

**June 1, 2006 – August 31, 2006**

**Contract # DTPH56-06-T-000006**

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

**LONG-TERM MONITORING OF CASED PIPELINES USING  
LONG-RANGE GUIDED-WAVE TECHNIQUE**

**2nd Quarterly Report**

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## Public Page

This project started on 1 April 2006.

The SwRI Magnetostrictive Sensor (MsS) system is being developed and advanced along with a defect characterization model based on a partnership between PHMSA/OPS, NYSEARCH/NGA (gas industry research consortium and user group) and SwRI; a research contractor who has been investigating the use and application of MsS for many years. This program addresses development and testing of the MsS for use in cased crossings and is supported by industry sponsors through management by the NYSEARCH organization, cash cofunding, use of a separately-sponsored controlled test bed and testing at live field sites.

The MsS system is unlike other guided-wave inspection techniques and is unique because it applies a permanently-installed Magnetostrictive Sensor (MsS) that permits testing of cased section of pipelines over time and without costly preparation. With a capability to both monitor activity over time and characterize the defects, the technology could potentially provide accurate tracking of defect growth with time and could give operators specific information to address inspection indications.

During the Second Quarter, the project team advanced several tasks as outlined below.

This report addresses project tasks:

### **Task #M2 Define/Finalize Utility Product Requirements**

- Start Date: 1 April 2006
- Scheduled Completion Date: 30 June 2006
- Status: Completed

### **Task #1 Refine and Validate Simulation Model**

- Start date: 1 April 2006
- Scheduled Completion Date: 30 September 2006
- Status: Ongoing; to be completed by 31 October 2006

### **Task #2 Develop Algorithm**

- Start date: 1 July 2006
- Scheduled Completion Date: 31 December 2006
- Status: Ongoing

### **Task #3 Improve Data Analysis Software for Inspecting**

- Start Date: 1 April 2006
- Scheduled Completion Date: 31 January 2007
- Status: Ongoing

### **Task #4 Evaluate Alternative Adhesives**

- Start Date: 1 May 2006
- Scheduled Completion Date: 30 September
- Status: Ongoing; to be completed 30 November 2006

**Task #M5 Second Quarterly Report**

- Start Date: 1 July 2006
- Scheduled Completion Date: 31 August 2006
- Status: Completed