



SUBCOMMITTEE ON MATERIALS (SOM)
101st Annual Meeting – Pittsburgh, Pennsylvania
Thursday, August 6, 2015
8:00 am – 10:00 am EDT

TECHNICAL SECTION (TS) 2a
Emulsified Asphalts

I. **Call to Order and Opening Remarks** – Chairman Ron Horner from North Dakota called the meeting to order at 8:01 a.m. He noted that attendance of this meeting will be recorded on the iPad that is circulating throughout the group. Chairman Horner specifically thanked Maria Knake from AMRL for her help in facilitating the TS 2a meeting. Finally, he remarked that the technical section had much to discuss today.

II. **Roll Call**

Voting Members:

Name	State	Present
Horner, Ron	North Dakota	X
Myers, Allen H	Kentucky	X
Blackburn, Lyndi D	Alabama	X
Voth, Michael D	FHWA	X
Nash, Tanya M (Tim Ruelke)	Florida	Proxy
Wu, Peter	Georgia	X
Santi, Mike	Idaho	
Abadie, Christopher David	Louisiana	
Williams, III, James A.	Mississippi	X
Boisvert, Denis M.	New Hampshire	
Sheehy, Eileen	New Jersey	X
Peoples, Christopher A.	North Carolina	X
Seiter, Scott	Oklahoma	X
Lane, Becca (Anne Holt)	Ontario	Proxy
Mullis, Cole F.	Oregon	X
Ramirez, Timothy	Pennsylvania	X
Franco, Colin A	Rhode Island	
Feller, Joe J.	South Dakota	
Hazlett, Darren	Texas	X
Bailey, William R.	Virginia	X

Friends:

Name	Affiliation	Present
Salomon, Delmar	Pavement Preservation Systems	X

In total, 51 people attended the TS 2a meeting: 13 members, two proxies, one friend, and 35 guests.

III. Approval of Technical Section Minutes – Chairman Horner reminded the group that TS 2a conducted a mid-year web meeting on March 26, 2015. Cole Mullis from Oregon offered a motion to approve the TS 2a mid-year meeting minutes, and Darren Hazlett from Texas seconded the motion. The entire technical section voted in favor of the motion.

IV. Old Business

A. SOM Ballot Items

- i. M 140, Emulsified Asphalt – Yes-44, No-2, No vote-7
 1. Updated to include suggested changes and balloted in June.
- ii. M 208, Cationic Emulsified Asphalt—Yes-42, No-4, No vote-7
 1. Updated to include suggested changes and balloted in June.
- iii. M 316, Polymer-Modified Emulsified Asphalt—Yes-39, No-7, No vote-7
 1. Updated to include suggested changes and balloted in June.
- iv. T 78—Yes-46, No-0, No vote-7
 1. Published
- v. T 302—Yes-45, No-0, No vote-8
 1. Published
- vi. TP 91, Determining Asphalt Binder Bond Strength by means of the Binder Bond Strength (BBS) Test—Yes-46, No-0, No vote-7
 1. Published
 2. Balloted in June to include changes suggested by the author.
- vii. T 59, Emulsified Asphalt—Yes-43, No-3, No vote-7
 1. Published
 2. Balloted in June to address negatives and new business.
- viii. MP XX, Materials for Micro Surfacing—Yes-45, No-1, No vote-7
- ix. PP XX, Standard Practice for Micro Surfacing Design—Yes-43, No-2, No vote-8
 1. Updated to include suggested changes and balloted in June.
- x. R 66, Sampling Asphalt Materials (T 40)—Yes-45, No-1, No vote-7
 1. Published.
 2. Balloted in June to address negative vote regarding minimum sample size.
- xi. MP XX, Materials for Emulsified Asphalt Chip Seals—Yes-44, No-2, No vote-7
 1. Updated to include suggested changes and balloted in June.
- xii. PP XX, Standard Practice for Emulsified Asphalt Chip Seal Design—Yes-45, No-1, No vote-7

B. TS ballot June-July 2015

- i. **M 140, Emulsified Asphalt—Yes-17, No-0, No vote-3**
 1. Comment: (Georgia) *Editorial comment - will be incorporated.*
Chairman Horner explained a major issue involving AASHTO M 140, M 208, and M 316. A major difference exists across the country about the maximum amount of time permitted to complete emulsion testing. Some states prefer to complete testing within 14 days of the sample date; others choose to require test completion within 30 days.

