

Final Meeting Notes  
FHWA Pavement Preservation Expert Task Group  
December 14-15, 2009  
FWHA Emulsion Task Force  
December 13-15, 2009  
Doubletree Paradise Valley  
Scottsdale, AZ

## **Introductions and Welcome**

The Pavement Preservation Expert Task Group meeting was called to order at 8:00 am on Monday, December 14, 2009 by Mr. Denny Jackson, KBA and Industry Co-Chair. Mr. Jackson welcomed the new members and invited guests. The membership roster was circulated and attendees were asked to update or add their contact information.

[ATTACHMENT #1 – PPETG Membership Roster](#), [ATTACHMENT #2 – ETG Meeting Agenda](#)

Mr. Jackson stated that the Emulsion Task Force was meeting separately.

[ATTACHMENT #3 – ETF Membership Roster](#), [ATTACHMENT #4 – ETF Meeting Agenda](#) They will join the PPETG on Tuesday, December 15 and will report on their meeting.

Mr. Jackson started the meeting by asking the attendees to state why pavement preservation is important to them. Selected comments include:

- Mr. Mike Voth, Federal Lands Highway Division, stated that pavement preservation provides cost savings.
- Mr. Todd Thomas, Road Science, reiterated that there needs to be awareness that agencies that use pavement preservation as an alternative experience a cost savings.
- Mr. Jeff Forster, FHWA, stated that properly managed roads promote good traffic flow.
- Mr. David Peshkin, Applied Pavement Technology, stated that preservation is better than the alternative and needs more consideration.
- Mr. Kent Hansen, National Asphalt Pavement Association (NAPA), noted the need to preserve the pavement structure.
- Mr. Jon Rice, NACE Representative, commented that pavement preservation keeps good roads in good condition.
- Ms. Lita Davis, Friend of the Committee, added the preservation treatment selected can also provide skid resistance.
- Mr. Chris Newman, FHWA and Co-Chair, stated that preservation gets the most out of our infrastructure as possible.
- Mr. Craig Olson, APWA Representative, commented that the bicyclists also appreciate good roads and that the elected officials in his community understand the importance of preservation.

- Mr. Mafiz Mian, Arizona DOT, stated there should be focus on the quality of chip seals.
- Mr. Bill Hurguy, Arizona DOT, added that the AZ DOT ties pavement preservation with their maintenance forces, and that maintenance administers the program.
- Ms. Anita Bush, Nevada Department of Transportation, noted that preservation is a collaborative effort within the agency, including the design division.
- Mr. Steve Mueller, FHWA, added preservation is always about cost savings and that the mindset needs to switch from building it towards successfully managing it.
- Mr. Caleb Riemer, University of Oklahoma Ph.D. student, added that the textures of the roads are also a factor.
- Mr. Steve Varnedoe, National Center for Pavement Preservation (NCP), added that another benefit of keeping good roads in good shape is improved safety.
- Ms. Janice Williams, Louisiana Department of Transportation & Development (DOTD), feels that pavement preservation gives practitioners tools to use and a better way to manage resources.
- Mr. Larry Galehouse, NCP, commented on the need to meet motorists' expectations.
- Ms. Tammy Sims, Texas Department of Transportation, noted the importance of dedicated funding and a pavement management system.
- Mr. Larry Rouen, Caltrans, stated there has been reorganization in Caltrans preservation division.
- Mr. Russell Thielke, New York State Department of Transportation, added that the culture has shifted to preservation technology and that different regions need to compare different treatments.
- Mr. Ed Denehy, New York State Department of Transportation, stated that preservation is in the maintenance division, and they need to put the tools developed in his bureau to empower them to make the right decisions.
- Mr. Rod Birdsall, All States Asphalt, stressed the importance of establishing the criteria to determine treatment selection and having performance measures to apply the most economical treatment.

Mr. Jackson recapped the comments by stating there is a passion for pavement preservation and it is important to disseminate that passion. He sees the Foundation for Pavement Preservation, NCP, and the PPETG as an integral part of spreading the benefits of preservation.

