

**Emulsion Task Force (ETF)
May 5-6
Meeting Minutes**

Day 1

Thursday, May 05, 2016

- 8:00 a.m. – 8:15 a.m. **Welcome, Introductions, & Roll Call** Franco/Lubbers/Dietz
- Sign-in sheet attached to meeting minutes (**Attachment 2**).
- 8:15 a.m.-8:30 a.m. **Agenda Overview** Franco
- Approval of June 22-23, 2015 Meeting Minutes**
- Minutes approved (motion by Gayle King, 2nd Ken Gryzbowski)
- Update on ETF Funding and Operating Structure (Our Sponsorship)**
- ETF is no longer affiliated with PPETG.
 - There is a proposal to fund travel for face to face meetings under the AASHTO TSP2 Program that was recently accepted. Funding includes 2 meetings/yr for the next three years.
- 8:30 a.m.-8:45 a.m. **Reviewing ETF Mission & Goals** Franco/Lubbers
- Reference attached slides from Colin Franco’s presentation. Contact Colin for presentation.
 - Past accomplishments were also summarized.
- Update on PPETG** Dietz/Kessler
- Document summarizing key actions, decisions, and takeaways for FHWA PPETG meeting held 3/8/2016 – 3/9/2016 document from Jim Moulthrop attached to meeting minutes (**Attachment 3**).
 - PPETG is composed of 15 people, good representation from current ETF, there is no friends list.
 - Next meetings – Teleconference in June, Face to Face in Sept.
 - Funding: Expectation is the ETG will be funded from 2 to 5 years.
 - What will coordination with ETF be like? Goals of both groups are very similar. *Initially will rely on members on both committees to bring ETF products to PPETG .*
 - The group has just formed and is in its initial stages.
- 8:45 a.m.- 9:15 a.m. **Activity Reports (5/mins per group)**
- a. FP² Inc. Moulthrop
- i. FAST-ACT bill secured funding for five years but did not create funding mechanisms for highway trust fund. FP2 is working to resolve issue.
 - ii. National Meeting: Organizing national meeting for October 2016.
 - iii. Participation as full funding partner in NCAT/MnDOT partnership. Will include a FP2 board meeting in Minneapolis.
 - 1) NCAT sections including various treatments were placed last year and have been monitored.
 - 2) Plan is to apply similar test section concepts to high traffic and low volume roads to MnDOT test sections. Also investigating

thin overlays, high modulus asphalt, etc. Problems with specifying OGFC due to past performance.

- b. AEMA Ishee
 - i. In process of getting a new manager, previous manager (Mike Krissoff) has retired.
 - ii. Developing a new strategic plan for emulsions and presenting different pavement preservation strategies.
 - iii. International Technical Committee: Arlis is a joint member.
 - 1) Addressing technical and regulatory issues.
 - 2) Also developing education in regards to both training and inserting in University programs.
 - 3) New residue research from NCSU and Texas A&M presented at last meeting and discussed in detail.
 - 4) Ash test is another issue.
 - iv. Partnerships with AASHTO TSP2 and NCAT. Also looking at a high friction micro-surfacing treatment.
- c. ISSA Price/German
 - i. Larry Tomkins gave update.
 - ii. Like AEMA, working through finding a new management firm.
 - iii. Education and training
 - 1) Slurry systems workshop: Included breakout sessions, best practices, and beta testing of slurry and micro-surfacing certification tests after web-based training.
 - 2) Web based training; Phase 1: Chip Seals, micro-surfacing, Phase 2 (recently complete): Spreader box and crack sealing best practices.
 - 3) Working on getting more labs participating in AMRL proficiency sample program.
- d. ARRA Thomas
 - i. Upcoming Events
 - 1) Recycling Workshop – Burlington, VT June 14-16.
 - 2) Recycling Session at RMAUPG in October
 - 3) Annual meeting is at NCAT. Part of agenda is to identify and develop plans how to fill current research gaps. Also develop regional ARRA groups to address specific issues.
 - ii. Web based training for FDR, CIR, HIR, etc.
 - iii. Standards submitted through ETF (will discuss later).
 - iv. Guidance documents have been finalized and posted on the ARRA website.
 - v. Recycling Session at RMAUPG in October
- e. AASHTO TSP2 Galehouse
 - i. Largest Program that AASHTO has (48 participating states), pavement preservation participation (19 states) is less than bridge preservation (38 states).
 - ii. Report to Mark McConnell – Mississippi DOT, chair AASHTO Subcommittee on Maintenance.
 - iii. Future considerations. From an Asset management perspective infrastructure quality will decrease with time due to funding (no new funding) and lack of stable highway trust fund. Preservation will be key.
 - iv. National meeting: 70 invited speakers, equipment demonstration

