

SUBCOMMITTEE ON MATERIALS

Mid-Year Web Meeting
Tuesday, February 24, 2015
2:00 pm – 4:00 pm EST

TECHNICAL SECTION 2b ASPHALT

I. Call to Order and Opening Remarks

Meeting was called to order at 2:03 EST. See the Agenda in Appendix A.

II. Roll Call

Voting Members					
Blackburn, Lyndi D	Alabama	X	Strizich, Matt (Oak)	Montana	X
Burch, Paul	Arizona	X	Tedford, Darin (proxy)	Nevada	X
Schiebel, Bill R	Colorado	X	Sheehy, Eileen	New Jersey	X
Connery, James (proxy)	Connecticut	X	Burnett, Robert A.	New York	
Khan, Wasi U	District of Columbia		Peoples, Chris (proxy)	North Carolina	X
Bukowski, John R	FHWA	X	Mullis, Cole F.	Oregon	
Nash, Tanya M	Florida	X	Ramirez, Timothy	Pennsylvania	X
Wu, Peter	Georgia		Byrne, Michael (proxy)	Rhode Island	X
Shishido, Eric	Hawaii		Egan, Brian (proxy)	Tennessee	X
Mueller, Matt (proxy)	Illinois	X	Hazlett, Darren	Texas	X
Kreider, Richard	Kansas	X	Andrus, Scott	Utah	X
Myers, Allen	Kentucky		Ahearn, William	Vermont	X
Abadie, Chris	Louisiana	X	Bailey, William R.	Virginia (proxy)	X
Bradbury, Richard L	Maine	X	Farley, Paul (proxy)	West Virginia	X
Hood, WoodyL. (proxy)	Maryland	X	Krebs, Steven W. (proxy)	Wisconsin	X
Grieco, John E.	Massachusetts	X			

See complete list of attendance in Appendix B.

III. Approval of Technical Section Minutes

Discussion and approval of minutes from July 31, 2014 meeting in Minneapolis, Minnesota.
No Discussion. Motion to approve (LA) Second (Montana). Approved.

IV. Old Business

A. SOM Ballot Items
Items 26 – 30 – See Attachment #1 for all comments.

Item 26 - SOM ballot item to ADOPT a new provisional test method for DETERMINATION OF ASPHALT BINDER RESISTANCE TO DUCTILE FAILURE USING DOUBLE EDGE NOTCHED TENSION (DENT) TEST as presented on pages 25-34 of the 2014 Minutes. The motion and discussion can be found on pages 4-6

of the 2014 Minutes. 43 Affirmative, 3 negative, 7 No Vote. Editorial comments have been addressed prior to meeting. The 3 negative votes need to be considered by TS.

Alabama Department of Transportation (Bernard (Buddy) Cox) (coxb@dot.state.al.us)	No, from notes in Tech Section minutes ALDOT does not believe the test will provide quality, beneficial intermediate temperature results to justify the additional equipment and molds needed.	Negative Withdrawn.
Arizona Department of Transportation (Paul Burch) (pburch@azdot.gov)	1) As industry looks at ways to eliminate the ductility bath, it does not make sense to introduce other empirically based tests using this equipment on a national level. 2) At 70 °C, a large component of energy is dissipated through plastic deformation in the direction of loading and it seems that this would affect the results. This is demonstrated in the left figure of the second slide presented on Page 53 in the minutes. There is significant deformation in the loading direction to the point that there is not a failure surface but rather a failure point. 3) It seems that the test itself and subsequent data analysis would be more applicable if the test were performed at a colder temperature such as 10 °C or 5 °C. Comment was made that the test temperature listed by Arizona was incorrect. Fundamentally to AZ, test does not make sense and this test basis was in metals. For this material you are only really stretching the sample. Do we want to maintain standards that only one or two want to use? Arizona wanted to clarify that they meant 70 F.	Negative AZ withdraws their negative after discussion.
Florida Department of Transportation (Timothy J. Ruelke) (timothy.ruelke@dot.state.fl.us)	Many states are going away from the Elastic Recovery test with the adoption of the MSCR, so this may be a different use for the equipment (with modification). Overall, this test is intensive and geared more as a research test. We are not sure that this would be practical from a production and acceptance stand point. With the ETG and others' comments about this test, we don't feel like Florida would adopt this test. We will not object to it becoming a provisional test method , but will look closely at the outcome of the NCHRP 9-59 research before supporting it becoming a full standard. Same as how Alabama stated in their negative. FL no longer has a ductility bath. Does not really believe that this test would provide benefit.	Negative FL withdraws their negative after discussion.