Mr. Jackson asked for a motion to approve the meeting notes from the May 2009 meeting in New Orleans, LA. Mr. Peshkin made a motion to approve the notes, which was seconded by Kent Hansen and unanimously approved by the members.

## State of the States

Mr. Jackson started the discussion on the state of the states, with the intent to share success stories and share lessons learned. It's beneficial to learn from the triumphs and mistakes of others.

### Pending Reauthorization Bill

Mr. Newman did a presentation on the pending Reauthorization Bill. [ATTACHMENT #5](#) He noted that SAFETEA-LU has expired and the recovery act (ARRA) did include a lot of pavement preservation funding. The general understanding is that Congress would like to see how our infrastructure is doing, what needs to be done, and where it is going. There needs to be some flexibility for states to structure their own goals and incorporating the interstate system is an important part of the network. We need to take a proactive approach in making a closer connection between pavement preservation and pavement management. FHWA continues to support pavement preservation programs by working with TSP2, NCPP, and the ETG. FHWA would like to see these programs working more concretely together. Mr. Newman would like to get the Division Offices more involved, to identify best practices, and measure and analyze data. Mr. Newman added that some Division Offices act more independently, others might not be proactive, and some are more reactive with a pavement management program. FHWA and State and Division Offices need to put preservation as the top priority. The offices are getting educated through Peer Exchanges, like the National Asset Management meeting held in Seattle in October 2009. During the spring 2010 meeting they will specifically address how the states take the leadership of pavement management. Mr. Newman said that the States need to make better use of the information acquired by HPMS (Highway Performance Monitoring System) and Interstate Highway Systems (IHS). FHWA is working with contractors and Asset Management to develop a pilot course, similar to the Red Book, to show the health of their networks. There is a need to better understand how the States work, to get more out of what we are already doing. There was some discussion regarding future funding. Mr. Mueller stated that Mr. Ray LaHood, Secretary of Transportation, has listed five key priorities in a December 1, 2009 letter. [ATTACHMENT #6](#) *Mr. Montenegro provided the NAPA Action News article on the Transportation Appropriations Bill.* [ATTACHMENT #7](#)

### Strategy for Dedicated Funding in Reauthorization Bill

Mr. Rice started the discussion regarding dedicated funding by suggesting more emphasis working with the Metropolitan Planning Organizations (MPOs). There are some concerns that this approach might be counterproductive and that local agencies do not want to have to rely on the MPOs. Mr. Newman stated that they haven't been talking with the MPOs and they are focused at the DOT level and LTAPs. Mr. Rice stated that LTAPs have provided good training for counties and cities but they are still missing the MPO. The middleman is unaddressed, like the National Association of Regional Councils (NARC). Mr. Rice suggested that working with them might gain more visibility for program funding. Mr. Rice stated that NACE is working with the National LTAP centers, and they are targeting managers and maintenance directors. Mr. Newman added that some counties have bigger programs than the DOT's and need basic training, while others need more detailed training. He noted that some LTAP centers offer many

training opportunities, like George Huntington with the Wyoming Technology Transfer Center. Mr. Rice stated the Subcommittee on Supporting Preservation Centers will be sending out a survey to the LTAP centers to identify the types of training desired. Mr. Mueller added that material presented during the 8<sup>th</sup> National Conference on Asset Management is available on-line. There is a good report on performance-based management by the Metropolitan Transportation Commission (MTC), the MPO for the Bay Area. [ATTACHMENT #8](#) *Mr. Mueller provided the TRB presentation, A Performance Based Approach to Street & Road Funding, Theresa Romell and Sui Tan, MTC.* [ATTACHMENT #9](#) They have federal aid to collect preventive maintenance data, and the presentation addresses how they prioritized funding. The conversation regarding targeting MPO's continued and it was noted that MPOs are planning organizations and have no ownership of bridges or roads. There was some brief discussion regarding the importance of mass transit, and its influence on pavement preservation. Mr. Mueller stated that by targeting as few as 50 MPOs, it could make a huge difference in the ways they handle the data. Mr. Newman added that even with legislative support for mass transit, pavement preservation is needed to assist the transit industry. There were additional comments regarding concerns about regulations and the ability to get projects out to bid, in order to receive the funding. Mr. Peter Montenegro, BASF, stated that FP2 has adopted a new corporate structure and is now a lobbying organization. Mr. Bill O'Leary, President of FP2, wrote an article regarding the change in the Winter 2009 issue of Pavement Preservation Journal. [ATTACHMENT #10](#)

