

Virginia Transportation Research Council
Contract/Grant Progress Report

Project No: 2005-2275 {TPF5 (045)} **Starting Date:** 8/16/04 **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: 11/30/04

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:

- Tested the linear and nonlinear regions of three sealants using BBR.
- Investigate the equivalency of crack sealant stiffness at temperature T for 2hrs to that at temperature T+10 for 60 sec.
- Determined the applicability of linear viscoelastic principles to crack sealants.
- Attempting to derive the necessary equations to determine the stiffness of a nonlinear viscoelastic material.
- Worked with ATS to expand the BBR software to allow for multiple load levels during the same test using available equipment.
- Developed preliminary plans/ alternatives for the adhesion test setup.

Problems Encountered:


- Problems in preparing and pouring samples for the adhesion-test.
- Selection of a preliminary set of artificial and natural aggregates for the adhesion test.
- Some delays due to transferring the project as well as the moving and installation of the equipment at the new laboratory facility. This delay will be addressed by the following reporting period.

Budget Status:

Current FY Project Budget: \$696,734	Project Budget Lifetime: \$0
Current FY Expenditures: \$0 as of 11/1/04	Expenditures LTD: \$0
Percent Expended this FY: 0% 11/1/04	Percent Expended LTD: 0%

Timetable: Project is (check):

On Schedule (Some delays due to project transfer)
Behind Schedule * (explain above)
Ahead of Schedule

Preparer's Signature: 

Date: 11/30/04_

Approved By: _____ Date: _____
(Research Manager)

Review Comments: (To be Completed by Research Director and Returned to Research Manager)