

4th Quarterly Report – Public Page

Date of Report: August 29, 2014

Contract Number: DTPH56-13-T-000002

Prepared for: DOT Pipeline and Hazardous Material Safety Administration

Project Title: Real-Time Multiple Utility Detection During Pipe Installation Using Horizontal Directional Drilling (HDD) System

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Results and Conclusions:

The research team has completed analysis of data collected from the first local area tests. Based on the data acceptance criteria, the 159 data sets showed that the acoustic system was able to achieve the average pipe detection accuracy of $\pm 2.1'$ during the trials. Both rotary and axial motors will require improvements in signal strength and frequency range for the noise generation and have potential as noise sources for the field application. The improved noise sources will require further evaluation in the local area. The project results were discussed and the project plan was revised. The revised schedule including a six-month no-cost time extension was submitted to PHMSA for the approval.

Plans for Future Activity:

- Improve and construct new noise sources.
- Conduct tests with new noise sources and acoustic pipe detection system in the local area.
- Perform analysis of data generated in the local area from the second the second trial and determine project continuation.
- Assuming the project continuation, initiate work on the system integration.
- Write the next milestone reports.
- Write monthly and quarterly reports.