Part A – Resource Plan

I. Background and Information:

1. Explain the business need for the proposed action. Indicate potential cost savings to industry where possible.

   RP 1176, 1st Edition was published in July 2016. In the intervening time, the Pipeline Integrity Group (PLIG) has noticed that the document needs to be updated to address:
   - Inclusion of MAT 8 assessment technique
   - Introduction of inditch techniques such as MMT for resolving toughness
   - Updating response criteria to align with agreed upon special permit or remove in consideration of 1160 content
   - Update SSWC to acknowledge material in RP1160
   - Review opportunities and strategies to monitor and reduce cycling
   - Refine elements of crack management program to clarify expectations
   - Update outlier identification/ILI limitations
   - Inclusion of crack morphology characterizations per the updated Std 1163

2. What is the scope of the standard?

   This recommended practice (RP) is applicable to any transmission pipeline system used to transport hazardous liquid or natural gas, including those defined in U.S. Title 49 Code of Federal Regulations (CFR) Parts 192 and 195.
   This RP is designed to provide the operator with a description of industry-proven practices in the integrity management of cracks and threats that give rise to cracking mechanisms. The guidance is
targeted to the line pipe along the right-of-way (ROW), but some of the processes and approaches can be applied to pipeline facilities, including pipeline stations, terminals, and delivery facilities associated with pipeline systems. Defects associated with lap-welded (LW) pipe and selective seam weld corrosion (SSWC) are not covered within this RP.

This RP presents the pipeline industry’s understanding of pipeline cracking. Mechanisms that cause cracking are discussed, methods to estimate the failure pressure of cracks are reviewed, and methods to estimate crack growth are presented. Selection of the appropriate integrity assessment method for various types of cracking, operating conditions, and pipeline characteristics is discussed. This RP also reviews current knowledge about in-line inspection (ILI) technology and in-the-ditch (ITD) nondestructive evaluation technology. A methodology for responding to ILI indications and specific criteria for when to respond to certain results is presented. Applicable repair techniques are reviewed. Sections are included for the discussion of reassessment interval determination and the consideration of appropriate preventive and mitigative measures. Finally, some meaningful performance metrics for measuring the effectiveness of a crack management program are discussed.

The technical discussion about crack formation, growth, and failure is to provide the knowledge needed by operators to effectively make integrity decisions about managing cracking on their pipeline systems.

3. Is this standard on the work program of another standards development organization (SDO)?
   - Yes [ ] No [x] [ ]
   If yes, specify SDO and standard designation/project title/contact

4. Are a volunteer chair and group of experts available to perform the proposed action?
   Please include names and company affiliation and indicate chair, if available.
   Co-chairs Jake Haase; Enterprise & Ken Bagnoli; ExxonMobil
   ~40 task group members representing operators, contractors, regulators, and trade associations

5. Is there a need to commit resources to supplement the development of the draft? Would a paid content specialist accelerate progress on the development/revision? Is there a readily available content specialist?
   Michael Rosenfeld at RSI at an estimated cost of $30K. Proposal provided. We have negotiated a better proposal for the remainder of 2020. However, this request is in case there is an additional need of funded research through 2021.

6. Are there special format requirements for final document, i.e. knowledge of ISO template required), significant graphics, photos or equations) required that would need extraordinary resources?
   - Yes [ ] No [ ]
   If Yes, please provide details:

7. Please provide any other information that is pertinent to the proposed action.

8. What are the implications of not initiating the proposed action? Include potential safety, reliability, environmental and financial impacts that may arise.
   The material within RP 1176 will not be representative of current best practice and its relevance amongst operators and regulators will quickly diminish.
9. Is there research proposed to accomplish the proposed action?

   Yes [ ]   No [x]  
   If yes, complete Part B of this form.

II. Project Timing

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<thead>
<tr>
<th>Proposed start date:</th>
<th>Proposed date draft will be ready for letter ballot:</th>
<th>TG/GWG: (estimated number of volunteers needed)</th>
<th>Content Management: ($ amount &quot;if needed&quot; or volunteer)</th>
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<td>1/1/2020</td>
<td>12/31/2021</td>
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PART B – Research Plan

I. Background and Information

1. Proposed Research Title:

2. Proposed Project Scope:

3. Research Amount:

   $  

4. What is the business need for the proposed research?

5. Is the proposed research edition-specific for a single standard or will it result in technology enhancement for multiple standards?

   Yes [ ]   No [ ]  
   If multiple standards, please cite the standards effected:

6. Research Timing:

   [ ] Research is necessary prior to scheduled revision.  
   [ ] Research can be done concurrent with revision.

7. How does the research support the proposed action identified in Part A?

8. Is a joint industry project (JIP) a possibility?

   Yes [ ]   No [ ]  
   If Yes, with whom?

9. Are there opportunities for leveraged research with other organizations?

   Yes [ ]   No [ ]  
   What organizations?

10. What are the implications of not performing the proposed research?

II. Dates and Funding:

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<th>Estimated Completion Date</th>
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<th>Anticipated Future Research Funding Needs</th>
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