

## 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><br><i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i><br><br><p style="text-align: center;">TPF-5(230)</p> |   | <b>Transportation Pooled Fund Program - Report Period:</b><br><input checked="" type="checkbox"/> Quarter 1 (January 1 – March 31)<br><input type="checkbox"/> Quarter 2 (April 1 – June 30)<br><input type="checkbox"/> Quarter 3 (July 1 – September 30)<br><input type="checkbox"/> Quarter 4 (October 1 – December 31) |  |
| <b>Project Title:</b><br><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><br><p style="text-align: center;">Jo Sias Daniel</p>   | <b>Phone Number:</b><br><p style="text-align: center;">603-862-3277</p>           | <b>E-Mail</b><br><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><br><p style="text-align: center;"><b>8/11/2010</b></p>  |  |
| <b>Original Project End Date:</b><br><p style="text-align: center;"><b>12/31/2013</b></p>   | <b>Current Project End Date:</b><br><p style="text-align: center;">12/31/2015</p> | <b>Number of Extensions:</b><br><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<br>Revised to 731,287<br>Revised to 796,706 | 796,706                        | 100%                                 |

Quarterly Project Statistics:

| Total Project Expenses and Percentage This Quarter | Total Amount of Funds Expended This Quarter | Total Percentage of Time Used to Date |
|--|---|---------------------------------------|
|  | 0   |                                       |

**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.):**

The Additional Silo Storage Task report has been sent to the technical committee for review.

**Anticipated work next quarter:**

Project close out web meeting with technical committee.

**Significant Results:**

None this quarter.

**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:**