

**Structural Steel and Concrete Coatings Committee**  
**Technical Committee Meeting Agenda**  
**Monday March 5, 2018**

Bennet, Todd	Missouri Department of Transportation	None
Morse, Kelly L	Illinois Department of Transportation	Voting
Gudiel, Joaquin F	Louisiana Department of Transportation and Development	Voting
Sirianni, Jonathan	AASHTO	None
Ingram, Steven	Alabama Department of Transportation	Voting
Jenkins, Andre Lemar	Alabama Department of Transportation	Non-Voting
Sommers, Scott Michael	Iowa Department of Transportation	Voting
Mitchell, Brandi Ramona	Kentucky Transportation Cabinet	Voting
Grubb, Michael A	Louisiana Department of Transportation and Development	Non-Voting
Davis, Jason	Louisiana Department of Transportation and Development	Non-Voting
Gallistel, Allen	Minnesota Department of Transportation	Voting
Collins, Edward Martin	New York State Department of Transportation	Voting
Luger, Matt	North Dakota Department of Transportation	Voting
Wutzke, Scott W	North Dakota Department of Transportation	Non-Voting
Boothe, Joel	Oregon Department of Transportation	Voting
Kuniega, David H.	Pennsylvania Department of Transportation	Voting
Fleming, C. Wa	Virginia Department of Transportation	Voting
Burst, Chris	Carboline Company	Non-Voting
Olson, Ahren	Covestro LLC	Non-Voting
Palle, Sudhir	Kentucky Transportation Center	Non-Voting
Corbett, William D	KTA-Tator, Inc.	Non-Voting
Castle, Derrick	Sherwin-Williams	Non-Voting
Grivna, Michael	TK Products	Non-Voting
Awilda Merced	Florida Department of Transportation	
Mark Hudson	Sherwin-Williams	
Robert Leggat	KTA-Tator, Inc.	
Carly McGee	KTA-Tator, Inc.	
Cindy O'Malley	KTA-Tator, Inc.	

**1) Introductions**

**2) CCS mix design from NY**

- Sent it out to some states, but had not heard much back about this particular design
- Illinois & PA had offered
- Put together CCS Task Force that is made up of the concrete experts from the DOTs
  - Would only be a short term assignment until we get the mix design nailed down and testing started
  - Kelly can lead the task force and get her concrete expert involved
    - Todd will reach out to Iowa (big concrete state) and see if we can get someone involved
    - Kelly and Dave will check with their contacts to try to figure out if they have contacts from other states that are experts with concrete
    - Awilda with Florida may be able to get in touch with their concrete expert
      - Send her the info we have in place right now
  - Derrick mentioned that concrete people may not have a background with concrete coatings
    - Thinks that northern states have data about concrete mixes that meeting their freeze-thaw requirements
      - Get this data and look at those mix designs for suitability
    - Mentioned also that accelerated testing is just a screening process
      - Publish what the mix design is, show the data that was gathered, and it would be on the states to determine whether the data is useful
  - *AI: Jonathan will send out emails to gather people and set date for meeting*
- Kelly mentioned that the NY design does not offer specifics beyond “fine agg”, “coarse agg”.
  - This would create issues with consistency since local sources would be different
  - Derrick mentioned that we may just need to pick an aggregate and accept that sources may vary in different locals
    - He believes most manufacturers would understand those differences are unavoidable
- Derrick asked about whether we would use a single mix design or would we entertain more than one mix design and split testing between them
  - KTA agrees that you would need at least two because of the divergent requirements on the properties of the concrete for various test methods
    - 1 mortar mix, 1 concrete mix
    - Kelly mentioned that the Work Plan has nonstandard requirements in the concrete
      - May need to look at changes to the work plan to use more traditional requirements

### 3) KTA Discussion Items

#### a) Reporting $\Delta E$

- $\Delta E_{00}$  or CMC... Currently calculating  $\Delta E_{AB}$ 
  - Should we use  $\Delta E_{00}$  since it is best below 5?
  - Work Plan originally wrote in  $\Delta E_{STAR}$
  - *AI: Todd will edit the Work Plan to change this, will need to be balloted*

