



VRMCA Technical Committee

Minutes from 1/27/2021

Meeting Held Virtually – via Zoom

I. Chairman George Kuhn called to order the Technical Committee meeting at 10:04am

II. The committee was reminded that the meeting was being held in accordance with the anti-trust statement which was displayed on the screen.

III. Introductions. Present at the meeting were: Bob Neal – Lehigh Cement, Teck Chua – Vulcan Materials, Derek Imperial - Swope & Associates, Michael Robinson – Carolina Stalite, Darrell Wilson – Boral Resources, Kevin Vaughn – Vulcan Materials, Steve McQueen – Aggregate Industries, Chris Conner – Luck Stone, Jennifer Greenwood - VRMCA, George Kuhn – Chandler Concrete. Steve & Chris were welcomed as 1st time attendees.

IV. **** ACTION ITEM **** Jennifer Greenwood stated that to make sure everyone who is interested in receiving the Technical Committee email blasts, meeting notices and other communications. A general email will be going out to the entire VRMCA email list requesting that people update their email addresses and other contact info for the TC database. The email will be going out in the next day or two – marked Action Requested. Those who do not respond will be removed from the list. Kuhn asked to have the list of respondents shared to be able to reach out to those who had not responded but likely wished to be included on the list. Greenwood asked that if you knew of any retirees or departures to share those with her if comfortable for removal.

V. Kuhn stated that the Minutes from the January 22, 2020 meeting were shared on a link that was sent out via email. VRMCA has all meeting minutes posted online, Kuhn provided a demo of how to access from the VRMCA site: About - SubMenu, Committees, under TC – TC Meeting Minutes. Motion was submitted and approved – Robinson/Connor.

VI. Past Old Business

A.) Technical Bulletins:

7 are in existence. Kuhn showed VRMCA site access steps: Resources - SubMenu, Resource Library, VRMCA Technical Bulletins. Kuhn asked for ideas for new TC Bulletins.

**** ACTION ITEM **** Those with ideas are encouraged to share them with the group. Technical bulletins are geared for “expert level”, with more depth to the topics.

B.) Newsletter Articles:

Greenwood stated that these go into quarterly newsletters and have generally been well received – for all of 2020 Technical articles represented 4 of the top 15 pages viewed in terms of website traffic. Articles are also shared on other social media

platforms – target audience is Industry level. At present, no articles are in the pipeline for the Winter 2021 newsletter. Neal suggested “Control of Lab Batches for Mix Designs” as a possible topic – discussed the effect of mix temperature on test results. Greenwood stated that articles would be shared with our group for content review before sharing with Marketing Committee, who would decide between Technical Article and Newsletter Article.

C.) Technical Articles:

Kuhn showed VRMCA site access steps to Technical Articles: Resources - SubMenu, Resource Library, Reference Materials, Technical Articles list.

Kuhn shared ideas for articles that had been voiced to him by others:

90 minute/300 revolution limits – discussion held about merits of these limits
drying time vs. curing time of concrete

salt scaling

pavement design

addition of water on job after HRWR is added into the mix

**** ACTION ITEM **** Kuhn requested that the group suggest ideas to share for articles.

Note: at the January 2020 meeting, technical content subcommittee was set up for content review - initial members were David vanwyhe, Bill Denison, Bob Neal and GK as TC Chair. Review process is by exception, shared information is automatically approved if no objections are raised by subcommittee. If objections, the item can be referred to the full TC for further review/approval.

D.) InfoGraphics:

Greenwood reported that InfoGraphics are for everyone, simple easy content. Ideas originate from multiple sources including newsletter articles and questions raised by others.

**** ACTION ITEM **** Anyone with ideas for InfoGraphics is requested to share them with Jennifer.

E.) Documents:

Jennifer reported that documents are 3rd party authored. There are currently 3 documents that need to be reviewed for posting: Flowable Fill, Parking Lots Specification, Basic Concrete Info for Homeowners.

**** ACTION ITEM **** Greenwood to send the existing 3 documents out for the subcommittee to review before posting on website.

F. Concrete Adherence Program

Kuhn reported that we had explored the Colorado program in the past, there was an indication the board wanted to get involved with it. Greenwood said board had discussed but she was not part of the discussion.

**** ACTION ITEM **** Kuhn to reach out to Doug Easter to see where board stands on the issue.

G.) Field Level Certification Program

Kuhn reported that past discussions had been held at TC level regarding the training component of the ACI Concrete Field Testing Technician Level I program. We had discussed bring Larry Lundy to one of our meetings to discuss the training being provided. Larry had reported that he had placed an emphasis on Initial Curing conditions into his training. There appears to be a disconnect between what is provided in training and instruction and what is reported to be taking place in the field. Training is one thing, but doesn't fully address the root problem, which is the adequacy of the testing taking place.

Kuhn reported that since Covid, the training portion of the program had been moved online, with self-study modules being provided 3rd party, and concerns had been voiced to me about how well people were being prepared for taking the exams.