Bill Ahearn from Vermont: Disagrees that it's a method for one or two states. Does understand that we need to move away from empirical tests but this test has reported to be successful at predicting early age cracking. Believes this tests warrants adoption as provisional.

NJ commented that with Ontario already using this test method and with other northern and western states looking at this test that it warrants provisional status.

Kansas moves for non-persuasive based on the fact that there are northern tier states and is currently used by Ontario on their contracts now. Vermont Seconds. No vote taken as AL, FL, and AZ withdrew their negatives.

Item 27 - SOM ballot item to REVISE R 29, Grading or Verifying the Performance Grade of an Asphalt Binder. Proposed revisions are presented on pages 35-40 of the 2014 Minutes and the motion and discussion can be found on pages 8-9 of the 2014 Minutes. 46 Affirmative, 0 negative, 7 No Vote. One comment from Montana was a general comment and does not need to be addressed.

Item 28 - SOM ballot item to REVISE T 49, Penetration of Bituminous Materials to update the precision and bias statement. Proposed revisions are presented on pages 41-43 of the 2014 Minutes and the motion and discussion can be found on pages 9 of the 2014 Minutes. 46 Affirmative, 0 negative, 7 No Vote. Editorial comments were addressed prior to meeting.

Item 29 - SOM ballot item to REVISE T 201, Kinematic Viscosity of Asphalts (Bitumens) to update the precision and bias statement. Proposed revisions are presented on pages 44-46 of the 2014 Minutes and the motion and discussion can be found on pages 9 of the 2014 Minutes. 46 Affirmative, 0 negative, 7 No Vote. Editorial comment was addressed prior to meeting.

Item 30 - SOM ballot item to REVISE T 202, Viscosity of Asphalts by Vacuum Capillary Viscometer to update the precision and bias statement. Proposed revisions are presented on pages 47-49 of the 2014 Minutes and the motion and discussion can be found on pages 9 of the 2014 Minutes. 46 Affirmative, 0 negative, 7 No Vote. Editorial comment was addressed prior to meeting.

B. TS letter ballots

Reconfirmation Ballot - This is the Technical Section 2b Reconfirmation Ballot for the following 2 full standards and 2 provisional standards:

- Full standard T 48-06 (2010), T 111-11
- Provisional standard TP 101-12, TP 102-12

T 111 and TP 101 were approved with 29 Affirmative, 0 Negative, 3 No Vote and no comments.

T 48 was approved with 29 Affirmative, 0 Negative, 3 No Vote with two comments for consideration:

AASHTO Material Reference Laboratory (Robert Lutz) (rlutz@amrl.net) This is an awkward standard and difficult to use because it has so many exceptions. Also, ASTM D92 has had several revisions since the version that is referenced. Why not just delete this standard?

AASHTO Material Reference Laboratory (Steven E. Lenker) (slenker@amrl.net) I don't think that the Subcommittee on Materials should spend the time and effort to maintain a test method that is virtually identical to the ASTM version of the test method. Is there a good reason why AASHTO should maintain T048 when it is almost identical to ASTM D092?

Given that the user can't perform the method unless the ASTM version is available, what is the point of maintaining the AASHTO version in this case?

NOTE: Maria Knake is working on a rewrite of T 48

Some developments – ASTM is also working on rewriting. ASTM D92 is not asphalt specific. Maria is working with ASTM to try and rewrite this standard together. Maria said she would have more to report. The Chair is turning this into a task group to stay on the August agenda.

TP 102 was approved with 28 Affirmative, 1 Negative, 3 No Vote with one negative for consideration.

Illinois Department of
Transportation (Matthew W
Mueller)
(matthew.mueller@illinois.gov)

Negative Vote for AASHTO TP-102

Negative

This provisional standard does not reflect the changes that were agreed to in the NTPEP Asphalt Release Agent committee quarterly meetings. In these meetings, the group agreed to adopt the percent change in mass as an objective measure of stripping. Illinois believes the current procedure listed in the TP-102 standard is too subjective and not defensible.