- f. Asphalt Binder & Mixture ETG Hanz
 - i. 4mm DSR Specification Update
 - ii. MnDOT study, will work through Arliss' subcommittee.
 - iii. Andrew will ask ETG if they are interested in reviewing emulsion PG work from NCSU and Texas A&M.

9:15 a.m – 10:00 a.m. **Update on AASHTO Deliverables**

- a. Subcommittee on Materials (SOM) TS 2a Actions Franco/Voth
 - i. Seven new specs were approved.
 - 1. Chip Seal (CS) & Micro-surfacing (MS): Design and materials specs are finalized.
 - 2. Amendments to M140, M208, M316. Approved by TS2a
 - ii. Reconfirmation to Full Std. TP-91 and TP-72. These will now go to full test methods.
 - iii. Recently Submitted
 - 1. Cold Recycling: Materials and design drafted for submittal.
 - 2. Tack Coat
 - 3. Fog, Slurry
 - iv. Close to submittal - Scrub Seal.
 - v. Longer term: QA specifications, surface performance grading.
- b. NCHRP Program
 - i. Construction Guide Specs for CS, MS.
 - ii. Was identified as best mechanism to get construction guidelines published. Was better than AASHTO subcommittee on construction or FHWA.
 - iii. Goal is to publish by end of next year. Does not include best practices.
 - iv. Best practices – how to handle it.
 - 1. Stand-alone Document through AASHTO TSP-2
 - 2. Sub-committee on Maintenance.
- c. Discussion – It is critical to have quick feedback and to address negatives in a timely manner and with quality responses. The efforts of the group were noted.
- d. Timeline/Process for Standards
 - i. March 2014 – Initial submittal the 7 standards references above for review by TS2a.
 - ii. Fall 2014 – Numerous negatives and comments. Needed to be addressed and re-balloted.
 - iii. May 2015 – Re-submitted and reviewed by TS2a. Were moved to full ballot.
 - iv. March 2016 – Call to address full ballot comments.
- e. TS-2a was not accustomed to handling so many standards; the ETF recognizes the efforts made.
- f. How can we involve FAA? They are proponents of preservation.
- g. Outreach- ETF needs to develop a brief/reference documents so that agencies, locals, and different industry associations have a one page reference guide so that documents can be easily accessed. Possible article in preservation journal.
- h. NCHRP Problem Statement: Must be submitted by state or TRB committee, due in mid-July.

10:00 a.m. – 10:15 a.m. **Break**

10:15 a.m. – 11:00 a.m. **Follow-Up Actions by Subcommittees** Franco/Lubbers

- a. Prepare to Work on Four New Treatment Stds.- Fwd. to AASHTO
- b. New Standards and Design Practices Sent to SOM
- c. Construction Guide Specs. for Emulsion Treatments
 - i. Components of spec: Specification references, materials, construction methods, equipment requirements, preparation of existing roadway, weather limitations, method of measurement, payment.
- d. Emulsion Treatments – Best Practices

11:00 a.m. – 11:15 a.m. **Membership Reviews**

- a. ETF Membership
 - i. 30 members, 22 friends. Represents industry, academia, federal agencies, state agencies.
- b. Sub-committee Membership
 - i. Residue Recovery and Testing: Arlis Kadrmas
 - ii. Design Group – Spray: Gary Hicks and Jim Moulthrop
 - iii. Design Group – Mix; Gary Hicks and Jim Moulthrop
 - iv. Supplier Cert. and QA: Todd Shields
 - v. Recycling Emulsions: Todd Thomas
 - vi. Research: Darren Hazelett
 - vii. Asphalt Emulsion Liquid – Special Working Group (SWG) – Mike Voth

11:15 a.m. – 12:00 p.m. **Quality Assurance (QA) – Materials and Production** Franco/Shields

