

State of Wisconsin/Department of Transportation
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: June 30, 2006

Program: SPR-0010(36) FFY99	Part: II Research and Development
Project Title: Monitoring and Evaluation of Fly Ash Stabilized Subgrade Constructed by the WisDOT	Project ID: 0092-04-10
Administrative Contact: James McDonnell	Sponsor: WHRP
WisDOT Technical Contact: Bob Arndorfer	Approved Starting Date: June 21, 2003
Approved by COR/Steering Committee: \$84,603	Approved Ending Date: May 21, 2006
Project Investigator (agency & contact): Tuncer B. Edil, UW-Madison	

Percent Complete: 92%

Project Description: This project will determine how fly ash stabilization for subgrade improvement impacts construction and pavement design parameters. The project includes the following phases:

Phase 1- Development of Laboratory Testing and Field Monitoring Program

Phase 2- Implementation of Data Collection and Monitoring Plan

Phase 3- Long-term Monitoring

Progress This Quarter:

Material Property Testing:

Production testing to evaluate the effect of freeze-thaw on long-term modulus degradation is currently completed. The results are being analyzed.

Field Instrumentation:

Volumetric water content, soil temperature, precipitation and air temperature data are being downloaded and collected with remote-controlled modem. The condition of the equipment is being checked periodically by site visits. A car ran into the field equipment damaging the solar panel post and the precipitation gage. However, the data logger is functional and the data collection is continuing.

Non Destructive Quality Control Tests:

The October 2005 FWD test have been analyzed. May 2006 FWD data could not be collected because the WisDOT FWD equipment is broken. As soon as the equipment is repaired this data will be collected. A pavement distress survey is also requested.

Leachate Quality Data Collection:

Over the past quarter the lysimeters installed at STH 12 have been sampled. The samples have been filtered and preserved and are analyzed for cadmium, chromium, selenium, and silver.

Column leach test data are being evaluated.

Work Next Quarter:

A final report summarizing the US 12 project data is in process. Effect of freeze-thaw on the resilient properties will be incorporated at the end of 5 cycles. A control sample not subjected to freeze-thaw was also tested. Additional samples will be collected from the lysimeters, and the results from the field samples will be compared with the results from the lab column tests. The funding has been depleted in this project but some more work remains. The exhaustion of funding did not result from any change in the project scope. An application was made for extension with additional funding. The project was envisioned as a 36-months project originally; however, a field project for long-term monitoring could not be identified in

the first year of the project. So additional funding and time extension is requested to collect the long-term data.

Circumstances Affecting Progress/Budget: Lack of funds to maintain monitoring.

Gantt Chart:

Phase 1: 95% complete

Phase 2: 95% complete

Phase 3: 75% complete