

**PUBLIC 1<sup>ST</sup> QUARTERLY REPORT**

DOT Project Number: 729 (GTI 22428)

DOT Contract Number: 693JK31810003

OTD Project Number: 4.14.c.2 (GTI 22429)

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## **Validating Non-Destructive Tools for Surface to Bulk Correlations of Yield Strength, Toughness, and Chemistry**

### **Reporting Period**

August 1, 2018 through October 31, 2018

### **Report Issued**

October 31, 2018

### **Prepared For**

U.S. Department of Transportation Pipeline and Hazardous  
Materials Safety Administration (DOT/PHMSA)

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## Project Objectives

The deliverables of this project will facilitate the use of non-destructive surface testing: micro-indentation, micro-machining, in situ chemistry, and replicate microscopy analysis as accurate, efficient, and cost-effective tools for material property confirmation.

This work will provide benefits to pipeline safety, energy continuity, and integrity assessment programs since the developed techniques and models and validated testing technology will not require a line to be taken out of service or destructively cut out samples from the in-service pipeline.

The results of this project will also be applicable to pending DOT/PHMSA regulations that require operators to backfill their material property records for grandfathered pipeline segments and/or those that do not have adequate material records.

## Completed Work this Quarter

1. All prime and subcontracting was completed.
2. The project kickoff meeting was held.
3. The Technical Advisory Panel (TAP) was finalized.

## Planned Work for Next Quarter

1. The project team will commence Task 2 - Develop project database and pipeline sample library.