Concrete Curing Compounds (CCC) & Concrete Admixtures
Technical Committee Meeting Agenda
Working Session 9
Tuesday, March 14, 2017 3:35PM – 5:00PM

Please complete the electronic attendance sheet

1) 3:35PM-3:45PM: Call to Order and Introductions

2) 3:45PM-3:50PM: Review of Current Technical Committee Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Organization</th>
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3) 3:50PM-4:00PM: Brief summary of the technical committee
   • Overview of Concrete Admixtures and Curing Compounds (Industry Reps)
     The following have references in the PowerPoint
     (1) Type A being normal water reducer
     (2) Type B is the retarder
     (3) Type C is accelerator
     (4) Type D Accelerate and Retard
     (5) Type E
     (6) Type F
        (a) Used to increase or swamp the concrete or used to increase the water in the amount of concrete
        (b) Benefits in reducing the water cement ratio, the biggest one being the strength
     (7) Type G through S
    ii) The ACII 208
     (1) CURING
        (a) Strength
        (b) Permeability
        (c) Abrasion resistance
        (d) Volume stability, etc
(2) Curing methods
   (a) Prevent moisture loss by imposing physical barrier
       (i) Pictures in powerpoint
(3) Liquid membrane curing compounds
   (a) Liquids sprayed directly onto the concrete surface
       (i) Astm C309
           1. Classification
              a. Type
                 i. Clear
                 ii. Translucent
                 iii. Clear translucent with fugitive dye
              b. Class
                 i. A - Unrestricted
                 ii. B – Resin
           2. Requirements
              a. Have to be membrane forming
              b. .55kg/m^2
       (ii) Astm c1315
           1. Classification
              a. Type
                 i. 1
                 ii. 2
              b. Class
(4) Why use curing compounds
   (i) Efficient
   (ii) Cost effective
   (iii) Low-labor intensive
• How Member States use NTPEP CADD/CCC Data (Merrill Zwanka, South Carolina DOT)
  a) 2016 143 samples submitted for CADD and CCC
  b) FY 2017
     i) 585 total products submitted program wide, so CADD/CCC make up 25% of the submissions across NTPEP
     (1) Lead state reviewers/chair and co-chair operate in a volunteer capacity. Please review work plans thoroughly before submitting questions
     (2) Work Plans can be found here: http://www.ntpep.org/Pages/CADDDocuments.aspx
     (3) Administrative, logistics, payment, membership questions should be handled through liaison (mwong@aashto.org)

4) 4:00PM-4:15PM: Review for Submittals, Communication, and Protocol
• CADD is open submission
i) Two testing labs available

• CCC cycles for 2017: 01/23/17 – 03/03/17, and 06/05/17 – 09/08/17
• Communication should always include Chair, Vice-chair, or Liaison
• If issue arises, handled on case-by-case basis. Manufacturer may request to put a product “On Hold”

5) 4:15PM-4:35PM: Review of Outstanding Action Items

• Chloride Analysis for Concrete Admixtures
  i) Been using the British Standard (EN480-10); currently C494 does not address chlorides at all, and only addressed the issue of chlorides by possibly going through the NTPEP program
  ii) At the ASTM meetings this year among the 494 chemists how the language should be written. Because of the different privates that are out there, and chlorides are difficult to determine (on top of which there is a barrier with proprietary information), the British Standard allows for three different categorizations of methods for chloride determination
    (1) Until something is acquired in C494 that can deliver on these different categorizations, the British implementation will proceed
        (a) The values are usually very small and some accelerating
            (i) Non-chloride accelerating admixtures
  iii) For states trying to determine the chlorides in their labs, correspondence is welcome
       (1) Contact:
           (a) Willie Morrison
               (i) American Engineering Testing
               (ii) wmorrison@amengtest.com
  iv) No objections with proceeding to use EN480-10

• Liquid admixture dilution guidance not currently available on the Work Plan
• Need additional language to clarify testing of the pH.
  (1) If a manufacturer requires dilution to be done for the product, the dilution should be done before additional dilution as stated in work plan.
  • Need additional language to clarify collection of the IR. If an admixture does not produce a residue when dried, the IR scan will be on the “neat” material and be noted as such.

6) 4:35PM-4:45PM: DataMine 3.0

• Currently having issues with report and data upload post launch
• Products with reports previously made public should still be publicly available
• Please check and contact Maribel Wong mwong@aashto.org if you have issues
• Credit card payment should already be implemented
• AASHTO/NTPEP now responsible for assigning laboratories immediately after payment now confirmed
  i) Laboratory specific requests will not be accepted
Interim report questions
i) Discuss if 56 days should be published and replaced by 90 days reports
   (1) Always keep 28 day
   (2) Action Item: An electronic ballot will be sent out for the decision of eliminating the standalone 56-day report and including it with the release of 90 days

7) 4:45PM-5:00PM: Industry Concerns/ Open Discussion
   • Currently: 10-year full re-evaluation (5-year uniformity)
     i) Should it be 5-year full re-evaluation
        (1) SCDOT goes with re-evaluation every 5 years
        (2) Montana is looking at 5 years
        (3) Action Item: electronic ballot will be sent out to make this change official in the Work Plan
   • Todd Bennett – Looking for a match between in house testing and the NTPEP report when brought in for QA
   • Brad Young – Has the committee considered the membrane curing compound? This is another method of retarding the water. Ohio DOT currently using hoses and burlap but it’s been recommended that membrane curing compounds be used
      i) ASTM C171
      ii) Viable for inclusion, but the work plan / program currently does not support the product