Chairman Horner contacted several states about this issue but identified no consensus. Then, he formed Task Force 2a-2015-01 to consider this question. The task force consisted of Mike Voth from FHWA, Vice-Chairman Allen Myers from Kentucky, James Williams from Mississippi, and Chairman Horner.

After discussing this question during a conference call on June 24, 2015, Task Force 2a-2015-01 developed a recommendation to: (1) complete testing for emulsion properties within 14 days of the sample date; and (2) complete testing on the asphalt residue within 30 days of the sample date. This change was incorporated into AASHTO M 140, M 208, and M 316. The modified specifications were balloted on the recent TS 2a ballot and approved with no negative votes.

Bill Bailey from Virginia presented a motion to forward AASHTO M 140 to this fall's SOM ballot. Mr. Hazlett seconded the motion, and TS 2a agreed unanimously. **{SOM BALLOT ITEM # 1}**

ii. **M 208, Cationic Emulsified Asphalt—Yes-17, No-0, No vote-3**

1. Comment: (Georgia) *Editorial comment – will be incorporated.*

The same issues as described above for AASHTO M 140 apply to M 208 as well. Mr. Bailey offered a motion to advance AASHTO M 208 to the upcoming SOM ballot. Mr. Mullis seconded the motion, and it passed without opposition. **{SOM BALLOT ITEM # 2}**

iii. **M 316, Polymer-Modified Emulsified Asphalt—Yes-17, No-0, No vote-3**

The same issues as described above for AASHTO M 140 apply to M 316 as well. Additionally, Mr. Voth discussed the issue of testing temperature for the elastic recovery analysis. He noted that the tables in AASHTO M 316 were revised to include elastic recovery. In his opinion, the specification as balloted on this issue is less disruptive than the current requirement of specifying 25°C as the test temperature and allowing 10°C as an alternate. Again, Mr. Bailey presented a motion to move AASHTO M 316 to the SOM ballot later this year, and Mr. Hazlett supported the motion with a second. The technical section approved the motion unanimously. **{SOM BALLOT ITEM # 3}**

iv. **TP 91, Determining Asphalt Binder Bond Strength by Means of the Binder Bond Strength (BBS) Test —Yes-17, No-0, No vote-3**

This provisional test method did not receive any comments on the TS 2a ballot, so Chris Peoples from North Carolina suggested promoting it to a full standard on the SOM ballot. Scott Seiter from Oklahoma seconded the motion, and it passed without dissent. **{SOM BALLOT ITEM # 4}**

v. **T 59, Emulsified Asphalt—Yes-16, No-1 (Virginia), No vote-3**

1. Editorial comments from Georgia will be addressed.
2. Negative (Virginia) *Virginia would prefer to see the requirements stay the same in order to keep that precision and bias applicable.*

Chairman Horner noted that this issue was discussed during the mid-year web meeting in March. Arkansas expressed a similar concern on the 2014 SOM ballot. In Section 7 of AASHTO T 59, requiring the determination of asphalt residue in four beakers may be excessive. According to Arkansas, determining the residue on two of the four beakers would be adequate. As a result of these comments, AASHTO T 59 was balloted to require the determination of residue on a *minimum* of two beakers. Additionally, a note was inserted explaining

that the given precision value does not apply when less than four beakers are used.

