

## TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): New Hampshire DOT

### INSTRUCTIONS:

*Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.*

<b>Transportation Pooled Fund Program Project #</b> <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i>  <p style="text-align: center;">TPF-5(230)</p>		<b>Transportation Pooled Fund Program - Report Period:</b> <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input checked="" type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)	
<b>Project Title:</b> <p style="text-align: center;"><b>Evaluation of Plant-Produced High-Percentage RAP Mixtures in the Northeast</b></p>			
<b>Name of Project Manager(s):</b> <p style="text-align: center;">Jo Sias Daniel</p>		<b>Phone Number:</b> <p style="text-align: center;">603-862-3277</p>	<b>E-Mail</b> <p style="text-align: center;">jo.daniel@unh.edu</p>
<b>Lead Agency Project ID:</b>		<b>Other Project ID (i.e., contract #):</b>	<b>Project Start Date:</b> <p style="text-align: center;"><b>8/11/2010</b></p>
<b>Original Project End Date:</b> <p style="text-align: center;"><b>12/31/2013</b></p>		<b>Current Project End Date:</b> <p style="text-align: center;">12/31/2015</p>	<b>Number of Extensions:</b> <p style="text-align: center;">2</p>

Project schedule status:

On schedule     
  On revised schedule     
  Ahead of schedule     
  Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
781,706 Revised to 731,287 Revised to 796,706	751,358	94%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
	11,820	

**Project Description:**

## Research Objectives

The objectives of this research project are to:

1. Evaluation the performance in terms of low temperature cracking, fatigue cracking, and moisture sensitivity of plant produced RAP mixtures in the laboratory and field.
2. Establish guidelines on when it is necessary to bump binder grades with RAP mixtures.
3. Provides further understanding of the blending that occurs between RAP and virgin binder in plant-produced mixtures.
4. Refine fatigue failure criteria for RAP mixtures that can be used in the simplified Viscoelastic Continuum Damage (S-VECD) model.

## Research Plan

The research plan is broken down into three phases with an additional task. Phase I focused on evaluating the effects of binder grade and plant type on the properties of mixtures with various percentages of RAP. Phase II of the study evaluated silo storage time and the fatigue failure criteria in the S-VECD model. Phase III was a laboratory study to isolate the effects of mixture variables without changing plant production variables. The additional task is to complete the silo storage study that was started in Phase II.

The following tasks will be required to achieve the research objectives for all phases of this project:

1. Producing Plant Mixtures.
2. Testing and Analysis of Asphalt Binders and Mixtures.
3. Construction and Evaluation of Field Test Sections.
4. Reporting.

**Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):**

During this quarter, the research team has focused on report writing. The Phase II report has been sent to the technical committee for review. The Phase III and Additional Silo Storage Study Task reports are being compiled and will be sent to the technical committee for review as soon as they are complete. It is anticipated that this will occur in the next 4-6 weeks.

**Anticipated work next quarter:**

Submission of Phase III and Additional Silo Storage Study reports to technical committee.

**Significant Results:**

Results from the silo storage study additional task were summarized in the TRB paper submission shared with the committee in August and will be presented at the NEAUPG meeting.

**Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).**

None this quarter.

**Potential Implementation:**