#### b) Spherical color meter in Work Plan

- There are differences in the results between the instruments
- At the Annual Meeting in Boston, we agreed that KTA could use Spherical
- KTA mentioned that Spherical meter is recommended for use in weathering (E1331?)
  - Spherical does not take into account gloss and texture
- Ahren Olson w/ Covestro will check into what his company runs. He will email Todd with further information
- Derrick indicated that because we are using gray, he is not sure that it matters much which instrument is used
  - Todd has seen differences and why we want to check on it
- May need to look at setting different requirements based on the type of instrument
- Could end up having products that fail 10  $\Delta E$  requirement with spherical that may have passed with 0/45
- *AI: KTA should use 0/45 for Color Comparison, use Spherical for Weathering*

#### c) CCS

#### d) Other Items

- Slip Coefficient
  - Proposing that at end of test when increasing load to Postload, measuring deformation at 49 and again at 52 (clamping force currently used by the machine)
  - NEPCOAT likely doesn't get that detailed, they look at the certification from the testing
    - State engineers may scrutinize the details and have an issue with stopping at 49
  - RCSC had put a ballot out to completely remove the post load requirement
    - Was unanimously approved, but has not been published
  - Todd thinks we should proceed and do both
  - Derrick concerned with how the certificate would read if it passed at 49 but failed at 52
    - The certifications currently on NTPEP are all based on 49 kips
  - Todd indicated that we should stick with what we are doing and continue only doing at 49 kips
- Develop a validity monitor for Tensile Adhesion testing
  - Can't compare data accurately because repeatability statement requires 3 replicates, but we currently run 4 replicates

- Thought was maybe to just compare the first 3 replicates, and collect the 4<sup>th</sup> replicate, but do not include it
- Todd mentioned moving our requirement to 3 replicates
- Derrick mentioned that the 4 replicates was specced because of the inherent variability of the testing, and it gave states the ability to throw out one as an outlier

**4) Industry Concerns on SSC/CCS.**

- CCS
- Manufacturers are interested in removal of intermediate evaluations
- What we are going to do with Slip post load requirements?

**5) SSC work plan changes:**

**a) Removing interim evaluations for Salt Fog / Cyclic Testing**

- Last conference call we discussed not removing panels between initial and 5000
- DOTs and NEPCOAT only look at total amount, not interim
- NEPCOAT may require an evaluation at 4000 hours / 12 cycles
  - We will accommodate NEPCOAT requirements, but we should check with them since 4000 hrs is not post scrape data so it is much more subjective

**b) Shelf life of submitted materials**

- “The shelf life of the material sent for testing, must exceed the expected time of the longest testing to be completed”
- There may be certain products that won’t be able to meet that, those will need to be addressed separately
  - Currently no products that seem to fall into this
  - Derrick mentioned that certain components may not be able to meet a 12 month shelf life
- Material would be retained by the manufacturer

**c) Spelling out items that are not clearly defined with the Work Plan**

- Items that are not clearly spelled out in the Work Plan
  - For instance, KTA has internal SOPs that they use for testing, but the methodology is not available in the Work Plan

**d) Other Changes?**

- 23 +/- 2 oC 50 +/- 5% RH drying time requirement
- Rockwell hardness of abrasive is specified, but KTA is having issues with procuring abrasive in the range specified
  - Can we specify a grade or align/remove hardness requirement in the Work Plan?
    - Does it even matter as long as you get the proper profile?
    - This is a holdover from the very first version of the Work Plan from the late 90’s
- Note that color gloss samples do not have to be put into bags when they come out of cyclic weathering

- Sometimes the bags stick to the samples
- Derrick suggested to dry them, wrap them up, and put them in a box to avoid UV exposure
  - No issue with not putting them in a bag
- Panel requirements in Work Plan page 21
  - Work Plan talks about grade of steel to be used
    - For Slip/Creep KTA would like to use a non-alloy generic steel
    - Francisco noted that he has seen galvanizing that has failed based on the type of steel used
      - Should review more closely to make sure there is no detrimental effects on the coatings
    - Can't always get a cert at the grade with the proper ksi
    - *AI: Todd will contact manufacturers and see if there is any concerns*
- DataMine changed to include  $\Delta E_{00}$  and  $\Delta E_{CMC}$ 
  - *AI: Jonathan will remove the requirement for  $\Delta E_{CMC}$  to be entered*

**6) Laboratory concerns on SSC committee.**

**7) Task Force Updates**

- a) SSPC BCI Review
- b) Color
- c) CCS
- d) FTIR Methods

**8) Discuss DataMine**

**9) Industry Concerns?**