Virginia objected to this change because of the effect on the precision value with fewer test results. Also, in Virginia, contractor's test results are utilized. If this modification is adopted, contractors may not test the full number of samples to ensure the accuracy of the precision statement. Mr. Bailey noted that if this change were adopted in T 59, Virginia's requirements would need clarification regarding the number of beakers needed for asphalt residue determination. Mr. Williams reported that testing four beakers has not been an issue in Mississippi, but reducing the number of beakers by half would be beneficial, provided the quality of the test was not adversely affected. Chairman Horner also indicated that North Dakota tests four beakers without complaint. Mr. Hazlett proposed the idea of including a statement in AASHTO T 59 indicating that referee testing would require four samples. Another suggestion involved requiring four beakers but adding a note that less than four could be used. In that case, the current precision statement would not apply.

After considering the discussion, Chairman Horner decided that the negative vote from Virginia was persuasive. He formed Task Force 2a-2015-02, comprised of Mr. Williams, Mr. Bailey, and himself, to develop proposed changes to AASHTO T 59 that would address Virginia's concern. Eileen Sheehy from New Jersey presented a motion to accept the work of the task force and propose the revised wording on a concurrent SOM ballot this fall. Lyndi Blackburn from Alabama seconded the motion, and it passed without opposition. **{CONCURRENT SOM BALLOT ITEM # 1}**

vi. R 66, Sampling Asphalt Materials—Yes-17, No-0, No vote-3

1. Comment (Oregon) *A section should be added to include a method of sampling between the storage tank and the mixing plant.*

Chairman Horner discussed the Oregon comment about an additional method of sampling. Mr. Mullis reported that his state samples asphalt binder between the storage tank and mixing plant, so he is requesting language to that effect be added to AASHTO R 66. The wording will be very similar to that in Section 10; an allowance to sample at the point in question will simply be included. Chairman Horner agreed to the change. Mr. Mullis provided a motion to modify R 66 accordingly and present the revised practice on a concurrent SOM ballot later this year. Mr. Williams seconded the motion. TS 2a passed it unanimously.

{CONCURRENT SOM BALLOT ITEM # 2}

vii. MP XX, Materials for Emulsified Asphalt Chip Seals—Yes-17, No-0, No vote-3

1. Comment: (Georgia) *Based on our state's experience, we have seen bleeding/flushing of emulsified asphalt under wheel path on chip seal products with ADT >4000. Why do we want a class III chip seal (ADT >5000) in Table 2?*
2. Comment: (Texas) *We use our own spec, so we're going to vote affirmative, but we have several comments: 1. Since the design procedure says the material have to meet this spec, why not make them one document? 2. This specifies specific requirements for aggregates that may not be applicable to all states. A reference to allow specific state aggregate gradations and characteristics might be a solution.*

Chairman Horner discussed Georgia's comments about ADT and the Texas remarks. Mr. Hazlett explained that the Texas comment was intended to caution that too much aggregate would just cause extra sweeping. Mr. Williams offered a motion to present AASHTO MP XX as a provisional specification on the upcoming SOM ballot. Mr. Peoples seconded this motion, and the technical section approved it without opposition. **{SOM BALLOT ITEM # 5}**

viii. PP XX, Standard Practice for Emulsified Asphalt Chip Seal Design—Yes-17, No-0, No vote-3

1. Comment: (Georgia) *Table 1 note a. "Greater than 5000 ADT has not been evaluated sufficiently to develop a recommended traffic correction factor" Are we sure there is no bleeding problem for chip seals with ADT >5000?*
2. Comment: (Texas) *The method tends to fit as many chips as possible onto the board, and even add extra to prevent pickup, both of which we generally try to teach people not to do. This would be more broadly acceptable if the board test called for a chip coverage typical of the entity's chip seals.*

Chairman Horner briefly considered the Georgia and Texas comments. Again, the Texas remark simply indicated that too much aggregate would result in extra sweeping. Mr. Hazlett presented a motion to forward AASHTO PP XX as a provisional practice on this fall's SOM ballot. Mr. Mullis seconded it, and the motion passed unanimously. **{SOM BALLOT ITEM # 6}**

ix. MP XX, Materials for Micro Surfacing—Yes-17, No-0, No vote-3

Updated to include suggested changes and balloted in June.

