

# Quarterly Report – Public Page

**Date of Report:** October 30, 2008

**Contract Number:** DTPH56-08-T-000019

**Prepared for:** U.S. DOT/PHMSA

**Project Title:** Advanced Development of Proactive Infrasonic Gas Pipeline Evaluation Network (PIGPEN)

**Prepared by:** NYSEARCH/Northeast Gas Association

**Contact Information:** George Janega, (212) 354 4790 Ext. 211  
[gjanega@northeastgas.org](mailto:gjanega@northeastgas.org)

**For quarterly period ending:** September 30, 2008

## Public Page Section

### Activities/Deliverables Completed:

		SCH Date	CMPL Date
Task 1.1:	Kick-off Meeting – MILESTONE	7/30/2008	8/14/2008
Task 1.2.1:	Define Concept of Operations – MILESTONE	8/30/2008	9/15/2008
Task 1.2.2:	Create Field Test Plan – MILESTONE	9/30/2008	9/30/2008
Task 1.2:	First Quarterly Status Report – MILESTONE	9/30/2008	10/15/2008
Task 1.7:	NYSEARCH Management/Oversight – MILESTONE	9/30/2008	9/30/2008

The point of contact for coordination, preparation, and distribution of any press releases is George Janega, (212) 354 4790 Ext. 211, [gjanega@northeastgas.org](mailto:gjanega@northeastgas.org).

## General Information

PIGPEN is based on infrasound detection, a technique used commonly for monitoring natural and manmade phenomena including avalanches, earthquakes, seismic waves, geomagnetic activity, ocean waves, severe weather, atmospheric turbulence, and volcanoes. Man-made infrasonic signals are generated by traffic, aircraft, heavy machinery, etc. Because of their low frequency, infrasound waves are less susceptible to dissipation than normal acoustic frequencies and travel long distances. Traditional infrasound sensors are large, susceptible to environmental effects, and expensive. PIGPEN employs innovative, inexpensive, rugged, high-sensitivity infrasound sensors developed originally by PSI for verifying nuclear treaty compliance, and integrates them with signal processors and communications hardware to form a pipeline encroachment detection system. The primary objective of the project is to advance PIGPEN technology to pre-production status by completing development of advanced algorithms, field testing

in a range of pre-production scenarios and developing practical procedures for deploying and utilizing the technology.

**Results and Conclusions:** No new data or analyses were completed during this period. Work to date is essentially system definition, test planning, and code implementation. Appendices A-C provides details of the technical advances made in this quarter.

**Plans for Future Activity:** During the next quarter, NYSEARCH and PSI will continue work on Task 1.2.3, including re-assembling equipment from a previous phase and in-house testing. This work is expected to include interfacing PIGPEN with alarm communication systems for the first time.

NYSEARCH will continue to interact with sponsors and project participants to secure field test sites. NYSEARCH will interact with project sponsors to approve and communicate technology requirements.