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Date of Report: June 13, 2008
Contract Number: DTPH56-06-T-000017
Prepared for: DOT
Project Title: In-field Welding and Coating Protocols
Prepared by: Gas Technology Institute
Michael Miller & Daniel Ersoy
michael.miller@gastechnology.org
847-768-0949
For quarterly period ending: June 15, 2008

This project is based on ongoing efforts by GTI and EWI to improve field welding and coating practices. This combined expertise, data, and experience will be augmented by pipeline welding contractors, operators and coating manufacturer application partners.

During the seventh quarter of the project:

GTI/EWI performed in-field girth welds in Houston, Texas with industry cost share partners, CCSI and CRC-Evans. These welds were performed to evaluate hydrogen off-gassing effects on protective coatings. GMAW and SMAW welding techniques were used to generate different levels of hydrogen off-gassing. The welds were performed on 6 inch and 24 inch diameter pipe. Each weld was then subjected to one of 4 conditioning procedures prior to coating. The coating procedure began with surface preparation and then coating application. The coatings were either fusion bonded epoxy or a brushable two-part epoxy. The completed and coated welds were then shipped to GTI where testing will be performed to evaluate the coating performance in the coming quarters.

Additionally, testing on the simulated girth welds has begun. These weld samples were created to related weld geometry to coating performance. They have been coated and sectioned to analyze the coating thickness on the weld area. In the coming quarter these welds will be tested in an accelerated corrosive environment.

Mr. Michael Miller
Engineer, GTI