November 10, 2023
Meeting – HMA Tech Team – Spec Subcommittee

Location: Teams Meeting
Date: November 10, 2023
Time: 9:30 am to 12:00 pm

Attendance

- Albert Kilger
- Ali Arabzadeh
- Debbie Schwerman
- Scott Syron
- Zach Lemke
- Jeremy Barron
- Jeff Anderson
- Neal Atanasoff
- Dan Kopacz
- Erik Lyngdal
- Derek Frederixon
- David Hose
- Joe Kyle
- Jake Amundson
- Travis Kurey
- Steve Bloedow

Agenda Items

1. Gmm/Gmb Reheat Correction Factors and Gmm Dryback Procedures
    - How are non-comparisons handled in the field?
        - SWR: If not matching, SWR has asked the contractor to “season” their Gmms for up to 20 minutes. This has appeared to help comparisons. Issues seem to arise from lack of silo time because these are portable locations and also absorptive aggregates. These seem like good candidates for reheat correction factors that should be done during mix design.
    - Suggestion: guidance for project staff to figure out differences.
    - The need for correction factors should be determined early on in production, not late into production when things aren’t comparing well.
    - Suggestion: Check for need during test strip.
        - Could take additional 3 QV and QC Gmm samples. Run first set hot, second set the next day.
    - Concerns about increasing Gmms for density when reheating material.

- Suggestion: If dept. and contractor agree there are issues, then the department can always run them cold.
- Regions run samples as soon as they get to the labs or sometimes later. It depends when the samples arrive. So, the department's Gmm results could be variable in terms of how long they've cooled and absorbed additional AC.

2. Manual of Test Procedures Updates
    a. WTM R35
        i. RAS Gsb = 2.500
    b. WTM R47
        i. 4-Way Split Samples to address Gmm/Gmb replicate tolerance needs for additional samples.
    c. WTM R97
        i. Adjustments for four-part split samples (formerly three-part split samples)
        ii. Pre-Printed Blank Sample Labels
        iii. Add Cumulative Tonnage Field
    d. WTM T283
        i. Remove distilled water requirement (potable water may be used).
    e. WTM T355
        i. Change unrestricted edge of pavement minimum distance to 1.0 foot.
            - Concerns that 1.5 foot from edge may have been implemented due to gauge accuracy near unconfined edges.
            - Additional concerns with adding this area to mainline pavement densities that it could affect PWL due to density uniformity differences near the edges.
                - Only would affect a small percentage of tests since the additional 6 inches is added to the random number testing. Random number would have to be .10 or less (10%) and then of the 15 tests in a lot the contribution to the dataset would be 6.7%.
                - Main issue is these areas are not being tested at all.
        ii. Proposed Language for Target Maximum Density Gmm
            - Concerns that Previous 2 production Gmms could include 2 production days. It's possible that mix was adjusted. Industry

is requesting that perhaps we only use the previous Gmm instead in this case.
- Concerns on when this will be implemented.
  - **Action**: Discuss with HTCP.
- Concerns that there may be data entry mistakes when adjusting the Gmm.
  - This can be automated with the spreadsheets.
  - **Action**: Demonstration of how the corrected Gmms will work with density and PWL spreadsheets.

3. AWP Specification Reorganization
   a. Review Industry feedback to-date
      - Industry needs more time to review.
      - Illinois tests at 1/1,000 tons. Department randomly selects ¼ contractor tests, if it compares, use the contractor results, if not, department tests all 4 tests. The contractor runs all 4 tests.
      - MnDOT tests 1 sample per day, unless daily production is under 300 tons. Once 300 cumulative tons is hit on the job, a test is taken (to prevent constructing the entire job in 299-ton increments).
        - MNDOT has plant monitors to witness sampling.
        - MNDOT needs to change this practice per FHWA. Also, there are issues with the sample being independent.
      - Implementation timeline is pilots in 2025 and full implementation in 2026. Could be delayed by 1 year.
      - Iowa uses AAD (absolute average deviation), +/- 1.0% for air voids for non-PWL. Helps prevent spiking.
        - Otherwise, most of the Iowa work is PWL.
      - Michigan, anything under 5,000 tons per mix type is small tonnage…. They are sampling 1/1,000 tons (per sublot). Lots are 5,000 tons. If they go over 1,000 tons of a particular mix type in a day, then they split the tonnage into two equal sublots.
        - Contractor data means nothing.
        - DOT tests every sample from that increment.
        - Pay based on DOT results.
      - Concerns about doing PWL and F&t on SMA.
        - Currently SMA does not use direct splits, so it is hard to analyze the data in the context of a PWL for F&t comparison purposes.
          - Currently for PWL, the contractor splits are removed from the analysis. So we should be able to do a

similar analysis.

- Industry claims there aren't any issues with QMP on SMA, so it might just increase costs without providing additional quality.
- Illinois uses PWL on SMA. Uses similar tolerances on SMA.
  - Industry claims they get achieve about 99% pay on Pay for Performance (PFP) with SMA.
- **Action**: Contractor members should, while reviewing the new AWP specs, bring concepts forward that they don't like that limit them, and conceptually explain this so that we can look for solutions.
- Concerns about why these programs are so different between states and why FHWA doesn't provide minimum requirements.
  - Possibilities
    - Specs violate CFR (CFR 637) and FHWA does not allow implementation.
    - Specs do not violate CFR and FHWA allows implementation.
    - DOT and FHWA disagree on specs, but specs do not violate CFR and get implemented anyways.
    - CFR is unclear in interpretation, and there may be disagreement between DOT and FHWA on implementation.

4. Test Strip Changes
   a. Fixed length and 750T option.
      - Thin lifts can create long density test strips compared to thicker lifts – which is unnecessary.
      - Allows to correlate gauges on smaller length projects.
      - Internal guidance will be to consider using nuclear gauges on projects with at least 15 density sublots, since test strips require 10 cores anyways, and it wouldn't make sense to correlate a gauge for only a few density tests.
      - Industry thinks 2 sublots (3,000 ft) should be enough for a fixed correlation strip.

5. Next Meeting
   - Approximately Week of the December 11th.

- **Action**: Industry would like to discuss all the round robins in more depth (analyzers, HWTT, IDEAL-CT).
- **Action**: Examples for Gmm from gauge to daily average.