

October 9, 2015

Via Certified Mail Return Receipt Requested

Mr. Rod Seeley, Director
Southwest Region, Pipeline Hazardous Materials and Safety Administration
8701 South Gessner, Suite 1110
Houston, TX 77074

Re: CPF No. 4-2015-5013M

Dear Mr. Seeley,

On June 9, 2015, Magellan Pipeline Company, L.P. ("Magellan") received a Notice of Amendment in regards to CPF 4-2015-5013M. In response to the Notice of Amendment, Magellan hereby submits the response and requested documentation as defined in the Notice.

ITEM #1 195.452 (j) What is a continual process of evaluation and assessment to maintain a pipeline's integrity? -

(3) Assessments Intervals. An operator must establish five-year intervals, not to exceed 68 months, for continually assessing the line pipe's integrity. An operator must base the assessment intervals on the risk the line poses to the high consequence area to determine the priority for assessing the pipeline segments. An operator must establish the assessment intervals based on the factors specified in paragraph (e) of this section, the analysis of the results from the last integrity assessment, and the information analysis required by paragraph (g) of this section.

(e) What are the risk factors for establishing an assessment schedule (for both baseline and continual integrity assessments)? (1) An operator must establish an integrity assessment schedule that prioritizes pipeline segments for assessment (see paragraphs (d)(1) and (j)(3) of this section). An operator must base the assessment schedule on all risk factors that reflect the risk conditions on the pipeline segment. The factors an operator must consider include, but are not limited to:

ii.) Pipe size, material, manufacturing information, coating type and condition, and seam type;...

(5) Assessment methods. An operator must assess the integrity of the line pipe by any of the following methods. The methods an operator selects to assess low frequency electric welded pipe or lap welded pipe susceptible to

longitudinal seam failure must be capable of assessing seam integrity and of detecting corrosion and deformation anomalies.

The Magellan procedure in its Integrity Management Program does not identify the methodology for identification of low frequency electric resistance welded (LF-ERW) pipe or lap welded pipe that may be susceptible to longitudinal seam failure. Unless an engineering analysis shows otherwise, all pre-1970 LF-ERW pipe is deemed susceptible to longitudinal seam failure (reference 49 CFR 195.303(d)). The considerations for conducting an engineering analysis are also found in the reference code wherein it states:

In conducting an engineering analysis and operator must consider the seam related leak history of the pipe and pipe manufacturing information as available, which may include the pipe steel's mechanical properties, including fracture toughness; the manufacturing process and controls related to seam properties, including whether the ERW process was high-frequency or low-frequency, whether the weld seam was heat treated, whether the seam was inspected, the test pressure and duration during mill hydrotest; the quality control of the steel-making process; and other factors pertinent to seam properties and quality.

Consequently, absent an engineering analysis, all pre-1970 LF-ERW pipe deemed susceptible to longitudinal seam failure must be assessed in accordance with the timing and stated methods found in 195.452(j). The Magellan integrity processes found in Section 7: *Perform Periodic Integrity Assessments*, Procedure 7.06-ADM-015: *Determining Tool Type Method Process*, and 7.06-ADM-016: *Pressure Cycle Analysis Procedure*, and any other referenced tables, charts, or processes in its IM program need to be amended to ensure that all Pre-70 LF-ERW pipe deemed susceptible to longitudinal seam failure is evaluated by a method capable of assessing the seam integrity, and of detecting corrosion and deformation anomalies on a maximum interval of five (5) years, not to exceed 68 months, unless a variance from the 5-year interval is requested, in accordance with 195.452(j)(4).

MAGELLAN RESPONSE:

The Magellan integrity processes have been amended to ensure that absent an engineering analysis, all pre-1970 LF-ERW pipe is deemed susceptible to longitudinal seam failure and will be assessed in accordance with the timing and stated methods found in 195.452(j). The revised IMP program will ensure that all Pre-1970 LF-ERW pipe deemed susceptible to longitudinal seam failure is evaluated by a method capable of assessing the seam integrity, and of detecting corrosion and deformation anomalies on a maximum five (5) year interval, not to exceed 68 months, unless a variance from the 5-year interval is requested, in accordance with 195.452 (j)(4).