Ms. Sheehy provided a motion to forward AASHTO MP XX as a provisional specification on the SOM ballot later this year. Mr. Hazlett seconded this motion, and it passed without dissent. **{SOM BALLOT ITEM # 7}**

x. PP XX, Standard Practice for Micro Surfacing Design—Yes-17, No-0, No vote-3

Updated to include suggested changes and balloted in June.

Again, Ms. Sheehy provided a motion to forward AASHTO PP XX as a provisional practice on the SOM ballot later this year. Mr. Mullis seconded it. TS 2a passed the motion without opposition. **{SOM BALLOT ITEM # 8}**

xi. T 300, Force Ductility test on Asphalt Materials—Yes-17, No-0, No vote-3

1. Reconfirmation ballot. No changes.

xii. PP 71, Certifying Suppliers of Emulsified Asphalt—Yes-17, No-0, No vote-3

1. Comment: (New Jersey) *I recommend this be moved to a full standard.*
2. Comment: (Mississippi) *Are any further changes to this Provisional Standard Anticipated? Should the TS consider balloting this as a full standard?*

Chairman Horner reported that both Mississippi and New Jersey recommend that AASHTO PP 71 be promoted to a full standard. Mr. Bailey offered a motion to that effect, and Mr. Peoples seconded it. The motion passed unanimously. **{SOM BALLOT ITEM # 9}**

xiii. PP 72, Recovering Residue from Emulsified Asphalt Using Low-Temperature Evaporative Techniques—Yes-17, No-0, No vote-3

1. Comment: (Mississippi) *Are any further changes to this Provisional Standard Anticipated? Should the TS consider balloting this as a full standard?*

Chairman Horner reported that Mississippi recommends promoting AASHTO PP 72 to a full standard. Mr. Seiter proposed a motion to present PP 72 as a full standard on the fall SOM ballot. Mr. Williams provided a second, and the motion passed without opposition. **[SOM BALLOT ITEM # 10]**

xiv. **TP XX, Determining the Viscosity of Emulsified Asphalt by a Digital Paddle Viscometer—Yes-17, No-0, No vote-3**

1. Comment (Georgia) 9.1 *"Calibrate the digital viscometer of not greater than three years or as required by measuring the viscosity..." for which three years frequency is too long. It should be done more frequently to be calibrated every six months or every year.*
2. Comment (Mississippi) **Section 4.2 - Last Sentence.** *The following wording is recommended - "The system shall control the preset temperature to ± 0.1 C (0.5 F) of the preset temperature."*
Section 4.3 - Last Sentence. *The following wording is recommended - "...read from the electronic display or printer."*
Section 5.2 - Second Sentence. *The following wording is recommended - "For many applications, the sprayability and workability of the emulsified asphalt are directly related to the viscosity."*
Section 5.2 - Last Sentence. *The following wording is recommended - "The material must have a viscosity low enough to be sprayed yet high enough to not flow from the crown or grade of the road."*
Figure 3 - *The dimensions and tolerances shown in Figure 3 do not contain units.*
Section 6.3 - *The thermometer requirements do not give a required accuracy even though the temperature control system requires that the emulsion maintain a specified temperature throughout the test.*
3. Comment (Texas) *The heater block is not a part of the apparatus that has been mentioned before article 7.7. Pulling the heater block forward and raising the heater block are very specific to the commonly available instrument, but other apparatus could be used. I suggest: 7.7 simply call for placing the cup in the temperature control apparatus, and 7.8 to submerge the paddle in the sample to the required depth, without the extra detail.*

Chairman Horner asked Delmar Salomon from Pavement Preservation Systems to discuss this provisional test method. Mr. Salomon reported that several comments were submitted for this standard, and he incorporated those suggestions as appropriate. Also, Mr. Salomon updated a figure in the method and added English units as needed. After completing these modifications, he returned the revised standard to the TS 2a chair.

