see §195.3), the procedures for direct examination of indications from the indirect examination must include—

(i) Provisions for applying more restrictive criteria when conducting ECDA for

the first time on a pipeline segment;

(iii) Criteria and notification procedures for any changes in the ECDA plan, including changes that affect the severity classification, and the time frame for direct examination of indications; and

.... (5) *Post assessment and continuing evaluation.* In addition to the requirements in Section 6 of NACE SP0502 (incorporated by reference, see §195.3), the procedures for post assessment of the effectiveness of the ECDA process must include—

(i) Measures for evaluating the long-term effectiveness of ECDA in addressing external corrosion in pipeline segments;

• **Item 3A: §195.588(b)(2)(i)**

Denbury's *Direct Assessment & Corrosion Control, Revision 4.0 dated July 2009, Section 5.1.1 Pre-Assessment*, did not include provisions for applying more restrictive criteria when conducting ECDA for the first time on a pipeline segment during the pre-assessment phase.

• **Item 3B: §195.588(b)(3)(i)**

Denbury's *Direct Assessment & Corrosion Control, Revision 4.0 dated July 2009, Section 5.1.1 Pre-Assessment*, did not include provisions for applying more restrictive criteria when conducting ECDA for the first time on a pipeline segment during the indirect inspection phase.

• **Item 3C: §195.588(b)(4)(i)**

Denbury's *Direct Assessment & Corrosion Control, Revision 4.0 dated July 2009, Section 5.1.1 Pre-Assessment*, did not include provisions for applying more restrictive criteria when conducting ECDA for the first time on a pipeline segment during the direct examination phase.

• **Item 3D: §195.588(b)(4)(iii)**

Denbury's *Direct Assessment & Corrosion Control, Revision 4.0 dated July 2009, Section 5.1.3 Direct Examination*, did not have criteria and notification procedures for any changes in the ECDA plan, including changes that affect the severity classification, the priority of the direct examination, and the time frame for direct examination of indications.

• **Item 3E: §195.588(b)(5)(i)**

Denbury's *Direct Assessment & Corrosion Control, Revision 4.0 dated July 2009, Section 5.1.4 Post Assessment*, did not include measures for evaluating the long-term effectiveness of ECDA in addressing external corrosion in pipeline segments.

Denbury uses close interval surveys (CIS) and ACVG as the tools for performing the ECDA assessment. All of the excavations performed on the Northeast Jackson Dome (NEJD) pipeline appear to have been driven by the ACVG results and not by the CIS data. Therefore, Denbury should have measures to determine the long-term effectiveness of CIS as an ongoing tool for ECDA, especially in consideration of other factors such as pipelines that are at deeper depths or under pavement where the CIS may not be a valid tool for ECDA.

Response to this Notice

This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.237. 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). 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 a Final Order.

If, after opportunity for a hearing, 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. § 190.237). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 60 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 Denbury Onshore, LLC maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Wayne T. Lemoi, Director, Office of Pipeline Safety, PHMSA Southern Region.

In correspondence concerning this matter, please refer to **CPF 2-2011-5011M** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

  
Wayne T. Lemoi  
Director, Office of Pipeline Safety  
PHMSA Southern Region

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