** ACTION ITEM ** Greenwood to reach out to Christina for clarification and information

** ACTION ITEM ** Kuhn to reach out to Lundy to be a speaker at our next meeting

H.) Concrete Acceptance Process

Kuhn introduced the acceptance process for concrete, in which every load is evaluated for quality, and the lot that the test represents is assumed to reflect that level of quality. Acceptance is supposed to be statistical acceptance, with statistical methods, but results are not being evaluated that way. Idea posed as a possible topic for further exploration.

VI. Material Supplier Updates.

A.) Wilson – reported that no beneficiation of ash was planned for Dominion Power's flyash landfills, material is only being used as feed for cement production. Chua reported that Chara had won the Dominion contract, SEFA the NC area contracts

B.) Imperial – reported there is a worldwide shortage of sodium thianate, used in non-chloride accelerator manufacturing. Companies are looking at bringing back older technologies to address. Not sure how long the impact will be – sodium thianate is a key component in Covid testing kits.

VII. New Business.

A.) Kuhn reported cylinder handling continues to be a an issue: 60-80 degree curing temps, 48 hour window to have cylinders back to standard curing, moving of cylinders on jobsite, ... Integrity of texting results is the issue. Robinson reported that in Carolinas, effort has been made to get jobsite handling of cylinders placed into the building code. It is presently in there by reference to ACI 301. They are getting traction and there is interest. Chua reported that with VDOT, enforcement is the issue rather than specs, it is clear what should be done. Some districts getting very good compliance results.

B.) Kuhn raised the issue of restrictive vs. performance based specs. More and more restrictions are appearing in specifications (flyash % limits & max w/c ratios when

durability not an issue) translating directly to the cost of producing concrete and limiting mix flexibility. Example give of 0.45 w/c ratio limit appearing on SOG spec for interior floor. Neal said w/c ratio limits, reported as an article could be made into a Technical Bulletin. Chua asked if ACI 318's exposure classes were provided as example, a lot of engineer's will be persuaded if you provide data. Structural Engineers using 2011 version may not be aware of changes since then.

- C.) Imperial reported on ACI 237 discussion, with VDOT and others. ACI 211 does not cover SCC production, you end up with a coarse grout mix with varying results, causing producers to make a lot of adjustments, with bad segregation and unstable air contents. VDOT does not recognize 237 yet, so we are stuck. Hampton Roads Bridge Tunnel used 237 method, very stable mix results. Chua reported that Celik is a founding member of 237 so it shouldn't be an issue getting his support.

VIII. VDOT COOP Items.

A.) Option 4 Mix Designs

Chua suggested allowing district engineers to approve single point mix designs, add language to give them a pathway to follow. Robinson asked if it would be lab or truck approval, with concern about the overdesigns.

** ACTION ITEM ** Kuhn to talk thru this with Angela

B.) Minus 200 Fines

2 issues in 1: allowance of non-compliant sands for mixes under Options 2 & 3, and increase in total amount of -200 material in a mix.

Non-compliant sand - lots of discussion, no consensus in VDOT on accepting a change to anything. Chua suggested we just ask VDOT to adopt C33, which would address the non-compliant sand part, indirectly resolving our issue

Increase in amount of -200 fines – consensus was to hold off on this while we try to get the non-compliant sands/C33 issue resolved.

C.) ACI 211

Position is we feel 211 is a starting point, not a recipe. We need to find out where Angela is on the issue.

D.) Low-Shrinkage Deck Mixes

Consensus of group was to keep pushing for fixed dosage option, to avoid the need for shrinkage testing when used. Other dosage rates still allowed with verification testing.

E.) Retarder Set Times

** ACTION ITEM ** Kuhn to reach out to Celik for a VTM

F.) Admixture Dispensing Systems

Consensus to approach like the C33 issue, ask VDOT to adopt NRMCA Plant Certification language which will eliminate the issue

G.) Adoption of ACI 318 Acceptance Methodology

Chua in favor of pursuing, insures latest updates, current technology. Robinson said if VDOT is limiting cement in mixes, they have to have a provision for break results below F'c.

H.) Electronic Delivery Tickets

Nothing happening. John Shuler is in favor of, it appears. Similar process used in asphalt division.

** ACTION ITEM ** Kuhn to discuss with Angela to see what's going on

I.) Allowing Removal of Air in Below Grade Structures

why require if not a freeze thaw application

** ACTION ITEM ** Kuhn to discuss with Angela

J.) Increasing Air by 1% When Using HRWR

discussion that footnotes to Table II-17 apply to all uses of the table. Suggested we provide clarification in Options 2 & 3 language to strengthen the footnote inclusion.

K.) Mix Expiration Dates

no action needed until Angela reports findings

L.) A3 Curb Mix as Mix Class

ball in our court, up to us to propose language for addition

M.) VDOT Field Certification

VDOT dropped the class requirement, question as to whether it gives field inspectors necessary skills

N.) Approved list of Materials

With Options 2 & 3, some suitable materials are not found on the list

** ACTION ITEM ** Conor to check with his folks and see how this is being handled

O.) Validity of Testing Being Done

discussion of results from field testing, no action taken.

IX.) Future meetings

Technical committee 2020: April 15th, July 21, COOP Meeting: Feb 11

X.) Chairman Kuhn adjourned the meeting at 12:36pm

