

Quarterly Report – Public Page

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Contract Number: 693JK31810009
Prepared for: DOT/PHMSA
Project Title: Improved Tools to Locate Buried Pipe in Congested Undergrounds
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For quarterly period ending: July 31, 2020

Project Scope

The purpose of this project will be to mitigate third-party pipeline damage and cross bores at the earliest stages through the development and commercialization of a geospatial probe to map existing buried utilities by being inserted inside of a live gas pipelines. This probe will be capable of mapping live underground pipes 3-dimensionally and give accurate locations of utilities. Additionally, a cloud-based data collection system will be created in order to effortlessly collect and store data, so it is easily accessible to the utilities.

Technical Status

During the eighth quarter, the team continued to add enhancements to the mapping probe. A new spring design and compartment set up has eased the transition of the probe through the 90° launch angle presented by the launching tool. The team performed a live pressurized gas mapping demonstration with a Peoples Gas and Light in Chicago. The probe successfully entered the pipe and mapped in two directions. The data was extracted from the probe for 2D and 3D viewing. The team collected valuable feedback on the system and is improving the general workflow to make the process even more seamless.

Results and Conclusions:

User-centric feedback from demonstrations will be pivotal to continue enhancing the system. The team had the opportunity to work with natural gas operators and hear how the system could be used to help them map underground assets. The second mapping demonstration also allowed the team to rework and validate enhancements from the first mapping demonstration. The team confirmed that the probe can travel a total of at least 600 ft due to the bi-directional nature of the launching tool, that the probe path can be located from the surface, and that data viewing tools can be readily used to view the x, y, and z, data in 2D and 3D formats.

Plans for Future Activity:

During the next quarter, the following activities will be conducted:

- The team will work to perform more live gas mapping demonstrations.
- The team will begin work on the final report.