The Chair has had an e-mail exchange with Richard Williammee (Texas) and James Trepanier (Illinois) who are the Chair and Vice-Chair of the NTPEP Committee asking for their input. This standard was adopted at the request of NTPEP. If it is contradicting current practice, we may want to modify. Jim Trepanier (IL) spoke with Richard (TXDOT) this morning. They agreed that the standard needed to be used but needs to be updated. Richard stated that TX would take on stewardship to make sure the standard is brought up to date with NTPEP's work plan. Draft update should be ready by August meeting. Illinois, Jim Trepanier, Wisconsin, Barry Paye and Vermont, Bill Ahearn also joined this task force.

C. Task Force Reports

GTR Specification Task Force – Goal of the task force is to develop stand alone specification(s) for GTR in PG Binder. The membership of the task force Lyndi Blackburn (AL) (Chair), Matt Corrigan (FHWA), Felicia Reid (Paragon), John D'Angelo (consultant), George Way (RAF), Jack Youtcheff (FHWA), Chris Abadie (Louisiana), and Tim Ramirez (Pennsylvania).

There are still too many open questions on GTR testing and specification. Sunset this task force for now and look at reforming at a later date after ETG recommendations.

Single Edge Notched Bending Test - Task force goal was to determine if this standard should be considered for adoption as provisional test method. The membership of the task force is Travis Wallbeck (West Virginia) (Chair), Bill Hurguy (Arizona), and Becca Lane (Ontario) Travis has started looking into this issue and plans to have something to present in August.

Binder Yield Energy and Elastic Recovery Test – Task force goal was to determine if this standard should be considered for adoption as provisional test method. The membership of the task force is Oak Metcalfe (Montana) (Chair), Bill Scheibel (Colorado), Barry Payee (Wisconsin), Mike Santi (Idaho), and Scott Andrus (Utah).

Basic survey 24 states responding – 16 voted (A) interested in the test method. 8 states voted (B) not interested but they did not oppose method becoming provisional. Two states reported waiting to see the results of the NCHRP study that might lend interest in this test method. Two reported absolutely no interest. The task force did not go into any need for additional research since the research had been previously presented. Based on the information collected, the task forces recommends that this method be carried forward to a TS ballot for provisional status.

John Bukowski stated that he has heard that this test is duplicate of MSCR for elastic recovery. He suggested that Mike Anderson be contacted. Oak replied that other methods were probably needed which this method would be another test for the low temperature end. Oak indicated that he would contact Mike Anderson. Results of the TS ballot will be discussed at the August meeting.

V. New Business

- A. Research Proposals – Chris Abadie is the TS 2b Research Liaison.
Chris noted that a REOB Task Force has been established. Bill Ahearn is the Chair for looking into this issue. If anyone has any research needs, please submit to Chris by July for consideration at the August meeting.
- B. AMRL/CCRL Issues – Discuss any new comments.
None at this time.
- C. NCHRP Issues
Representative was not available.
- D. Correspondence, calls, meetings/ Presentation by Industry

- REOB Task Force – Based on a request from SCOH, a SOM task force chaired by Bill Ahearn has been formed to look at the current state of REOB use and knowledge and the need for further research.

Task Force has listened to presentations from Simon Hesp and John D'Angelo. Terry Arnold will make a presentation to the task force soon. Objective is 1/3 of the way met. Have not addressed the specification issues yet.

- Pamela Marks (Ontario) – presentation, "Ontario's Quest for Improved Asphalt Cement Specifications"

See the presentation in Appendix C.

The Chairman solicited any interest by the TS for development and participation in a Task Force for the Extended BBR test method. Vermont is very interested in Ontario's work. Carolina Heinen with TXDOT is also interested in participating. Pamela agree to be the Chairman of the Task Force.

- PAV Temperature – Binder ETG considering modifications to the requirements for temperature for PAV conditioning. Matt Corrigan to give a brief presentation.

See the presentation in Appendix D. Matt stated that a redline mark-up of M 320 was provided and deferred at August meeting to this webinar meeting. Comments from the ETG were split – half agreed with changes those being predominately state DOTs other half that were against were binder suppliers. The suppliers were not in favor due to the thoughts of the additional testing for more grades that would be required. Rick Kreider commented that it appears this change would add another level of complexity for qualification of binders. Matt explained that the standard temperatures of 90 -100 °F for PG46 – PG70. There would be no change. The agency can elect to test at the temperatures shown in the parenthesis. The change occurs for the PG76 and PG82 where the temperatures are reversed.

