

3rd Quarterly Report – Public Page

Date of Report: *January 14, 2011*

Contract Number: *DTPH56-10-T-000005*

Prepared for: *Pipeline & Hazardous Materials Safety Administration (PHMSA)*

Project Title: *Compatibility of Non-Ferrous Metals with Ethanol*

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For quarterly period ending: *January 14, 2011*

This project extended the efforts made in previous projects that focused on industry survey and literature to investigate the compatibility of non-ferrous metals with ethanol. Electrochemical testing will be conducted to investigate the corrosion performance of a set of selected non-ferrous metals in fuel grade ethanol.

In this project quarter, electrochemical tests on all selected six materials were completed in SFGE (E95) under deaerated and aerated conditions. The tested materials showed different corrosion rates with bronze and brass shown the highest corrosion rate independent of aeration condition. A selected set of materials will be evaluated in E50 in the next quarter. The final report will also be submitted next quarter.