

MINUTES
AASHTO Subcommittee on Materials - 2013
Technical Section 5b; Environmental Quality Measures
Valentine's Day, 2013; 1:00 PM Eastern
Via Webinar

I. Welcome and self-introductions

II. Approval of Minutes from April, 2012

- a. First Motion – *Bob Burnett – NY DOT***
- b. Second Motion – *Alan Rawson – NHDOT***
- c. Carried**

Attendees for today's meeting are:

Jack Cowsert – NC DOT (Chair)	jcowsert@ncdot.gov
Aaron Gillispie – WV DOT (Vice Chair)	Aaron.c.gillispie@wv.gov
Oak Metcalf – MT DOT	rmetcalfe@mt.gov
Henry Lacinak – AASHTO	hlacinak@ashto.org
Greta Smith – AASHTO	gsmith@ashto.org
Katheryn Malusky – AASHTO	KMalusky@ashto.org
Jack Springer – FHWA-LTPP	Jack.springer@dot.gov
Maria Knake – AMRL	mknake@amrl.net
Chris Abadie – LA DOT	Chris.Abadie@la.gov
Georgene Geary – GA DOT	ggeary@dot.ga.gov
Vickie Prill – IL DOT	Vickie.prill@illinois.gov
Bob Lutz – AMRL	rlutz@amrl.net
Steve Mueller – FHWA	Steve.Mueller@dot.gov
Lyndi Blackburn – AL DOT	blackburnl@dot.state.al.us
Bill Bailey – VA DOT	Bill.bailey@vdot.virginia.gov
Alan Rawson – NH DOT	arawson@dot.state.nh.us
Bob Burnett – NY DOT	bburnett@dot.state.ny.us
Eileen Shehy – NJ DOT	Eileen.sheehy@dot.state.nj.us
Ed Harrigan - NCHRP	eharriga@nas.edu
Steve Lenker - AMRL	slenker@amrl.net

III. Actions on standards

Number	Name	Action required	Steward
R8-96(2009)	Evaluation of Transportation-Related Earthborne Vibrations	None	Robert Burnett (NY)
R16-04(2009)	Regulatory Information for Chemicals Used in AASHTO Tests	None	Robert Burnett (NY)
R21-96(2009)	Drilling for Subsurface Investigations - Unexpectedly Encountering Suspected Hazardous Materials	None	Robert Burnett (NY)
R22-97(2010)	Decommissioning Geotechnical Exploratory Boreholes	None	Robert Burnett (NY)
R23-99(2008)	Chemical, Biological, and Physical Analysis of Water	TS Reconfirmed in February	Jack Cowsert (NC)
R24-99(2008)	Collection and Preservation of Water Samples	TS Reconfirmed in February	Alan Rawson (NH)
R34-03 (2008)	Evaluating Deicing Chemicals	TS Reconfirmed in February	Alan Rawson (NH)
PP56	Evaluating the Engineering and Environmental Suitability of Recycled Materials	Subcommittee Ballot	Georgene Geary (GA)

Chair Jack Cowsert - NCDOT will send out Ballots on R8-96, R16-04, and R21-96.

R22, R23, and R24 – We have 5/7 votes to reconfirm these standards. These will be published in the next 2013 standards.

PP56 – **Chair Jack Cowsert - NCDOT** has not been able to get this into the full subcommittee ballot to take it from a provisional to a full standard. He will attempt this again.

IV. Old Business

a. Mercury alternates - AMRL update

Maria Knake - AMRL –

There is a new ASTM Standard E2877 Standard Guide for Digital Contact Thermometers.

- Maria is reviewing it now.
- This standard has accuracy classes with different tolerances.

- It looks like a great tool for AASHTO to use to develop alternatives.
- It does not include or consider time and response information.
- Maria attempted to write and submit a NCHRP problem statement since the 2012 SOM Meeting. It appears to have not been successful, perhaps due to format, etc.
- Maria has started again to develop a NCHRP problem statement
- TS 2b Asphalts is one of the most affected TS's; also TS 2b Emulsions
- Ed Harrigan from NCHRP will work with Maria to develop a new problem statement.
- Maria has spoken at ASTM, AASHTO SOM, and multiple Webinars on this subject.
- Bob Lutz - AMRL will be speaking at the Rocky Mt. Asphalt User's Group Meeting.
- Steve Mueller - FHWA asked to be kept in the loop and intends to network with Subcommittee on Maintenance and Subcommittee on Construction.

b. Fly Ash; Coal ash provisions dropped from transportation bill

Chair Jack Cowser – NCDOT - Provision was attempted to be included in the MAP21 Bill but it was left out at the last minute. It would have kept the EPA from designating coal fly ash as a hazardous waste.