Bill Ahearn questioned if states have two environmental conditions will they have to test at the two different temperatures? Would it be imprudent not to test at the higher temperature? Matt explained the impacts and benefits for ensuring that you can test for the more stringent environmental condition.

Mike San Angelo commented to keep in mind that the manufacturers are the ones that have the ability and time to perform this testing. We might be getting into a dual certification. It becomes a problem when an asphalt meets one environmental condition fine but is on the edge for the second environmental condition. The manufactures are doing this formulation and are making tanks that fit for two certifications. So we need to be able to get and have this information and this change will allow for this ability.

Chris Abadie asked how this relates to Canada changing the PAV aging time. Simon Hesp has looked at the film thickness, double the PAV time and PAV aging temperature - in any case the good binders will test okay – poor binders will lose 10 to 15 degrees on the low temperature grade.

Darren Hazlett TXDOT don't lose sight of the issue which is what grade are we asking for – your climate doesn't change but if we are incorporating high recycles then we can look at this and see what we need to use.

Barry Paye Wisconsin – this is very helpful and would like to see this move forward.

Chris Abadie guidance for states to specify not a specification to use.

Bill Ahearn commented that one issue that we have is that when we look at LTPPBind, we cross three temperatures and sometimes we will bump based on traffic loading. It will be the state's option to specify a temperature for specific projects. He can understand why the binder suppliers would have concerns.

Chair will plan to have a TS ballot for the change as presented by Matt.

Rick Kreider would like to have a webinar for Matt to have the opportunity to go over this again.

TS will plan to have a webinar to go over this topic again perhaps after the next ETG meeting.

- Binder ETG Update – Matt Corrigan has been requested to give an update on ETG activities.

Due to time – Matt covered the highlights. See the presentation in Appendix E.

- New provisional standards –MP 23-14 and PP 78-14
- Ongoing NCHRP project 9-58 and 9-59
- Reported on the two memorandums from FHWA on the use of high recycled binder contents specifically in regards to RAS.
- Reported the total mix production percentage for RAP usage in HMA/WMA
- Reported the total RAS tone used for mix production. There was a decrease for 2013.
- Highlighted the topics for the next ETG meeting: MSCR, GTR, REOB, and support of SOM.
- MSCR Jnr-32. And Recovery 3.2 to assess elastic response as a separate standard.
- GTR – complex and how to move and can GTR be moved into a PG grading system and all of the issues/limitations for moving this forward. Solubility limitations and handling and reheating this binders are issues to be addressed. Higher percentages for GTR are being incorporated and it's a very viscous material and it will take thought on how to add to the PG grading system. We probably need to look at this as an engineered product.
- Published a Tech Brief on GTR
- REOB with National dialog, terminology, and task forces put into place.

E. Proposed New Standards

TS ballot for Binder Yield Energy and Elastic Recovery Test

F. Proposed New Task Forces

- TP 102 – Update needed to match the NTPEP work plan for asphalt release agents. TXDOT Richard Williammee (Task Force Chairman), Jim Trapanier –Illinois, Barry Paye – Wisconsin, and Bill Ahern – Vermont.
- T 48 – Maria Knake (AMRL) pursuing working with ASTM for a rewrite of T 48 to make it specifically for asphalt binder and include automated testing.
- EBBR Provisional Standard Development
Pamela Marks – Ontario (Task Force Chairman), Carolina Heinen – TXDOT and Bill Ahern - Vermont

G. Standards Requiring Reconfirmation – M 320-10 was missed on the Reconfirmation ballot. A ballot was sent out last week. **Please vote ASAP.**

H. SOM Ballot Items (including any ASTM changes)

VI. Open Discussion

- A. Rick Kreider would like to see the Extended BBR presented again as well. The Chair will look to have a webinar scheduled for the end of April.
- B. Darren Hazlett commented that RTFO test if you have a highly modified material or GTR or gel agent it was difficult to run the RTFO. There was a research project that recommended the German rotating flask. This test method did not answer problem with these types of materials. Darren would suggest a RNS. Chris Abadie volunteered to help develop a statement for “Investigation of Aging Techniques” that we can consider at our August meeting.
- C. Wayne Brinkmeyer, Nevada DOT – reduced aging due to altitudes differentials is needed as well. Chris Abadie suggested that this issue be considered in the proposed research need statement.

VII. Adjourn

Chris Abadie motion to adjourn.