#### AZ DOT – Status of Pavement Preservation Budget

Mr. Hurguy discussed the changes with Arizona's preservation budget and techniques. Prior to 2005, the treatments were milling, filling, and overlays. Around 2005, extra money was used for the districts for sporadic fog sealing. Three Districts put together a pavement preservation program, not just with extra money but also with funds from the Capital program. They are working to get procurement money for pavement preservation. They now have \$10M of federal aid money. The ARRA (American Recovery and Reinvestment Act) projects have helped promote pavement preservation education. Overall, the budget in Arizona is very bleak, projected with a \$1.5 billion short fall. He added that on the good side, they have started to shift money from expanding capacity into pavement preservation. He stated that some of the decorative freeway accents were funded by the local enhancement projects and the developers were responsible for building the unused interchanges. Mr. Peshkin inquired about the interaction between pavement management and pavement preservation. Mr. Hurguy stated that Arizona DOT is involved with the Districts every day regarding project selection. They work with Mr. Mian to ensure that the projects coincide with the overall system plan. He added that the AZ DOT definitions for pavement preservation are evolving to be the same definitions as the FHWA. Mr. Galehouse reiterated the importance of speaking the same language, including the Partnerships, to ensure that the money won't be misappropriated. He also stated that there are good preservation champions in Globe, Tucson, and the Central Office. Mr. Hurguy added that they won't do preservation techniques on any road that needs to be rebuilt.

The discussion regarding how other states have been affected by budget cuts continued. Mr. Reimer added that Oklahoma has ~5% cut every month, they are proactive not

having furlow days, and they are cutting new building funds. The FHWA Oklahoma Division office works well with Oklahoma DOT. Ms. Bush stated that NV spent \$12M on chip and fog seals, and has \$25M for District programs, including recycling and microsurfacing programs. In early 2000, the budget was twice as much. The Nevada DOT pavement management system is based on service life and remaining service life, based on an 8-year cycle versus a 20-year cycle. The remaining service life determines the project list and they review the roads every 2 years. They do visual inspections and the Central Office prioritizes the projects. The districts accept their recommendations. Ms. Williams stated that the Louisiana DOTD gets funding from the gas tax, some from truck permits, and it all goes into a transportation trust fund that can't be changed without a constitutional amendment voted on by the people. They must get approval from the legislature to spend the money, and there will be a shortfall next year. In the past 6 years, they went from 5,200 employees to 4,700 employees and they are still discussing where to find additional budget cuts. An article written about the LA DOTD is available at <http://www2.basf.us/AcrylicsDispersions/asphalt/docs/TreatmentsTailored25DAA7.pdf>. **ATTACHMENT #11** Three different types of treatments were used on one road. They developed a new specification for 1-inch hot-mix pavement design for pavement management projects. They did a project this summer with shot blasting equipment to correct a skid problem, and placed a rejuvenator on top. It is reported to have worked well with the pavement management group considering future uses. Ms. Sims stated that TX DOT has regionalized support functions, going from 15K employees to 12K, mostly through attrition. Pavement preservation funding is actually better. State funded projects have increased, with the administration pushing Districts to spend maintenance money on pavements. It increased from between \$250M and \$350M, to \$400M per year. It used to be out of \$1.1B that only \$200M would go to pavement preservation. Now about \$500M is going to preservation and very little to rehabilitation. The Districts develop a 4-year plan, and they have to justify their projects and prove that their projects work. Administration is transparent, so the taxpayers can see that they are getting the most of out their tax dollars. Ms. Sims stated that they take the pavement data and put it into the system, and it detects which pavement sections need a certain type of treatment. They put those back into the system using traffic loads, environmental inputs, etc. and it will predict what the conditions will be in the future. The predictions are collected every year and are very accurate. Louisiana DOTD also uses the (NCP) "quick check" method, and one District kept steady and actually improved their life expectancy. Mr. Varnedoe added that North Carolina used a quick check also.