Chairman Horner inquired of the group concerning the future of this proposed standard. Should AASHTO TP XX be forwarded on the upcoming SOM ballot as a provisional test method? Mr. Bailey asked if the calibration interval in Section 9.1 was revised. Mr. Salomon responded that this section was updated to indicate a one-year calibration. Mr. Bailey questioned whether or not the calibration could be performed in-house by a state agency, and Mr. Salomon reported that this operation can be completed in-house. Chairman Horner inquired about the Texas comment concerning the heater block. Mr.

Salomon responded that he used the verbiage suggested by Texas to revise Section 7.

Following this discussion, Mr. Hazlett provided a motion to advance this proposed standard to a concurrent SOM ballot as a new provisional test method. Mr. Williams seconded this motion, and TS 2a passed it unanimously. **{CONCURRENT SOM BALLOT ITEM # 3}**

C. Task Force Reports

- i. Emulsion Specifications M140, M208 and M316: MS (Williams), ND (Horner), Kentucky (Myers) and Federal Lands (Voth) held a conference call to discuss comments made during the March webinar as received in the 2014 SOM ballot. Requirements for completing testing on emulsion properties are 14 days from sample date; testing on the residue is 30 days from sample date.
The original charge and subsequent activities of Task Force 2a-2015-01 were discussed in Section IV. B. i. 1. above. This group provided recommendations for the timeframe for testing emulsions (i.e., 14 days versus 30 days) as covered in AASHTO M 140, M 208, and M 316. These proposed changes will be offered to the entire SOM on this fall's ballot. Since the group has completed its assignment, Chairman Horner decided to disband Task Force 2a-2015-01.

V. New Business

- A. Research Proposals – None.
- B. AASHTO Issues – None.
- C. NCHRP Issues – None.
- D. Correspondence, calls, meetings/ Presentation by Industry
 - i. Select a date for Mid-Year Web Meeting – Tentatively scheduled for February 16, 2016.
- E. Proposed New Standards and Updates – Colin Franco, Rhode Island
 - i. Standard Specification for Materials for Slurry Seal
 - ii. Standard Practice for Slurry Seal Design
 - iii. Standard Specification for Emulsified Asphalt Fog Seal
 - iv. Standard Practice for Fog Seal Design
 - v. Standard Specification for Cold Recycled Mixture with Emulsified Asphalt
 - vi. Standard Practice for Determination of Optimum Emulsified Asphalt Content of Cold Recycled Mixtures

Mr. Voth discussed these proposed new standards. He recommended a TS 2a ballot to thoroughly review these practices and specifications. Chairman Horner asked if any state would use a practice for fog seal. Mr. Williams replied that the maintenance staff in Mississippi commonly uses fog seals, so this practice may be valuable. He also noted that several of these standards move the use of asphalt emulsions from “art to science.” Mr. Hazlett added that a practice might be helpful in the face of declining experience in this field. Mr. Bailey also expressed support. Mike San Angelo from Alaska commented that interest in these materials is growing in the design community, so these standards could be beneficial to a new audience. Chairman Horner requested that Mr. Voth forward these proposed standards to TS 2a in standard AASHTO format. Mr. Voth recommended that these standards be balloted prior to the mid-year meeting. Chairman Horner responded affirmatively, provided that the updated versions were received in time. A more likely schedule would be balloting these standards in June of next year. He remarked that the number of standards assigned to TS 2a is quickly increasing.

