Quarterly Report – Public Page

Date of Report: *January 12, 2007*

Contract Number: *DTPH56-06-T-000012*

Prepared for: *US DOT*

Project Title: *"ECDA for Unique Threats to Underground Pipelines"*

Prepared by: *CC Technologies, Inc.*

Contact Information: *Mark Yunovich, (614)-761-6919, myunovich@cctechnologies.com*

For quarterly period ending: *December 31, 2006*

Progress to date:

One of the milestones achieved during the last quarter was the completion of underground large-scale testing site. The site is considered to be unique, as there are no known installations that contain the same degree of versatility and flexibility with regard to configuration. The site consists of multiple sections of electrically isolated pipeline sections with intentionally introduced defects in the coating. The defects have varying sizes; also, some sections contain clusters of defects. The sections can be cathodically polarized by either sacrificial Mg anodes or by an imposed DC current.

The potential measurements at grade can be augmented by the measurements taken using Coupon Test Stations placed in the vicinity of the coating defects and by using permanent pseudo-reference electrode buried with the pipe. The setup can test the effects of stray currents on the pipeline sections by varying the stray current activity and comparing the ECDA results to the actual configuration of the experimental setup.

Small-scale experimental work has been largely completed. The results indicate that, depending on the conditions on the actual pipeline, the effect of DC and AC stray currents on potentials measured during close interval survey (CIS) can be profound. The stray currents may make current pick-up locations appear to be overly protected, and the discharge sites may appear to be protected while in fact having polarization potentials significantly below the protection criteria.