

WAQTC QAC COMMITTEE MEETING MINUTES

LEADER: Garth Newman, ITD
FACILITATOR:
RECORDER: Christi Juchmes, KBA

DATE: July 13-17, 2009
TIME: 8:00 am – 5:00 pm
LOCATION: Clackamas, OR

MEMBERS PRESENT:
Garth Newman, ITD
Sean Parker, ODOT
Jon Ogden, UDOT
Linda Hughes, WSDOT
Greg Christensen, AKDOT & PF
Brian Legan, NMDOT
Alan Hotchkiss, CDOT
Misty Miner, MDOT

MEMBERS ABSENT:
Joanne Nakamura, HDOT
Bruce Wasill, FHWA

MEETING OBJECTIVES:

1. Concrete test methods
2. Aggregate test methods
3. Asphalt test methods
4. Soils test methods
5. Exams
6. Committee business / wrap-up

ISSUE	DISCUSSION / DECISION	ACTION REQUIRED BY:
<p>1. Concrete test methods</p>	<p>TM 2: No changes</p> <p>T 309: No changes</p> <p>T 119: No changes. ACI has modified their performance exams since WAQTC was given permission to use exams in 1997. QAC would like to review existing perf exams with the possibility of use or adaptation for our purposes. Definition of scoop added for compliance with AASHTO.</p> <p>T 121: Definition of scoop to be added. No other changes.</p> <p>T 152: Definition of scoop to be added. No other changes. Discussion of tilting of the pot and introduction of water & paste into petcocks.</p> <p>T 23: Definition of scoop to be added. Added language to clarify the number of times the mold must be tapped and with what instrument. Curing times must be revisited and potentially modified to reflect advent of new types of concrete. Discussion of acceptable set / initial curing time. <i>WSDOT to produce and propose change to set / initial curing times</i></p> <p>Related Discussions: Discussion: Use and wear of gyratory molds. The walls on Troxler molds begin to thin over time. CDOT uses locally-made molds which show no sign of degradation.</p> <p>Discussion: ACI has discontinued their Laboratory Grade I certification. WA, CO, UT, and NM currently provide concrete lab certifications that meet state needs without having to earn an ACI certification. AK, WA, NM, OR, ID, UT, and CO all recognize ACI Strength Testing Technician as an acceptable cylinder breaking qualification. Vote was taken to allow ACI Strength Testing Technician for WAQTC reciprocity. Vote was unanimous. <i>Issue will be taken to Executive Committee at August meeting for final approval.</i></p> <p>Discussion: Self-consolidating concrete use and properties. Montana and Utah are currently the only states to use this type of concrete extensively.</p>	<p>Linda</p>

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<p>2. Aggregate test methods</p>	<p>T2: Sean notes content in scope that is more appropriate in apparatus. Discussion of mechanical sampling systems Addition of mechanical sampling device to apparatus. Emphasized necessity of random sampling in procedures. Discussion of adding language regarding nominal maximum size to Note 1. Note 1 moved to below table 2 Discussion of definitions of fine aggregate and sand. Stockpile Methods A and B renamed; B is 'Alternate Tube Method' instead of 'Fine Aggregate'. Third step added to Method B for emptying container. Changes made to steps in Method A. Steps added to Conveyor Belt methods A & B. Order of coarse and fine aggregates changed in scope, stockpiles method Perf reviews modified to reflect addition of sampling tube language to Method B. <i>Send Colorado's research on sample splitting to correct size to Greg</i></p> <p>T248: Scope contains language more appropriate to procedures section. Note 1 deleted. Redundant wording deleted from Method Selection section. Sample Preparation subheading changed to Method Selection; section completely restructured. Ratios completely changed in Calculations section – extend changes to T2 Clarifications added to Mechanical Splitter procedure. Discussion of Quartering process Diagram on page 10-2 renamed Figure 1 Changed number of turns from 3 to 4 in Quartering method – marks a departure from AASHTO but is now consistent with R 47</p> <p>T 255: Directions for Drying to be incorporated into the end of the procedures section. <i>Short form modifications to create better flow in progress</i> Change to Table 1 header from Minimum Dry Mass to Minimum Sample Mass.</p>	<p><i>Alan</i></p> <p><i>Garth</i></p>