Georgene Geary - GADOT – Georgia has a fill that they are currently monitoring. Just last week, the EPA sat in on a conference call regarding this fill and said that they (The EPA) were recently sued for not providing regulation on coal fly ash. The EPA indicated they will not do anything for at least one year.

Steve Mueller-FHWA - discussed that many states are using fly-ash as an Alkali Silica Reaction (ASR) mitigation measure. Steve mentioned the series of three webinars on the ASR topic on Wednesdays during February 2013. Attached are documents containing information on those webinars. These webinars are being recorded, and Steve thinks a link will be provided in the ASR Reference Center at a later date. The webinars provided great information about how much fly-ash is needed mitigate ASR, and how to specify a variety of SCMs to accomplish the mitigation.

Here is the link to FHWA's ASR webpage:

<http://www.fhwa.dot.gov/pavement/concrete/asr/>

There is also an ASR Technical Working Group:

<http://www.fhwa.dot.gov/pavement/concrete/asrtwg.cfm>

Here is the link to the ASR Reference Center:

http://www.fhwa.dot.gov/pavement/concrete/asr/reference.cfm?doc_category=overview%20of%20asr&doc_title=overview%20of%20asr

FHWA has also offered instructor-led workshops on ASR. The flyer is attached. Any members who might have an interest can contact Gina Ahlstrom in the FHWA Head Quarter office for more information.

There is a very nice ASR Field Identification Handbook that is downloadable from the reference center website link about that Steve encourages everyone to have, and also to share with their local agency partners. ASR is something that we all need to deal with.

Alan Rawson - NHDOT– Indicated all of NHDOT concrete mixes contain fly ash.

Vice Chair Aaron Gillispie – WVDOT – Indicated that Self Consolidated Concrete mix designs make use of fly ash and other fines.

Chris Abadie LADOT – Asked - Is there a concern that if fly ash is classified as hazardous, then used concrete and grindings which contain fly ash would also be classified as hazardous such as when introduced into a landfill? Lyndi Blackburn (AL) had the exact same concern.

This was a unanimous concern by attendees.

Steve Mueller - FHWA – Noted the EPA got 450,000 comments on this subject and are now reviewing them for decision on how to proceed.

c. Crumb Rubber use in asphalt

Chair Jack Cowser – NCDOT – Noted we had presentation on this subject during the last TS 5b webinar.

Jack asked for a poll of the attendees on their state's usage of crumb rubber:

States that indicated they have used crumb rubber in asphalt pavement	States that indicated they have current crumb rubber specifications
Alabama, Georgia, Illinois, Louisiana, Montana, New Hampshire, New Jersey, New York, Virginia, West Virginia	Alabama (spring 2013), Georgia (alternate since 2008), Illinois, Louisiana, North Carolina (Provision), New Hampshire, New Jersey, New York (only as a modifier), Virginia

Alan Rawson – NH DOT – NH is using a gap graded asphalt rubber mix (ARGG) that contains 17.5 % rubber by weight of AC, with a total AC content of 7.5%. The crumb rubber is a minus #40 mesh and is blended with the AC at the HMA plant. The mix needs to be gap graded to accommodate the high percentage of crumb rubber.

In 2011 NH DOT put down its first ARGG mix, which was a 3 mile long project with 5600 tons of ARGG (15,000 tires) and 1650 tons of conventional dense grade HMA as a control. This summer NH DOT is doing a HFL project that has 14,300 tons of ARGG (38,000 tires), where it will be compared to a high polymer content (7%) dense graded HMA wearing surface and a conventional dense graded HMA wearing surface. NH DOT has projects being bid this year with the ARGG mix that will have a total of 136,000 tons (370,000 tires).

RI DOT developed this mix more than ten years ago. They had great success with it so Mass DOT started using it with great results. NH DOT went on a tour to look at a project in Mass and liked what we saw and decided to give it a try. From what NH DOT saw in Mass and RI, we are expecting excellent performance as well. The NH DOT spec is provided below. If anyone with like to discuss this further they can contact Eric Thibodeau. His contact information is provided below.

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Bill Bailey – VA DOT – Virginia has put down GTR in their open graded friction courses in order to make quieter pavements. Virginia has also put down a section this year (about 1 mile) to compare with a polyethylene SBS binder from New Star. Looking to determine if GTR can be used instead of the SBS binders and have a performance for our PG-76 materials. Virginia has experienced trouble getting the material to stay in solution from suppliers in Florida.

Bob Burnett – NY DOT – Dry process was tried years ago and did not receive good results. However, the GTR is allowed as a modifier for the binder and is in the specifications. It is allowed, but rarely used due to expense when compared to latex. Usage of this material is not tracked.