Magellan has enhanced the process for determining the susceptibility to seam failure through the development procedure 7.06-ADM-019: *Susceptibility to Seam Failure Determination Procedure*. In accordance with 49 CFR 195.303(d), an engineering analysis will be conducted with consideration given to each of the factors included in the procedure. The results of the engineering analysis conducted per procedure 7.06-

ADM-019: *Susceptibility to Seam Failure Determination Procedure* will be incorporated into the Magellan Integrity Management Program including the revised *Determining Tool Type Method Process* and the Section 7: *Perform Periodic Integrity Assessments* procedure.

The revised procedures have been included in the Attachment.

If you have any questions or need additional information, please contact me by phone at (918) 574-7332 or e-mail at jason.smith@magellanlp.com to discuss.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason Smith". The signature is fluid and cursive, with the first name being more prominent.

Jason Smith
Director, Asset Integrity

Cc: Michael Pearson, Vice President, Technical Services, Magellan

Attachment

**SUSCEPTIBILITY TO SEAM FAILURE DETERMINATION
PROCEDURE****7.06-ADM-019**

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1.0 OBJECTIVE

- 1.1 The objective of this procedure is to establish a standardized process to conduct an engineering analysis for the determination of the susceptibility to pipe seam failure.

2.0 DESCRIPTION

- 2.1 In accordance with 49 CFR 195.303(d), all pre-1970 ERW, EFW, and lap welded pipe is deemed susceptible to longitudinal seam failure unless an engineering analysis shows otherwise.
- 2.2 Incorporate up-to-date knowledge and relevant results of Magellan and industry knowledge from failure analyses and research.

3.0 STANDARDS**3.1 The Pipeline Integrity Engineer shall:**

- 3.1.1 Conduct an engineering analysis to determine the susceptibility of pipe seam failure considering the following factors:
- 3.1.1.1 Pipe specifications – wall thickness, grade, seam type, manufacturer, year built, and OD.
 - 3.1.1.2 History of seam related fatigue or grooving corrosion (SSC) failures.
 - 3.1.1.3 Presence of seam related fatigue as confirmed by metallurgical analysis.
 - 3.1.1.4 Presence of grooving corrosion (SSC) as confirmed by in-the-ditch field examination.
 - 3.1.1.5 Results of the previous pressure test including percent SMYS, test failure results, MOP, and discovery of fatigue or grooving corrosion (SSC) since the previous pressure test.
 - 3.1.1.6 Pipe mechanical properties as confirmed through metallurgical analysis or material test reports.
 - 3.1.1.6.1 Fracture toughness
 - 3.1.1.6.2 Manufacturing process and controls including:
 - 3.1.1.6.2.1 Whether ERW process was high frequency or low frequency
 - 3.1.1.6.2.2 If the weld seam was heat treated
 - 3.1.1.6.2.3 The seam inspection data
 - 3.1.1.6.2.4 Test pressures and duration of mill hydrotest
 - 3.1.1.6.2.5 Quality control of the steel making process
 - 3.1.1.6.2.6 Other factors pertinent to seam properties and quality.

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3.1.1.7 The aggressiveness of the pressure cycles and the seam re-inspection due date in accordance with the [Pressure Cycle Analysis Procedure](#).

3.1.1.8 Coating condition including the presence of bare or poorly coated pipe and the potential for insufficient cathodic protection.

3.1.2 Document the results of the engineering analysis and provide to the Supervisor of Integrity Management.

3.2 Supervisor of Integrity Management shall:

3.2.1 Determine based on the engineering analysis whether the pipe is susceptible to seam failure.

3.2.2 Incorporate the results of the engineering analysis into the [Integrity Management Program](#) including the [Determining Tool Type Method Process](#) and the [Section 7: Perform Periodic Integrity Assessments](#) procedure.

3.2.3 If the pipe is considered susceptible to seam failure and a seam assessment cannot be completed on at least a five year inspection interval, not to exceed 68 months, a request for variance must be made to PHMSA in accordance with 49 CFR 195.452 (j)(4).