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<p>2. Aggregate test methods</p>	<p>T 255: Language added to clarify that material should be sampled in its existing condition. Language on potential increased mass after cooling added to report section. Values in Calculations changed.</p> <p>T 27/T 11: Major changes to language in scope. Discussion of gradation in methods A, B, and C: AK and MT use Method C but do not follow the calculations indicated in the WAQTC FOP. <i>AK and MT to work on updating procedures with a rewrite of Method C, including simplified calculations. Due by end of August.</i> Changes made to value in Percent Retained equation. Cumulative Retained equation error changed in instructor form Corrections to values in overload procedure table for 14 x 14 and 16 x 24 Corrected pan mass value in Note 4 to 1966.7 from 1966.8</p> <p>T 176: Minor grammatical changes to notes; addition of ‘non-detrimental’ to Note 2 and ‘unless otherwise specified’ in Note 5. Retain 2008 date.</p> <p>TP 61: Now T 335 in AASHTO – all docs must be revised. <i>At February meeting: Discuss questionable aggregate (up to 15%).</i> Discussion: taking half in the fractured and half in non-fractured piles, instead of reevaluating the questionable pile. Would eliminate calculations involved.</p>	<p><i>Greg and Misty</i></p> <p><i>Committee</i></p>

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<p>4. Asphalt test methods</p>	<p>T 168: Discussion of sampling methods (plant, roadway, windrow, truck, auger). HMA Sampling Locations by state:</p> <table border="0"> <tr> <td>Alaska</td> <td>Roadway, windrow, end of auger or lift plate</td> </tr> <tr> <td>Colorado</td> <td>Windrow</td> </tr> <tr> <td>Utah</td> <td>Roadway (with plate)</td> </tr> <tr> <td>Oregon</td> <td>Plant</td> </tr> <tr> <td>Montana</td> <td>End of auger</td> </tr> <tr> <td>Washington</td> <td>Truck</td> </tr> <tr> <td>Idaho</td> <td>Truck, Plant or Roadway depending on conditions</td> </tr> <tr> <td>New Mexico</td> <td>Roadway (no plate)</td> </tr> </table> <p>Two steps added to Attached Sampling Devices procedures clarifying use of agency-approved release agent and transfer without loss of material. Exams modified to reflect changes</p> <p>R 47: Added “sheeting” in Apparatus section to cover paper/heat-resistant plastic/etc. Placing empty receptacles under the riffle splitter broken out to form its own step. Change to numbering of Quartering and By Apex procedures. Numbering error corrected on review form. Clarified that tools are to be heated to a temperature not to exceed 110 degrees C, instead of ‘at least’ 110. Minor change to language in scope – ‘sample reduction’ replaces ‘3 methods of reducing samples’</p> <p>T 329: Changes made to sequence of constant mass calculations - percent change now on other side of equals sign. Same changes made to moisture content equation. Added ± symbol to inst form and perf exam to correct omission. Deleted Tips section from inst form.</p>	Alaska	Roadway, windrow, end of auger or lift plate	Colorado	Windrow	Utah	Roadway (with plate)	Oregon	Plant	Montana	End of auger	Washington	Truck	Idaho	Truck, Plant or Roadway depending on conditions	New Mexico	Roadway (no plate)	
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<p>4. Asphalt test methods</p>	<p>T 308: Addition of a zero in the hundredths place for correction factors percentage. Discussion of removing Method B from procedure <i>Topic to be revisited at February's meeting.</i> Changed language to read 'temperature of ignition furnace should be lowered' from 'must be lowered' Discussion of differences between Method A and B and usefulness. All states represented use primarily a Method A process with variations from state to state. The majority of the states follow the AASHTO version more closely by weighing the tray assembly at room temperature.</p> <p>T 209: Background: AASHTO eliminated manual shaking and striking with a rubber mallet as acceptable methods, which creates problems in field laboratories and when using a glass container. They are requiring the use of a mechanical shaker, but provide no description under Apparatus. Sample size has been increased at least 500 g, which could have adverse effects. Vessels and bowls used with this procedure could have issues with performing this test as a single sample. There is a concern by members that the change to the minimum sample size table will impact how the tests are performed.</p> <p>Changes: Table 1 title changed from 'Size of Largest Particle of Aggregate in Mixture' to 'Nominal Maximum Aggregate Size'. Values for 50.0, 25, 9.5, and 4.75 deleted from Table 1. Addition of specific time frame for steps 12b through 16b when using flask method. Clarification to flask step 12b to emphasize avoiding the reintroduction of air.</p>	<p><i>Committee</i></p>

