

Quarterly Report – Public Page

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Contract Number: **DTPH56-08-T-000012**
Prepared for: **U.S. Department of Transportation, Pipeline and Hazardous
Materials Safety Administration**
Project Title: **Improvements to the External Corrosion Direct Assessment
(ECDA) Process (WP#360): Potential Measurements on Paved Areas**
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An inaugural meeting was held on July 8, 2008 with the corporate partners and PHMSA Contracting Officer's Technical Representative (COTR). Aside from the COTR representing PHMSA, the others present at the meeting were the representatives of Texas Gas Association, ExxonMobil, and El Paso. Separate meetings were held with ExxonMobil, El Paso, and Panhandle. The essential conclusions reached at these meetings could be summarized as follows: (1) all information and data Corrpro receives will be confidential and (2) all relevant data from work that was performed by Corrpro, on behalf of each corporate partner, will be utilized for the benefit of this project.

Meanwhile, an assessment summary table was developed aimed at obtaining information related to potential measurements in paved areas from corporate members of the project. The table requires the corporate members to provide hard data that could be used for statistical analysis.

A literature search was undertaken and analyzed. The methods generally used for potential measurements in paved areas (concrete, gravel and asphalt pavements) are summarized as follows: (a) Drilling through pavements every 5-10 feet.; (b) Offset measurements in adjacent unpaved areas; (c) Surface wetting and other methods to lower contact resistance.

Some of the key conceptual issues of potential measurements in paved areas include the basic characterization of (1) Junction potentials, (2) Contact/surface resistance, (3) Bulk resistivity / resistance, (4) Impact of thickness, compaction, compressive strength and porosity, (5) Impact of pH and steel reinforcing (concrete), (6) Impact of surface wetting, (7) Impact of damage and wear/deterioration,

Over the next quarter, scheduled contractual activities include design of test apparatus, design of experiments, controlled laboratory testing, and analysis of laboratory data. Potential measurements will be carried out using a "Bathtub" equipped with "controlled" paving samples as well as samples removed from actual pavements. In-situ field tests on asphalt, concrete and gravel will be carried out in cooperation with our corporate partners, local gas distribution companies and other operators.