Chris Abadie – LA DOTD – Specification PG 82-22 RM used which requires elastic recovery. Louisiana has a general contractor or two that blend the material at their plant site and it is controlled at that point since 2008. It brings a very competitive, quality material to our system. Performance of this material is being tracked on every job. Several jobs were performed over the last 15 years with excellent performance. Louisiana is a modified state using PG 76 in 70% of our pavements. The GTR is considered equal to our PG 76-22 mixtures in the lab and on the roadway. Louisiana uses a 30 mesh rubber in their mixtures.

Georgene Geary – GA DOT – NCAT just studied different sizes of crumb and recommended size 30 mesh or finer.

Eileen Sheehy – NJ DOT – New Jersey has experienced no supply or performance problems. NJ has had 16-18 year performance on open graded friction courses. The process used in NJ is blending at plant with 15-18% rubber. GTR has not yet been used in a PG binder.

Chris Abadie LA DOT – Asked: Is crumb rubber considered an environmental concern?

Georgene Geary – GA DOT – It is not a concern in Georgia. It is considered a good use of an otherwise bad product.

Chris Abadie – LA DOT – asked: Can AASHTO get the word out on state's usage of crumb rubber and promote it as a good thing? Chris also indicated AFK20 has submitted a synthesis on this.

Chair Jack Cowser – NC DOT – Indicated that it is probably more appropriate for TS 2b (Chair Eileen Sheehy - NJDOT)

Alan Rawson – NH DOT – California gives a thickness reduction credit when crumb rubber is used. Need to verify, but Alan reported that California 1” of GTR modified asphalt is equal to 1,5” of normal HMA on dense graded. Chris Abadie stated that California is comparing to a neat asphalt (without polymers) when allowing a thickness reduction credit. He also stated that California uses a larger quantity than some other states. They are very advanced in their pavement design in their capability of testing and developing numbers.

Greta Smith - AASHTO – Encouraged members to use the TS webpage to link specifications, etc. Greta recommended it be used as a central repository for specifications.

Georgene Geary – GA DOT – asked if any state was using the dry process.

Chris Abadie – LA DOT – Louisiana is using the dry process by Special Provision only. Plus ride job (3%) failed in 1994 in first year, it raveled. We have a dry process with only 2% by volume of a smaller material which passed. If you hold the GTR at 30 mesh at 1% we have had success, but very little utility at the moment. Louisiana has a 2 mile GTR dry process project in Baton Rouge still performing well after 4 years.

Georgene Geary – GA DOT – Georgia is currently doing a research comparison, comparing wet and dry methods. Several contractors do not want to do the wet process and fell in love with the dry. GTR, both wet and dry process, is allowed as an alternate to polymer modified asphalt binder since 2008. Georgia has placed about 300,000 tons.

Eileen Sheehy - NJDOT –

NJDOT uses Asphalt Rubber in Open Graded Friction Course (AR-OGFC). The Asphalt Rubber is blended at the hot mix asphalt plant at about 18% by weight of binder. Our oldest projects were completed in the early 1990's and performed very well. We have done a number of additional projects in the last 10 years that are all performing well. We have not used it as a PG Binder as yet but we are not opposed to it. Following is a link to our specification:
<http://www.state.nj.us/transportation/eng/specs/2007/spec900.shtm#s902>

Bill Bailey – NC DOT – North Carolina has a provision that allows GTR and working with a contractor, but it is not currently considered an equal to a modified PG binder. Steps are being taken to make GTR an equal.

Ross “Oak” Metcalf – MT DOT – Not specified. Used very briefly in early 1990 when mandate came out from FHWA. Not disallowed, but don’t have specification relating to GTR. Contractors are not using it now.

Vickie Prill – IL DOT – Illinois looked at GTR in 2008 as an alternate modifier when there was an SBS shortage. Illinois developed a specification that takes PG 64-22, adds 10% GTR and is shipped from the asphalt terminal. It was used experimentally. Not used for awhile, but now there is renewed interest. It would now be used experimentally. It is not considered an alternate with the PG material as of now.

Aaron Gillispie – WV DOT – Used on trail basis, but not used now.

d. PP56 ballot for full standard

PP56 – **Chair Jack Cowser - NCDOT** Motion to take this to the full subcommittee ballot was approved in a previous meeting, but the item failed to make it on the SOM Ballot. He will attempt this again. (See Attachment 1)

V. New Business

Chris Abadie – LA DOT – asked: Do the attendees (states) have to comply with storm water regulations for general contractors?

Most states indicate that they are being required to comply with EPA effluent regulations or they are subject to a reallocation of funding from the DOT to the DEP/EPA.

Greta Smith – supplied link below

http://environment.transportation.org/center/products_programs/practitioners_handbooks.aspx

VI. Adjourn

- a. Motion to adjourn
- b. Seconded
- c. So carried