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<p>4. Asphalt test methods</p>	<p>T 166/T 275: Clarification to suspension method on the allowable amount of time for steps 7-9 to be performed (within 5 seconds), as requested by Misty.</p> <p>T 40: No changes</p> <p>T 30: Changes to values in Table 1 for the -4.75 sieve.</p> <p>Related Discussions Discussion: WSDOT's temperature segregation procedures using infrared cameras. <i>Specs to be sent to committee for review and reference.</i> Useful if/when other states adopt infrared cameras for temp segregation.</p> <p>MT suggests development of supplemental 312 volumetrics module. <i>Develop initial test method for review by QAC at February meeting</i></p>	<p><i>Linda</i></p> <p><i>Jon</i></p>
<p>5. Embankment test methods</p>	<p>T 255/T 265: Same changes as recorded by notes in agg method. Dry mass changed to sample mass in table header. Language regarding existing conditions of the material added. Placement of % change and moisture content switched sides in equations. Values changed in moisture content calculation.</p> <p>T 99/T 180: Background: AASHTO made major changes to this method. The final was a significantly modified version of what WAQTC requested. Their rationale was to include an alternative method of calculation for wet density, dividing by the volume instead of multiplying by the mold factor; added an equation in Section 12.1 that shows the relationship between mold factor and volume. AASHTO did not make the same changes to T 180 even though the procedures are very similar.</p> <p>QAC voted to maintain the current WAQTC FOP combined T 99/T 180 test method. Alan's notes: reference to T 265 in method needs to be deleted, reference T 255 only. I do not remember this. Is this correct?</p>	

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<p>5. Embankment test methods</p>	<p>T 272: No changes</p> <p>T 85: Discussion of newly approved Phunque Flask method (AASHTO TP-77) developed by Bryce Simons of New Mexico DOT. Has been looked at and/or is being used by several states – CO, WA and NM – with success and good repeatability. The states using the TP-77 process are very excited to be able to get rid of the T-84 test procedure due to its poor repeatability and operator-specific outcome. There is still great concern for the cost for each flask and the “breakability” of the flask is a concern. Clarification to allotted time sample is allowed to soak, now reads 15 to 19 hours.</p> <p>T 224: Short form revisions also lost. Instructor form intact with two equations that were added to calculations section. If other revisions need to be made, please let me know</p> <p>T 310: References to T ____ (?) removed (Another cryptic, handwritten note. Did I make this up?)</p> <p>T 209: See T 209 Asphalt notes for the background on changes to this test method.</p> <p>T 166/T 275: See T 166/T 275 Asphalt notes</p> <p>TM 8: Changes to direct transmission procedure – two tests no longer required, one 4-minute test only. Step added to backscatter method on density average – redundant language deleted from calculations section. New example for direct transmission added to calculations section. Core correlation figures broken out into separate English and metric tables. Discussion of significant figures and reporting. <i>States to email GN with current reporting procedures for TM 8 (and/or density) & sig figures to approach exec committee re: standardization.</i> Alan’s notes say “Include standard deviation formula in test method”. I don’t see it in the short form – was this something that someone is supposed to send me for inclusion?</p>	<p>Formatted: French (France)</p> <p><i>All committee members</i></p>

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5. Embankment test methods	Humphrys Curves: Continued work on SOP by ID, AK, and WA. ASTM 4253 may be a valuable reference and/or alternative for this method	
6. Exams	<p>General Discussion: Discussion of exam questions and vetting process. AK, ID and OR suggest a professional reviewer (psychometer) to review proposed questions, eliminate bad ones and provide proof of question legitimacy in the event of a legal challenge. <i>Develop administrative guidelines for exam development and approval</i></p> <p>Exams updated to reflect changes made in test methods</p>	Greg
6. Committee Business	<p>Discussion of consultant contract and issues to consider when putting contract out for re-bid <i>Send Linda the letter to Tim Biel and a copy of the original 1997 contract</i> <i>Update letter and redistribute to QAC for review</i> <i>Review and send to Executive Committee</i></p> <p>Tentative location for 2010 February meeting identified as Reno, NV. Albuquerque, NM is also a possibility.</p>	Garth Linda QAC