- a. Acceptance Testing: QC (Process Control), Independent Assurance
 - i. Has certification and acceptance process of manufacturer been addressed?
 - ii. Who inspects the plants? Independent contractor, agency?
 - iii. Referenced approved supplier certification AASHTO provisional spec. Who is administering it?
- b. Protocols for Agency Acceptance of Projects (Materials and Construction Workmanship)
- c. QC (Contractor) Plans and Requirements (Materials and Construction Workmanship)
- d. New Product Acceptance Procedures. (NTPP)
 - i. Reviews the QC plan at the plant and conducts some independent testing. States can use that for approved products.
- e. Presentation by Todd Shields (Contact Todd for Presentation)
 - i. Currently focused on chip seals.
 - ii. Survey in previous ETF found that most issues were related to construction/workmanship not materials.
 1. Example – Aggregate loss due to low application rate. Pre-construction select appropriate rate, during construction – monitor as-placed rate.
 - iii. Quality Phases
 1. Pre-construction: Define material specs, construction specs, QC plan, mix Design, project Selection, equipment, workmanship.
 2. Construction: Verify materials certifications, check application rates, and workmanship.

3. Post-construction: Performance/field monitoring – *Larry Tomkins*
 - a. Numerous laboratory tests mentioned on both emulsion residue and full treatment.
 - b. Predictive field tests: Friction, texture, IRI, moisture loss. When should test be run?
 - c. For both measures: What frequency would this be tested at? Start at 75,000 SY.
- iv. Players (all have input in each phase)
 1. Agency
 2. Suppliers
 3. Contractor
- v. Questions for Open Discussion
 1. What format will final document be in?

12:00 p.m. – 1:00 p.m. **Lunch Break**

1:00 p.m. – 1:45 p.m. **Quality Assurance (QA) – Education and Certification**

- a. Education and Training Leading to Certification of Personnel
 - i. Pilot exams was given at ISSA workshop to both DOT and industry personnel, average was 70%.
 - ii. Second pilot test in Reno, NV. Prerequisite was web-based training, training was already established before the test was written. Some test questions were thrown out due to inconsistencies between test questions and training materials. Test results improved.
 - iii. Quality assurance was the worst performing topic area, materials was 2nd worst.
- b. Certification of Plants/Materials
 - i. In-progress, no update given.
- c. Accreditation of Labs
 - i. Casey Soneira from AMRL also gave an update on AMRL assessments for micro-surfacing and pavement preservation. Have done on-site assessments and have one accredited lab.
 1. Three programs: Accreditation, Assessment, and Proficiency sample. Need participants in proficiency sample to get good precision and bias measurements. *Commitment due July 1.*
 2. Also providing feedback to ISSA on slurry/micro performance tests, so eventually then can become AASHTO methods.
 3. Labs encouraged to participate in the proficiency sample programs for micro-surfacing in order to get a larger data set.
 - ii. Need to identify accrediting and manufacturer certification bodies and disseminate to industry. Also need to resolve certification vs. accreditation.
 - iii. Is there a need to develop a ETF website?
 1. Serve as a resource for accreditation information, list products.
- d. Discuss possible methods or approaches to get more formal FHWA support.
 - i. Develop short summary of ETF history, goals, and accomplishment to submit to different AASHTO subcommittees.
 - ii. Are there other mechanisms? Pooled funds, UTCs, National Road Research Alliance (NRRRA). Look to leverage NRRRA preservation sections.

1:45 p.m. – 2:15 p.m.

Research

- a. Research Roadmap Database Galehouse
 - i. NCPP website has a link to the research roadmap database. Originally developed in 2008 and published in 2009.
 - ii. Website includes a link to a database of Research Gaps for various categories (materials, construction, performance, etc.). Cross references completed research with objectives established in 2008. Gaps are listed as substantial, moderate, small, and none.
 - iii. NCPP is updating database to include state-funded projects. The current database only summarizes anything on TRID and TRIS.
 - iv. Database is also capable of running a keyword search.
- b. NCHRP Problem Statements Hazelett
 - i. Past synthesis topics and research needs statements were presented. Contact Darren for more information.
 - ii. Proposed RNS: Design and Construction Specifications for Pavement Preservation Treatments – Fog and Scrub Seals.
 - 1. Consider pulling scrub seals out, as it is not as far along as other treatments we will be working on.
 - iii. RNS Format: Template is on NCHRP website.
 - iv. NCHRP Concern: It is difficult to see interim results for some projects.
 - v. Research Subcommittee is soliciting RNS for topics of interest
 - vi. Asphalt Mixes: Emulsions, WMA, HMA
- c. Other Research

2:30 p.m. – 3:00 p.m.

