

Eighth Quarterly Report June – August 2015

Date of Report: *September 3, 2015*

Contract Number: DTPH56-13-T-000008

Prepared for: *Pipeline and Hazardous Materials Safety Administration, TransCanada Pipeline, Enbridge Pipeline, and PRCI*

Project Title: “In-Ditch Validation Methodology for Determination of Defect Sizing”

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Project Status

Item 29 – Integrating Field Ready Scanner.

Improvements were made to the scanner in the 8th quarter.

- The most recent scanner improvements go back to the idea of attaching the IWEX unit to a rail for scanning seam welds. Field trials have shown this scanner capable of following the seam and producing an image that properly represents the seam as a straight line down the pipe.

Item 30 – Training of field engineers.

An interpretation training session was held in Columbus Ohio, July 16-17. 15 people attended including 5 Applus RTD field engineers from Houston, Minnesota, and Edmonton. The session was successful in moving the operation of IWEX from Application Center personnel (a.k.a. Jeff Vinyard and Peter den Boer) to the field engineers, who will be responsible for using IWEX in the field for acquiring image data of axial cracks on the seam and in the pipe body.

- In addition to training field engineers on interpreting IWEX images the session helped bring a consistency in interpretation.
- Two operators were present to bring an operators perspective to the training.
- It was apparent that sizing in the seam is not as accurate as sizing in the pipe body (i.e. SCC sizing appears to be more accurate than ERW seam anomaly sizing). The consensus from the meeting is this may be caused by the manufacturing process for

making an ERW seam. The pipe body is made from a rolling process, which is fairly uniform, but the seam is made from crimping the edges in an attempt to match the curvature in the pipe body. This combined with other affects such as poor trim, offset plate edges, and other affects is affecting sizing in the seam area.

- Tasks in the modification should help alleviate some of these imaging problems and improve sizing accuracy.

Item 32 – Field trials of the integrated system.

Two sets of field data were acquired in the 8th quarter and were used to test the system.

- One test was conducted in Canada. Other than problems with getting the equipment through customs in a reasonable time frame, the field trials appeared to go well and produce good images. This was the first use of the equipment in Canada since scanning a few joints of pipe in the ApplusRTD shop in the 5th quarter.
- A field trial was initiated in North Dakota on ERW pipe with multiple detected ILI anomalies in individual joints. This scanning was not completed in the 8th quarter, but should be complete in the 1st week of the 9th quarter.