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SYSTEM INTEGRITY CHANGE LOG

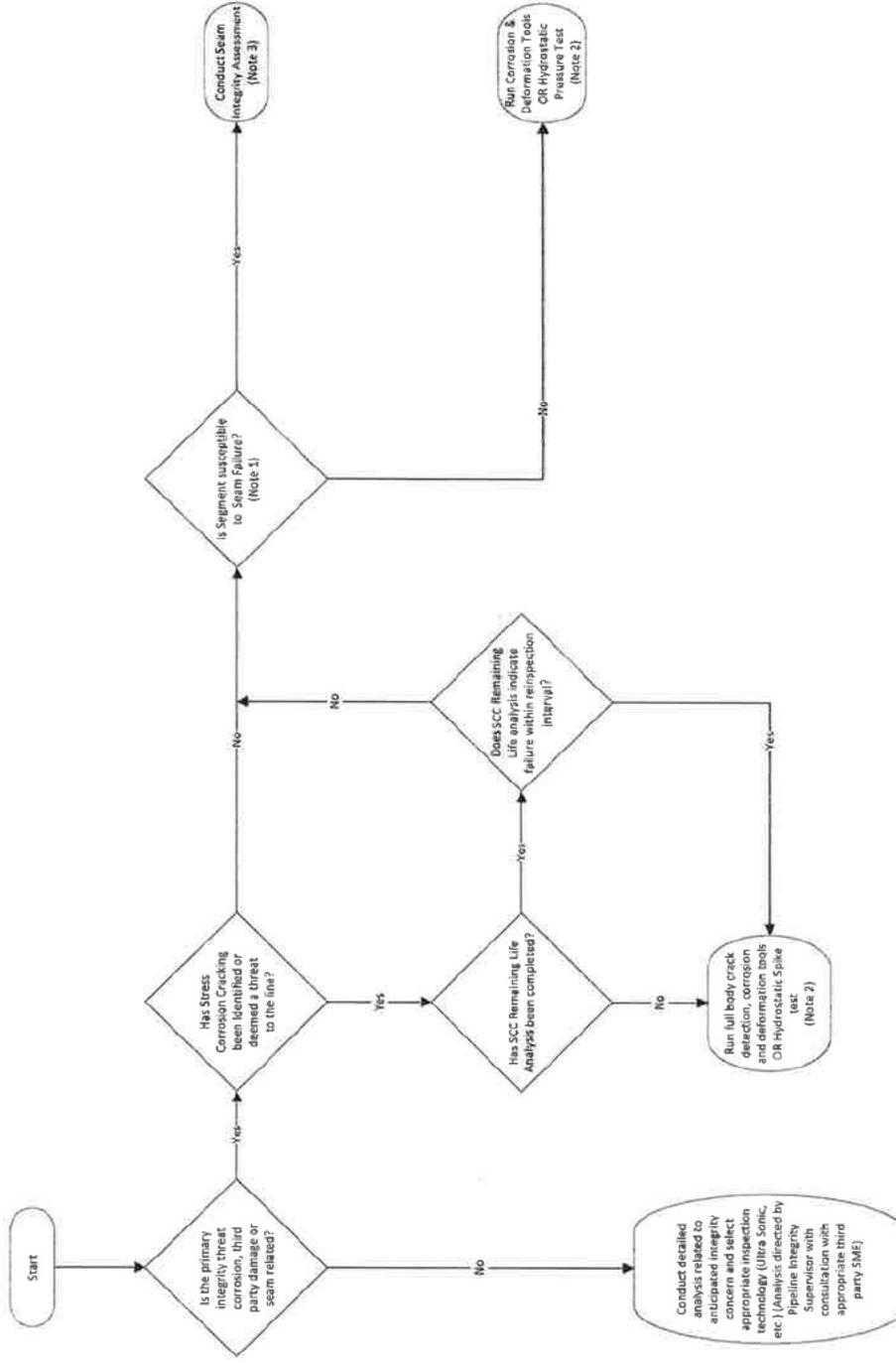
DATE	LOCATION	BRIEF DESCRIPTION OF CHANGE
10/1/2015		New

Magellan Midstream Partners

Integrity Assessment Method Determination Process

7.06-ADM-017

Line Segment:
Selected Integrity Assessment:
Integrity Concern:
Note:



Note 1: Reference the Susceptibility to Seam Failure Determination Procedure.