Ongoing Research

- a. LTTP and Pavement Preservation Hicks
 - i. Presentation by Gary Hicks, contact him for slides.
 - ii. Research compliments MnROAD/NCAT efforts. Those efforts look at comparing treatments, LTTP is focused on effects of treatment timing and distress propagation rates. Treatments and 0, 2, 4, 6, 8, and 10 years. Existing pavements are expected to be in good condition.
 - iii. Path forward – Complete experiment planning (2016) including construction guidelines, construction data requirements, performance monitoring requirements, others. Begin soliciting projects and experiment (2017).
 - iv. Supplemental sections are welcome.
 - v. Finishing construction guides is critical to ensure consistency.
- b. Mn Road/NCAT Pooled Fund Study Moulthrop
 - i. Presentation by Jim Moulthrop, contact him for slides.
 - ii. NCAT 280 includes numerous surface treatments and thin overlays (i.e. OGFC or 4.75mm mixes).
 - iii. MnRoad will have similar treatments with adjustments for cold climate.
 - iv. Goal is to compare treatments to control.
- c. Discussion on Research Needs and Strategic Planning
 - i. Is there the opportunity to use a broader approach in scoping research needs and strategies? Cost of pavement construction and maintenance relative to funds needed for research.

3:00 p.m. – 5:00 p.m

Subcommittee Breakouts and Reports

- a. Residue Recovery and Testing: Arlis Kadrmas
 - i. Compared AMRL samples from 2014 and 2015.
 - ii. Discussed sampling for MnDOT either through NCAT partnership or NRRRA.
 - iii. Task force is open to discussing and including topics from Texas A&M and NCSU studies. Will also test under current specs and compare to new methods.
 - iv. Ash content test will be through ASTM process by the end of 2016.
- b. Design Group – Spray: Gary Hicks and Jim Moulthrop
 - i. Working on scrub seal specification, materials are done working on a separate emulsion specification. Design practice is also in draft form.
 - ii. Remaining issues: Emulsion spec, ensure polymer type does not degrade with recycling agent. Rejuvenating emulsions.
 - iii. Will work to complete before August.
- c. Design Group – Mix; Gary Hicks and Jim Moulthrop
- d. Supplier Cert. and QA: Todd Shields
 - i. Discussed format, decided to draft a stand-alone document for QA guidelines. Next step is to develop outline.
 - ii. FHWA coming June 2017 for many preservation treatments.
 - iii. AI is in process of implementing asphalt emulsion technician training program.
- e. Recycling Emulsions: Todd Thomas
 - i. Waiting on comments from AASHTO on documents submitted.
 - ii. Developing RNS either on central cold plant or CIR. Suggestion to send central plant document to Brian Diefenderfer.
- f. Research: Darren Hazlett
 - i. Discussed RNS for tack, fog, and CIR.
- g. Asphalt Emulsion Liquid – Special Working Group (SWG) – Mike Voth
 - i. Next topic is review of SPG Research

Day 2

Friday May 6, 2016

8:10 a.m. – 10:30 a.m.

Presentations and Discussion on Performance Grading Specifications

- a. Amy Epps Martin – TxDOT Effort: History, Validation, Development ([Attachment 4](#))
- b. Richard Kim – NCHRP 9-50 Effort: Summary of Standards ([Attachment 5](#))
- c. Darren Hazlett – TxDOT Implementation: Hurdles, Industry Concerns, Funding, AASHTO Specs ([Attachment 6](#))
- d. Gayle King – Comparison of Approaches + National Implementation Needs ([Attachment 7](#))

Discussion Points

- Challenges in submitting a specification.
 - Equipment availability
 - Precision and bias
 - Setting limits
- How much does construction/best practices impact performance? Field validation vs. Laboratory validation?
- TxDOT SPG sent to AASHTO Tech Section 2a.

Next Meeting: Fall 2016, Date and Location TBD

Attachments:

1. Meeting Agenda
2. Sign-In Sheet
3. FHWA PPETG Meeting: Technical Report
4. SPG Presentation, Amy Epps
5. NCHRP 9-50 Presentation, Richard Kim
6. TxDOT Implementation of SPG Presentation, Darren Hazlett
7. Combining TxDOT SPG and NCHRP 9-50, Gayle King