

Virginia Transportation Research Council  
Contract/Grant Progress Report

**Project No:** 2005-2275(TPF5 (045)) **Starting Date:** 3/1/2003 **Target Completion Date:** 12/31/06  
**Project Title:** Development of Performance Guidelines for the Selection of Bituminous Hot-Poured Crack Sealants  
**Performing Agency:** UIUC  
**Principal Investigator(s):** Imad L. Al-Qadi  
**Date of This Report:** 3/18/05

**Project Description**

Achieve a means of selecting durable crack sealant materials for use on pavements. The project will establish performance guidelines for the selection of crack sealants. The guidelines will be in the spirit of the performance Grade (PG) system for bituminous binders.

**Research Activities Pursued This Period (Including Tasks):**

Canadian partners have conducted testing with sealant tracking under summer temperatures. The UIUC research continues with stiffness and relaxation of sealers at sub-zero temperatures. Detailed progress is included in the attached draft status report.

Despite some setbacks (noted below), the project continues in the right direction. The Brookfield viscometer will be used to measure the viscosity of crack sealants during installation. Additional performance parameters show promise for characterizing low temperature performance of crack sealant materials and will be investigated during the next quarter.

**Problems Encountered:**

Some delays have been encountered during this phase of research.

- The load cell of the BBR equipment broke twice, and had to be shipped to the manufacturer to repair or replace.
- In addition, the DTT has been shipped for repair due to some problems in the load-controlled mode.
- Several attempts were made to develop an adhesion-testing fixture. While significant progress has been made, more work is needed to develop a reliable fixture.

**Activities Planned for Next Period:**

- Finish testing BBR specimens at the different temperature grades and select the final sets of performance parameters, and test aged specimens (with the aging process developed in this project).
- Continue developing the fracture testing procedure.
- Try to develop a layout of the Sealant Performance Grade (SPG).

**Budget Status:**

Current FY Project Budget: \$205,000		Project Budget Lifetime: \$820,000.00
Current FY Expenditures: \$113,346	as of 1-31-2005	Expenditures LTD: \$199,569
Percent Expended this FY: 55.3%	(Date)	Percent Expended LTD: 24.3%

**Timetable:** Project is (check):

- On Schedule
- Behind Schedule \*  (explain above)
- Ahead of Schedule

Preparer's Signature:


Date: 3/18/05