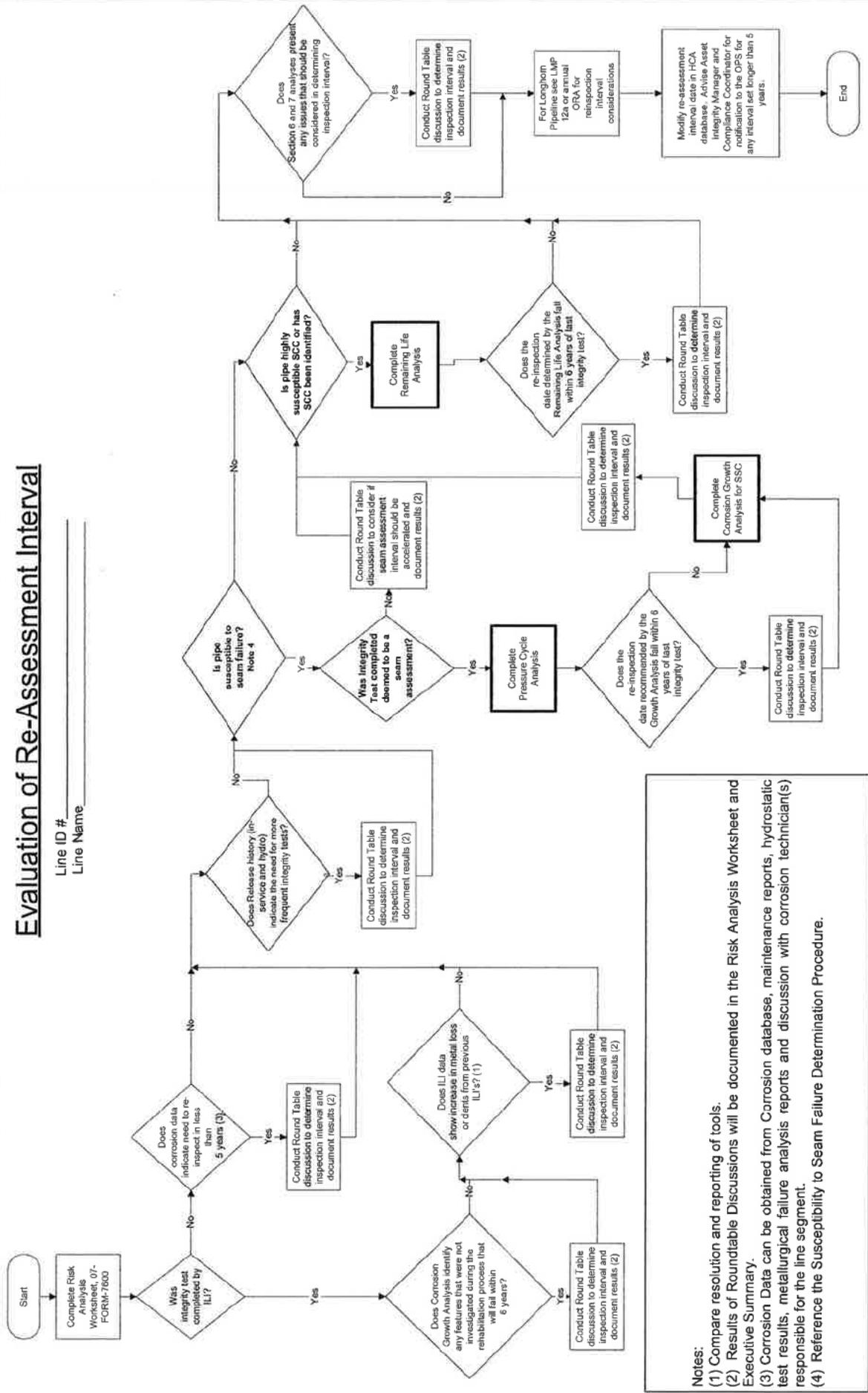
Note 2: If hydrostatic testing is the integrity assessment method, conduct a corrosion effectiveness review prior to finalizing the integrity assessment method.

Note 3: Seam Integrity Assessment shall include either an ILL capable of detecting seam, corrosion, and deformation anomalies or a hydrostatic pressure "spike" test.

Figure 3.2 – Integrity Assessment Method Determination

Evaluation of Re-Assessment Interval

Line ID # _____
Line Name _____



Notes:
 (1) Compare resolution and reporting of tools.
 (2) Results of Roundtable Discussions will be documented in the Risk Analysis Worksheet and Executive Summary.
 (3) Corrosion Data can be obtained from Corrosion database, maintenance reports, hydrostatic test results, metallurgical failure analysis reports and discussion with corrosion technician(s) responsible for the line segment.
 (4) Reference the Susceptibility to Seam Failure Determination Procedure.