

'Performance of Recycled Asphalt Shingles (RAS) in Hot Mix Asphalt'

National Pooled Fund Study TPF-5(213)

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During the first quarter, October 1, 2009 through December 31, 2009, the TPF-5(213) team achieved the following components on the project:

1. Hosted the TPF-5(213) "Kick-Off Meeting" of the technical advisory committee (TAC) on October 21-22, 2009, in Ames, Iowa. Partners from Indiana DOT and Wisconsin DOT were not able to attend the meeting, however Mike Prather from the Indiana DOT participated for a portion of the meeting by conference call. The meeting included a thorough discussion of RAS factors for the study and participating state priorities. A document outlining the RAS factors and state priorities was created, *Factors for RAS Study and Priority*. Mike Prather reviewed Indiana DOT's RAS demonstration projects for 2009. The first project was completed in September 2009 utilizing 3% post consumer RAS with no RAP in foamed asphalt at both 260°F and 300°F and a second demonstration project scheduled for November 2009, utilizing 2.2% post consumer RAS with 15% RAP in foamed asphalt. In addition, Steve Gillen representing the Illinois Tollway, discussed the outcomes of their demonstration project utilizing high contents of FRAP (20,30 and 40%) and RAS (5%) completed in August /September 2009. The Tollway is currently working with Iowa State University (ISU) on a project titled '*Performance of Fractionated Recycled Asphalt Pavement and Recycled Asphalt Shingles In Hot Mix Asphalt*', and has been invited to share research results and expertise. A literature search on RAS research will be completed and made available for review at the next meeting scheduled for February 2010. The meeting minutes were completed and distributed to all participating state committee members along with the *Factors for RAS Study and Priority* document. The next TAC meeting is scheduled for February 4th and 5th and will coincide with the North Central Asphalt User/Producer Group Meeting in Overland Park, Kansas. A proposed draft agenda will be presented to the TAC prior to the meeting for review and comment.
2. The four aforementioned mixtures produced by the Indiana DOT were collected by Iowa State University in December 2009 and baseline characterization of the materials has begun.
3. Chris Williams was invited by the FHWA to attend and provide a presentation on asphalt shingle recycling and status on the pooled fund study to the RAP ETG in Seattle, Washington in December. The only major comment received was regarding long term aging of mixtures prior to fatigue and thermal cracking testing.

Next steps for the study include:

1. Completion of a literature search on RAS research papers;
2. New TPF-5(213) research partners (California??);
3. State demonstration projects for 2010, addressing RAS factor priorities;
4. Environmental quality control/quality assurance for post consumer RAS facilities;

5. DOT quality control/quality assurance for HMA producers;
6. Discussion of state RAS specifications (current and draft);
7. Conduct pavement distress surveys on paved pavements (Indiana in May); and
8. Possible partnering with the EPA on asbestos research (proposal by Iowa State is pending review).

The above next steps will be discussed at the next TAC meeting in February 2009.