- F. Proposed New Task Forces – Chairman Horner stated that AASHTO R 5, *Selection and Use of Emulsified Asphalts*, should be revised to become a solely owned standard. He asked for volunteers on a task force to complete this assignment. Messrs. Voth and Peoples agreed to participate, and Chairman Horner did as well. Mr. Williams suggested that the AASHTO liaison staff be solicited to assist. Perhaps Georgene Geary, an AASHTO consultant, could contribute to this effort. Given the interest expressed in this assignment, Chairman Horner established Task Force 2a-2015-02 for this purpose.
- G. Standards Requiring Reconfirmation in 2016
- i. M 81, Cut-Back Asphalt (Rapid Cure Type)
 - ii. M 82, Cut-Back Asphalt (Medium Curing Type)
 - iii. T 79, Flash Point with Tag Open-Cup Apparatus
- H. SOM Ballot Items (including any ASTM changes)
- i. M 140, Emulsified Asphalt **{SOM BALLOT ITEM # 1 – See Section IV. B. i. of these minutes}**
 - ii. M 208, Cationic Emulsified Asphalt **{SOM BALLOT ITEM # 2 – See Section IV. B. ii. of these minutes}**
 - iii. M 316, Polymer-Modified Emulsified Asphalt **{SOM BALLOT ITEM # 3 – See Section IV. B. iii. of these minutes}**
 - iv. MP XX, Materials for Emulsified Asphalt Chip Seals **{SOM BALLOT ITEM # 5 – See Section IV. B. viii. of these minutes}**
 - v. MP XX, Materials for Micro Surfacing **{SOM BALLOT ITEM # 7 – See Section IV. B. x. of these minutes}**
 - vi. PP 71, Certifying Suppliers of Emulsified Asphalt (move to full standard) **{SOM BALLOT ITEM # 9 – See Section IV. B. xiii. of these minutes}**
 - vii. PP 72, Recovering Residue from Emulsified Asphalt Using Low-Temperature Evaporative Techniques (move to full standard) **{SOM BALLOT ITEM # 10 – See Section IV. B. xiv. of these minutes}**
 - viii. PP XX, Standard Practice for Emulsified Asphalt Chip Seal Design **{SOM BALLOT ITEM # 6 – See Section IV. B. ix. of these minutes}**
 - ix. PP XX, Standard Practice for Micro Surfacing Design **{SOM BALLOT ITEM # 8 – See Section IV. B. xi. of these minutes}**
 - x. R 66, Sampling Asphalt Materials **{CONCURRENT SOM BALLOT ITEM # 2 – See Section IV. B. vii. of these minutes}**
 - xi. T 59, Emulsified Asphalt **{CONCURRENT SOM BALLOT ITEM # 1 – See Section IV. B. vi. of these minutes}**
 - xii. TP 91, Determining Asphalt Binder Bond Strength by Means of the Binder Bond Strength (BBS) Test **{SOM BALLOT ITEM # 4 – See Section IV. B. iv. of these minutes}**
 - xiii. TP XX, Determining the Viscosity of Emulsified Asphalt by a Digital Paddle Viscometer **{CONCURRENT SOM BALLOT ITEM # 3 – See Section IV. B. xv. of these minutes}**

VI. Open Discussion

Chairman Horner asked TS 2a if any other topics needed consideration. Mr. Hazlett reminded the technical section of a specification for surface performance-graded emulsions for chip seals that was submitted to the Emulsion Task Force a few years ago. He stated that the Texas Transportation Institute developed the specification, and the Texas DOT is currently applying the requirement to a few projects. Future plans include greater usage of the specification and eventual statewide implementation. Mr. Hazlett expressed willingness to submit the specification for TS 2a consideration again. Chairman Horner was receptive to this idea. The Texas document could be presented as a new provisional standard.

Next, Chairman Horner explained that the AASHTO staff has identified several “carryover queries” involving various TS 2a standards. He will review the questions and develop responses as appropriate. Also, a number of standards need the identification of “keywords.” Chairman Horner remarked that numerous TS 2a standards were moving from provisional status to full standards. Additionally, several new provisional standards were being introduced. State agency representatives are needed to serve as stewards for these new standards. Chairman Horner will request volunteers or make assignments as needed.

VII. Adjourn – Chairman Horner adjourned the TS 2a meeting at 8:59 a.m.

First	Last	Company	Email	Phone	TS
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