



**1ST QUARTERLY REPORT – PUBLIC PAGE
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"Full Scale Testing of Interactive Features for Improved Models"

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1.0 Results and Conclusions

Task 1 – Project Kickoff

- The project team, consisting of Electricore, Inc., Quong & Associates, BMT Fleet Technology, GDF SUEZ and PRCI, held the required Kick Off meeting via teleconference and webinar on January 21, 2014 with DOT/PHMSA’s Mr. Robert Smith and Mr. James Merritt. A copy of the kick-off presentation and meeting minutes are attached to this Quarterly Report.

Task 2: Material Selection, Acquisition, and Characterization

- BMT has identified two different pipes at PRCI repository for Task 4, “Full Scale Testing of Complex Dents”. The two pipes are 16 inch diameter and 0.28 inch wall thickness and 24 inch diameter 0.25” wall thickness. Sixteen pipe lengths (~ 22 feet length each) of 16 inch diameter have been shipped to BMT facility in Ottawa, Canada. A formal approval is being sought from PRCI to make use of this pipe for the current program.
- GDF SUEZ chose Pipe 5 for the Task 5a “Full Scale Testing of Dent and Gouge Defects-Interaction between Defects”: a vintage 24 inch diameter pipe provided by an US transmission pipeline operator.
- GDF SUEZ chose the defect colonies for Task 6 “Stress Corrosion Cracking Colonies and SDO Modeling Coordination”. There are three crack colonies present on two different 18 inch diameter pipe sections: two longitudinal crack colonies on one pipe section and one longitudinal crack colony on another pipe section.

Task 9: Project Management and Reporting

- Electricore executed the Subcontract Flow-Down Agreement with BMT Fleet Technology
- GDF SUEZ subcontract agreement was reviewed, finalized and is being currently signed. The team anticipates executing the agreement by end of March 2014.
- Electricore, BMT Fleet, and GDF SUEZ attended the 2014 PRCI Research Exchange Meeting in Atlanta, GA on February 3-6, 2014.
 - The project team presented this program during the Mechanical Damage and Data Management session and also during a scheduled DOT Mechanical Damage and Combined Loading Project Team Meeting session, outside the framework of the regular PRCI Research Exchange Meeting.

2.0 Plans for Future Activity

Task 2: Material Selection, Acquisition, and Characterization

Material characterizations for selected materials will be done for:

- A vintage 24 inch diameter pipe provided by an US transmission pipeline operator for Task 5
- Two 18 inch diameter pipe sections containing SCC colonies for Task 6.
- 16 inch diameter pipe that will be used for Task 4.

Task 3: Baseline Existing Features

- GDF SUEZ will propose dent and gouge defect types and geometry to enhance the existing database created in previous PRCI and DOT projects. A first set of such defects will be created in Task 5a.
- GDF SUEZ will continue searching for pipe sections retrieved from service containing in-service created dent and gouges.

Task 6: SCC Colonies and SDO Modeling Coordination

Task 6 next steps include the following activities :

- GDF SUEZ CRIGEN's Direct Current Potential Drop device will be tested in order to optimize distance between current feeding and measurement points
- A vessel will be built with the two 18 inch diameter pipe sections
- Electrochemical cells will be adapted to fit 18 inch diameter pipe sections with flat areas.