

AASHTO TSP•2 - Emulsion Task Force (ETF) Meeting

The Heritage Group Innovation Center and Research Lab
6320 Intech Way (near 71st street and I-465), Indianapolis, IN 46278
Dec 3rd, 2019

AGENDA

Day 1

Tuesday, Dec 3rd

1. Welcome, Roll Call and Housekeeping (Franco, Lubbers)

- a. The focus of Marketing or Messaging committee is oversight of NCHRP project 20-44(26) – Facilitating Adoption of Guide Specifications for Construction of Chip Seals, Micro Surfacing, and Fog Seals (\$200k)

2. ETF Review (Lubbers, Franco)

- a. Approval of June 2019 Meeting Minutes
 - i. Need to include the specification from NCHRP 9-63 in the official minutes.
- b. Agenda Review
- c. Status Review (Presentation)
 - i. Tentative plan for publishing the Quality Assurance guidelines are under review by Tech Section 5C. Forwarded on by Tech Section 5B.
 - ii. Future needs:
 1. Address materials specification related questions from COMP Tech Sections.
 2. NCHRP 14-37 guidelines were used successfully by a local agency. Contact Gary Hicks for further details.
 3. Difference between NCHRP 9-62 and 14-44. 9-62 is focused on test methods for field acceptance and approval for opening. 14-44 is a construction guide specification.
 4. Demonstration projects for Messaging/Implementation: Intent is to use construction guide specifications on projects. These specifications reference materials and design practices that were developed through ETF. Potential to leverage projects from NCHRP 9-63?

3. AASHTO Committee on Materials & Pavements Update

- a. TS 2a – Emulsified Asphalts (Pfeifer)
 - i. T59, T382 (Rotational Paddle Viscometer) Tolerances addressed. Some technical comments.
 - ii. M140 – SC Requested to put HFMS-1 back into the specification. PP-86 Error for calculating RAP SPG corrected.
 - iii. All four items under COMP Ballot. Tech Section 2A is in last round. Ballot closes Dec 12, mid-year meeting is in mid to late January.
 - iv. TFASH: Harmonization effort between AASHTO and ASTM.
 - v. ASTM is working on a modified emulsions specification, will be brought to ETF after further development.
 - vi. Items under review. R-66 – sample size for emulsions (T59) and T72 (minor edits). Also focused on deliverables from NCHRP 9-63.
- b. TS 5b – Bridge & Pavement Preservation (Nener-Plante). Not presented.
- c. TS 5c – Quality Assurance (Sade). PowerPoint presentation
 - i. Emulsion testing in PSP. Tests used (Saybolt and %Residue) and are not modified. How can good quality samples be maintained? Variability of residue properties after recovery? Emulsion have more sampling/handling factors that will influence repeatability of residue properties.
 - ii. Relationship between specification tests and performance is not clear.
- d. NCHRP 14-37 Status (Sade)

4. **Polymer-Modified Slurry Material/Design Spec Discussion (Eberly)**
 - a. A-115 Polymer Modified Slurry Seal Spec. Intent is for high performance slurry seal. Quick traffic, leveling, high traffic, night work etc. is best for micro-surfacing (A-143). States that it is not a product that is to be used for applications that require layers more than one stone. Allows for softer binder grades, increased sand equivalency value, higher performance criteria, heavier application rates.
 - b. Next steps: Revisions to A-143 to improve performance. Make it easier to require more residual asphalt in mixes and increase performance tests requirements.
 - c. Focus on application guidelines (roadway classification/traffic level) to help foster use of the different products. Slurry, polymer modified slurry, micro-surfacing.

5. **ISSA Incentives & Disincentive Recommendations (Reimschiessel)**
 - a. Proposal was made to form a committee to collaborate with ISSA in developing incentive/disincentive protocols.
 - b. AASHTO also has results on variability of DSR residue after Method A (48-hour method) recovery.

6. **NCHRP 9-63 (EA-PG) Update (Anderson) (Presentation)**
 - a. Is specification intended for chip seals or chip seals/micro-surfacing? Most field validation sections were chip seals. Also concerns with micro surfacing emulsions and the variability of the thin film methods due to pooling of the emulsion and other factors.
 - b. Optional polymer identification parameter. Does not exist in M332 or M320, however many states have a "PG Plus" test.
 - c. Considering additional round robin testing.
 - d. Phase 1 report is due by the end of the year.