Mr. Galehouse asked about cost effectiveness. Mr. Mueller said that there is a 1982 paper with a curve showing deterioration, spending \$1.00 saves \$4.00. The paper is available at <http://www.dennis.polhill.info/archives/150>. Mr. Mueller also referenced the SPS-3 Project, *Preventive Maintenance Treatment Performance at 14 Years*.

**ATTACHMENT #12** Mr. Galehouse added that we need some data to reflect the increased cost of mixes. Mr. Rouen stated that Mr. Hicks developed an analysis for Caltrans and it showed for every \$1.00 spent, the actual savings was \$6.00.

**ATTACHMENT #13** There are variations, depending on construction. Mr. Thielke stated that the cost of HMA overlays depends on the haul distance and they are still gathering data. He added that they've had budget cuts with mid-year budgets cut ongoing. NYS DOT Comptroller prepared a report on *The Dedicated Highway and*

*Bridge Trust Fund*, <http://www.osc.state.ny.us/reports/trans/dhbtbf102809.pdf>.

**ATTACHMENT #14** The pavement management group developed an Excel program to assist in module updates. It was to shadow what they had and the feedback was so positive that the Regions will use the model. Surface score is trying to move to pavement condition index, incorporating rutting and cracking into the issues. Mr. Denehy added that in 1992, there was \$100M for pavement maintenance and they were spending all that money and the scores improved. As the state money has been eliminated, they did get \$45M stimulus money through the procurement contracts. The paperwork and reporting was cumbersome. Spending in excess of \$500.00 must be approved by many different departments. Mr. Jerry Geib, Minnesota DOT, stated that the roads are deteriorating and in about 2 years, the funding will be reduced by 50%. The bad roads will increase from 2% to 6%. Mr. Rice added that Michigan is struggling with budget cuts, and that next year they have to cut \$2.5B from the budget. They will get funding money from maintenance. They are struggling to patch the whole system. Mr. Jackson asked Mr. Newman if the states are required to match funds? **Mr. Newman doesn't know about the federal aid eligibility but he knows in the past there were soft matches. There were alternate measures in lieu of state matches. Mr. Newman will find out what options are available.** Mr. Huerta, FHWA, stated that soft matches still exist but are being overshadowed. Mr. Rice added that in Michigan there are two Senators trying to introduce legislation that if unemployment is over 15%, no match is required. Mr. Rouen added that California has a \$21B budget deficit. They've instated 3 furlow days per month, resulting in a 15% pay cut. This saved about \$400M. The good news is that pavement maintenance is \$206M per year, for 2700 lane miles but there are more than 2700 lane miles. Mr. Jackson concluded the discussion by stating that at some point there will be a turnaround.

#### American Recovery and Reinvestment Act (ARRA)

Mr. Huerta made a presentation on the ARRA, also referred to as the stimulus economic recovery act. He also reported on the Northeast Pavement Preservation Partnership. **ATTACHMENT #15** Regarding the Bulletin Board posting requirement, Mr. Mueller suggested possibly making them web based, or waive them, or possibly have weekly meetings. Mr. Huerta stated that the Standard 1273 must be posted, exactly as written, including typing errors. Mr. Peshkin asked if the money spent created jobs. Mr. Huerta stated that it didn't necessarily create additional jobs but it did save jobs. Overall, pavement preservation was about 30% in terms of dollars. There was one warranty project in Oklahoma. Ms. Williams pointed out that Louisiana allocates an 8% overage on project funding. With the regular programs, any overages go back into the fund. Sometime in September 2010, any money remaining will go back into the federal general fund. This is being discussed at AASHTO. Without special authorization, the letting overages with ARRA funds will be lost.

