**FALL MLPA/MoDOT COOPERATIVE MEETING**

**Wednesday, October 24, 2018 from 1:15 – 3:15p.m.**

**MATERIALS LABORATORY, CONFERENCE ROOM 201**

**Agenda**

- **Introductions**

- **Review MLPA Antitrust policy**

**Item No. 1 – Update on ACR laboratory testing.**

Chemical testing is performed on every sample submitted to the Central Laboratory for concrete source approval. ASTM C1105 testing is performed when chemical testing indicates the aggregate is potential expansive as per the guidelines in AASHTO R80. Based on research conducted by the department during the mid 60’s if the potassium oxide is over 0.3 percent the aggregate could be potentially expansive. NOTE: The amount of potassium oxide is determined in accordance with ASTM C25. A handout was distributed to the group showing alkali carbonate reactivity (ACR) test results conducted on several aggregate sources. Testing was performed using Meramec Sand and Missouri River Sand. Results indicated the Meramec Sand is virtually non-active. Based on these findings, MoDOT will conduct all future ASTM C1105 testing utilizing Meramec Sand. Testing showed the Chouteau formation is fairly reactive.

**Action Item:** Send email to Chris Epps on what test method MoDOT uses to determine the amount of potassium oxide contained in aggregate. (Brett Trautman)

**Item No. 2 – Discuss testing protocol for ACR.**

A handout was passed out containing a flow chart for evaluating aggregates for alkali silica reactivity (ASR) and alkali carbonate reactivity (ACR). The flow chart was taken from AASHTO R80. MoDOT is currently utilizing this flow chart for evaluating aggregates. ASTM C1105 contains expansion limits for measurements taken at 3, 6, and 12 months. For formations that MoDOT has utilized for years with no field issues, aggregates will be approved provided there is no aggregate expansion after 3 months of testing and all other material requirements (i.e. freeze/thaw) are met. Testing will continue beyond 3 months for informational purposes only.

It does not appear that the problem is wide spread, but it is something that MoDOT wants to stay on top of moving forward. Some sources have already been approved that may be potentially reactive. For those sources, field performance will be evaluated to determine if an issue exists with the source.

**Item No. 3 – Update on MoDOT’s D-Cracking Study.**

Research conducted by MoDOT showed if there is too much material retained on the sieve below the ¾ inch sieve (i.e. maximum top size) the potential for D-cracking increases. Based on the research, there needs be a limit on how much material can be retained on the ½ inch sieve. A specification change has been developed that establishes a range of 85-100 percent passing on the ½ inch sieve, limiting the amount of material retained on the ½ inch sieve to 15 percent.

Have included ASTM C1105 to Section 1005.2.1.4 as an additional test that the engineer reserves the right to perform to measure the soundness and durability of the aggregate.

**Action item:** Send comments on proposed specification change to Brett Trautman (MLPA).

**Item No. 4 – Update on the use of manufactured sand in concrete pavement.**

A specification change was developed allowing the use of manufactured sand in Portland cement concrete pavement. The amount of manufactured sand would be limited to a maximum of 12 percent of the total volume of the aggregate utilized in the concrete mix. A copy of the proposed specification change was provided to the MLPA for review.

**Action item:** Send comments on proposed specification change to Brett Trautman (MLPA).

**Item No. 5 – Update on resistivity testing on select granular backfill (SGB).**

A handout was passed out about NCHRP Project 21-11. This research project is developing a new method for evaluating the corrosion potential of select granular backfill. The research is being conducted in three phase. Work is currently underway for Phase III. The research is scheduled to be completed January 5, 2019.

**Item No. 6 – Discuss the use of limestone for microsurfacing on secondary roads.**

At this time, microsurfacing costs are very high and cost almost as much as single lift overlay. MoDOT is open to trying limestone in microsurfacing. If a producer is interested in having their material tested for microsurfacing, let Brett Trautman know.

**Action Item:** Send proposal to MoDOT to consider using limestone in microsurfacing (MLPA).

**Item No. 7 – Utilizing Muratic Acid to test chert in limestone**

During the meeting, an aggregate producer indicated they were having issues complying with the tight deleterious requirements specified for coarse aggregate used in bridge deck overlays. The producer was having problems meeting the maximum chert limit of 0.5 percent. Muratic acid is the common name for a less pure hydrochloric acid. Muratic acid will bubble when applied to limestone but does not react when applied to chert. The question was asked if muratic acid could be used to distinguish chert from limestone. The Central Laboratory currently uses a 10 percent solution of hydrochloric acid to determine if a piece of aggregate is chert or limestone.

**Action Item:** Will check into the use of muratic acid to differentiate chert from limestone (Brett Trautman).

**Item No. 8 – Discuss Technician Certification Program (TCP) moving away from providing printed manuals.**

There has been a request to stop providing printed manuals to individuals attending Technician Certification classes at State Technical College of Missouri (STC). STC has proposed having tablets and printed manuals available for individuals to utilize during classes. The overall consensus of the MLPA was to continue to the printed manuals so technicians could take notes and be able refer to the manual in the field.

**Item No. 9 – Maintenance checking maintenance bid that listed a particular aggregate source (Item No. 10 – March 15 meeting).**

The producer who brought this issue up indicated that it had been resolved and further discussion was not required.

**Item No. 10 – Modifying Grade A1 seal coat gradation involving the No. 4 sieve (Item No. 10 – March 15 meeting).**

Industry would like to see the limit of the No. 4 increased from 0-25 to 0-30 for Grades A1 and B1 to reduce the amount of waste generated at the quarry. This proposal will be discussed with our Maintenance Division.

**Item No. 11 – MoDOT’s website has been re-designed.**

The MoDOT website has been moved to a web-based platform. This has changed how you navigate the website to access the Standard Specifications, Technician Certification manuals, and other documents. The MGS specifications are now listed under Doing Business with MoDOT > Standards and Specifications. If you have any trouble locating information on the website, please contact Lori Greer.

**Item No. 12 – Other Issues.**

* The industry indicated it has been taking a long time to receive information about source approvals. Some districts are not sending source approval letters in a timely manner. Districts have several new individuals who may not be alerting the individual responsible for sending the letter when testing has been completed.

**Action Item:** Work on creating an automated process to notify the persons writing letters when source samples are completed (Lori Greer).

* Some districts are requesting Source Approval samples for base rock.

**Action Item:** Review base rock approval process with districts (Brett Trautman).

* MLPA would like to host a Coop. Quarry Day for new inspectors. They would like to have a host site in each District. The industry is hoping to start Coop. Quarry Days by late January.

**Action Item:** Will contact the districts about participating in a Coop. Quarry Day (Brett Trautman).

**Item No. 13 – Next Meeting.**

Notification will be sent from MLPA when a meeting date has been selected.