VTRC File No: _____

Virginia Transportation Research Council
Contract/Grant Progress Report

Project No: TPF5 (045) **Starting Date: 3/1/2003** **Target Completion Date: 12/31/07**
Project Title: Development of Performance Guidelines for the Selection of Bituminous Hot-Poured Crack Sealants
Performing Agency: University of Illinois
Principal Investigator(s): Imad L. Al-Qadi
Date of This Report: 11/30/06 **Next Report Due Date: 2/28/07**

Project Description
The project will establish performance guidelines for the proper selection of hot-poured crack sealants. The guidelines will be in the spirit of the Performance Grade (PG) system for bituminous binders with some modifications to the equipment, data analysis procedure, and testing methods.

Research Activities Pursued This Period:
- A round robin viscosity testing of sealants using the new viscosity test was completed. The test repeatability and reducibility analysis was also completed.
- A repeatable CSBBR test protocol was developed; the 15 selected sealants were tested. The identified performance parameters are stiffness at 240s, average creep rate, and dissipated energy ratio. A variation analysis between operators was completed.
- A repeatable DTT test protocol was developed; the 15 selected sealants are currently being tested. Quantitative parameters including rate of modulus reduction and toughness at specific strain are under investigation. The modified center notched specimen mold is currently being used in testing.
- The DTT adhesion testing plans are completed and testing is underway using three aggregate types.
- The fine-tuning and testing procedure for the blister test is almost complete. Specimen geometry and preparation procedures have been identified.

Problems Encountered:
- No major problems this quarter.

Activities Planned for Next Period:
- Simulate temperature variation and effect of cyclic loading/ unloading on sealants using DTT.
- Develop analysis procedure for testing results of center notched specimen.
- Work on theoretical analysis of blister test.
- Continue adhesion DTT testing of sealants with three aggregate types. In addition, conduct within laboratory variation testing.

Budget Status:

Current FY Project Budget: $74,236*		Project Budget Lifetime: *820,000
Current FY Expenditures: $31,167	as of 10/31/06	Expenditures LTD: $587,457
Percent Expended this FY: 42%		Percent Expended LTD: 71.6%

* this represents the number in the budget; the project was extended to 12/31/07

Timetable: Project is (check):

On Schedule	☒
Behind Schedule *	☐ (explain above)
Ahead of Schedule	☐

Preparer's Signature: _____ Date: 11/30/06