7. **NTPEP – Plant Certification (Franco & Siriani)**
 - a. Task force developed for evaluating facilities. Evaluates process control/compliance with program and split sampling/testing between third party and QC lab.
 - b. Motivation for group is coming from the North East. 1) Facilities can ship to 10 different states, difficulties in approval of QC plans, 2) Regional efforts are different, examples are round robin testing and daily data submittal, 3) Uniformity in QC Plans.
 - c. Will figure out asphalt binder program first. Then apply to emulsions.
 - d. Recommendation was made to review Combined State Binder Group Guidelines
 - e. Comments:
 - i. Buy-In from States. Not all states will adopt, goal is to standardize procedures and reduce repeated effort by increased state participation.
 - ii. Similar to R18 this program uses SP-01 to expand focus beyond solely lab testing.

8. **ETF – Subcommittee Progress Updates/Initiatives**
 - a. Residue (Kadmas)
 - i. High Float residue work is underway to identify high float properties. Yield stress measurement is under evaluation. Gelling was evident in low temperature recovery procedures. Still have not identified replacement for Float test.
 - ii. Sweep Test (ASTM): Precision statement was developed through ASTM.
 - b. Construction Guide Specs (Hicks, Moulthrop)
 - i. Deliverables from NCHRP 14-37 were submitted to AASHTO. New NCHRP projects for construction guides for tack, slurry, scrub seal, etc.
 - c. Quality Assurance (Franco)

- i. Guidelines in place for micro-surfacing and chip seal. Need to focus on other treatments. Additional committee members solicited.
- ii. As discussed previously, QA specs will be under Tech Section 5C.
- iii. Incentive/Disincentive will be under this subcommittee.
- d. Research (Hazlett)
 - i. Two projects submitted. 1) Performance and safety specifications for rejuvenating seals. 2) Construction guide specifications for sand seals and bonded surface treatments.
 - ii. Future problem statement on sampling and determining asphalt content of asphalt emulsion mixtures.
 - iii. Soliciting other research ideas.: Field cohesion test for micro-surface treatments (Illinois DOT). Some methods had been used in the past. Evaluation use of the accelerated weather-ometer for evaluation of maintenance treatments (Ken Gryzbowski).
- e. Rejuvenators (Tabatabaee)
 - i. No update given.
- f. Marketing (Tomkins)
 - i. Colin Franco gave an updated on NCHRP Project 20-44(26). Objective to facilitate adoptions of outcomes of NCHRP 14-37 by AASHTO, state agencies, local agencies.

9. Asphalt Content in Micro Surfacing Mixtures (Wielinski) (Presentation)

- a. Are sampling and test procedures in place? California was noted as an example.
- b. Solvent extraction vs. Ignition Oven. Ignition ovens require a correction factor. Possible solvents: Toluene or toluene/ethanol blend. TCE may have a solubility issue. Also a safety issue.
- c. Sampling is a significant issue. Need to standardize methodology to establish proper tolerances.

10. Concurrent Breakout Sessions (Subcommittee Chairs)

- a. Residue (Kadmas)
 - i. Low temperature recovery method discussions. Ways to improve consistency of emulsion film being recovered.
 - ii. Problem statement for emulsion issues with AASHTO Resource group. Ideas include: Abbreviated test program in the interest of making a stable higher residue emulsion. AASHTO Resource samples at plant and immediately ships, regionalize sample collection and evaluation.
- b. Construction Guide Specs (Hicks, Moulthrop)
 - i. Slurry, microsurfacing, and chip seal documents will be reviewed and revised.
 - ii. Chip seal was completed by Scott Schuler and based on previous NCRHP work.
- c. Research (Hazlett)
 - i. Joined residue group.
- d. Rejuvenators (Tabatabaee)
 - i. Not presented.
- e. Quality Assurance (Franco)

