

Quarterly Report – Public Page

Date of Report: July 9, 2013

Contract Number: *DTPH56-10-T-000017*

Prepared for: *Department of Transportation*

Project Title: *Fuelfinder: Remote Leak Detector for Liquid Hydrocarbons*

Prepared by: *Physical Sciences Inc.*

Contact Information: *Mark G. Allen (allen@psicorp.com, 978.738.8131)*

For quarterly period ending: *June 30, 2013*

The Fuelfinder program objective is to develop a prototype handheld mid-IR stand-off sensor for early detection of hydrocarbon leaks from buried pipelines. The technical basis for the sensor is an extension of PSI's commercial near-IR methane leak detector, RMLD. In the Fuelfinder configuration, the RMLD near-IR laser and detector components will be replaced by mid-IR equivalents, based primarily on PSI's subsidiary company Maxion Technologies' proprietary Interband Cascade Laser (ICL) capability. PSI's license commercial supplier of the RMLD, Heath Consultants, is a cost-sharing partner responsible for assisting PSI in developing a manufacturable product that meets the needs of the user community. Kinder-Morgan, one of the largest owners of pipeline distribution systems in the US, is also a cost-sharing partner responsible for assisting PSI in understanding typical leak scenarios and operational constraints.

Results and Conclusions:

During the reporting period, processing of ICL for the prototype sensor continued.

Plans for Future Activity:

In the next quarter, we plan to test processed ICL's and incorporate into prototype sensor.