11. Treatment Self-Assessment Survey (Galehouse) – Presentation

12. Best Practice Documents – Open Discussion (Lubbers, Franco)

13. Recap Activities (Lubbers, Franco)

Adjourn

**AASHTO TSP-2
Messaging & Implementation Subcommittee Minutes
December 4, 2019**

Present: Stormy Brewster, Shelly Cowley, Steve Cross, Scott Dmytrow, Colin Durante, Colin Franco, Larry Galehouse, Jerry Geib, Mark Ishee, Gayle King, Chris Lubbers, Kevin McGlumphy, Russ Milan, Peter Montenegro, Eric Reimschiessel

Absent: Larry Tomkins

Guests: Ken Grzybowski, Andrew Hanz, Arlis Kadrmas, Ben Sade, Sophia Sobrito

Notable Discussion Points

NCHRP 20-44(26): Implementing Guide Specifications for the Construction of Chip Seals, Micro Surfacing

Objective: Facilitate the adoption by AASHTO of the guide specifications for construction of chip seals, micro surfacing, and fog seals produced in NCHRP Project 14-37 through a series of phased activities in four areas: information dissemination (messaging), outreach, training, and demonstration.

Budget: \$200K

Contract Time: 36 months

Project Panel: Assembled by TRB – usually 8 to 10 people

Steering Committee: Assembled by ETF

Project Contractor: Selected by project panel

Discussion Summary

Messaging: (estimated effort \$80K)

Print articles and video presentations are to be developed, placed and distributed capturing the overall work of the AASHTO TSP-2 ETF, including documenting the U.S. pavement preservation applications managed during this implementation of AASHTO specifications.

- a. Document successful projects for selling the standards, guides and best practices.
- b. Effectiveness of pavement preservation
 - i. Address why we need pavement preservation
 - ii. Right treatment – right road – right time concept
 - iii. Dollar savings and life extensions
- c. Target audience
 - i. Transportation Agencies (state DOTs, county, municipal, toll authorities)
 - ii. Material Producers
 - iii. Application Contractors
- d. Focus on the importance of adopting national standards

Outreach: (estimated effort \$30K)

- a. Assemble a group of presenters
- b. Work with the contracting industry to buy into the standards
- c. Individuals in agencies we target:
 - i. Decision makers
 - ii. Those who produce projects

Training: (estimated effort \$50K)

- a. Train to the basics to:
 - i. Managers
 - ii. Technicians
 - iii. Field Staff
 - iv. Emphasis on individuals that are involved with the projects

Demo Projects: (estimated effort \$40K)

- a. A minimum of at least one project in each of AASHTO's 4 regions.
- b. Potential candidate projects and point person
 - i. Mississippi – chip seal – Tomkins
 - ii. Montana – chip seal – Bachini
 - iii. Minnesota – micro surface – Geib
 - iv. Kent County Michigan – fog seal & micro surface – Milan
 - v. Illinois – chip seal – Pfeifer
 - vi. Kansas – fog seal (shoulders) – Kadrmas
 - vii. Tennessee – treatment unknown – Franco
 - viii. Indiana – treatment unknown – Franco
 - ix. California – treatment unknown – Dmytrow
 - x. Nevada – treatment unknown – Reimschiessel
 - xi. New York – treatment unknown - Grzybowski

PowerPoint Presentation

A volunteer group will assemble a PowerPoint for presentation this winter at various meetings and conferences to introduce the ETF and promote the new approved standards. Volunteers include: Scott Dmytrow, Eric Reimschiessel, Ben Sade, Stormy Brewster, and Russ Milan.

Post Meeting Comments Offered for Consideration

1. Have a booth manned by a knowledgeable person and exhibit at all user producer groups, with full literature. This will give you 3 times the outreach out to states.
2. Have a "hot line" to answer questions.
3. Have knowledgeable person witness each demo job, volunteers from ETF.
4. Get state DOTs to reference the new AASHTO standards on their website.
5. For 3 years offer selected testing at cost to facilitate mix designs by testing AE's, aggregates, and mixes.
6. Use ETF members to hold training seminars.
7. The PG adoption effort was similar to our tasks. Speak with John D'Angelo on what works best.
8. Provide list on knowledgeable volunteers for a Q & A.

END