#### **Break out into Subcommittees**

*The subcommittee updated goals referenced below are reflected in the current Strategic Plan.* **ATTACHMENT #16**

## Subcommittee Updates- Short and Long Term Goals

### Pavement Preservation: Acceptance and Implementation

Jeff Forster submitted the updated goals. Mr. Galehouse suggested having a MPO appointed to the PPETG. **Mr. Newman will contact a MPO organization to see if they have a recommendation.**

### Support Research Programs

Ms. Bush made a presentation on their updated goals. She also presented the results from a survey she conducted with the help of NCPP. It was sent out to States DOT's Materials, Maintenance and/or Research personnel and compiled by the NCPP.

[ATTACHMENT #17](#)

### Support PP center for Excellence and Regional and State Organization

Ms. Davis made a presentation on their updated goals and accomplishments. There was some discussion regarding how to avoid the public backlash of potential traffic delays during maintenance and rehabilitation. Caltrans notified the public by placing informational flyers on the residents' door knobs, which was very successful. Mr. Jackson complimented Ms. Davis' group for completing one goal at a time. Ms. Davis asked for additional suggestions and goals, to add to their responsibilities. Mr. Mueller stressed the importance of partnerships and added that the subcommittee has put a consistent message on the web. Mr. Galehouse added that the NCPP's website receives more than 1M hits a year.

### PP Training and Certification

Mr. Newman made a presentation on pavement preservation training and qualification. [ATTACHMENT #18](#) The report on training that is available is complete. The NCPP worked with Applied Pavement Technology to complete the training document, which is a living document that will continually be updated. The short terms goals have been updated, and the subcommittee has added a sustainability goal. In the end, sustainability will be parceled out to all the committees. Mr. Thielke stated that there is no money for training. Mr. Newman stated that NHI has many web-based courses that are free. FHWA is aware that funding for training has been reduced and Mr. Newman would like the ETG to develop training. **Mr. Thielke will notify the New York State DOT Districts that there is free online training available.**

### Portland Cement Concrete Pavement

Mr. Varnedoe stated that the group thinks the committee should be referred to as the Rigid Pavement Committee. They updated their strategic plan goals. It was suggested that committee members have the opportunity to meet with several groups during the breakout sessions. Mr. Jackson approved the committee name revision. The Rigid Pavement Committee would like additional members. Mr. Jackson requested that possible participant names be forwarded to Mr. Newman before extending an invitation to attend.

There was some discussion regarding the ability for subcommittees to meet throughout the year. Some suggestions included meeting online, teleconferencing, and webinars. If

minutes are taken, they should be distributed to the subcommittee members. Ms. Williams suggested that an option could be to have breakout rooms available during the PPETG meetings so subcommittee members could remotely participate if they can't attend the meeting. Mr. Newman stated there may be a need for microphones so people accessing the meeting remotely can hear the discussion. Mr. Hansen said that through NAPA he may have access for to push-to-talk microphones. He stressed that advance notice was needed for him to get these to PPETG meetings.

### **Pavement Preservation: Acceptance and Implementation**

#### Update on Fabric Checklist

Ms. Davis made a presentation on the fabric checklist. **ATTACHMENT #19: 1-31-10 Updated Version** They wanted to create a checklist for fabric use under hot-mix and chip seals. Ms. Davis stated that trade magazines were writing articles about the use of geotextile fabric and that process was being used in other parts of the country. Mr. Newman stated that the ETG will review the checklist before it will get published. He added that it won't be ready for TRB but it should be completed in time for the International Conference in April 2010. Mr. Galehouse stated that there are issues with recycling if fabric is used. Ms. Davis stated that the checklist is for applying the application and not for removal of the pavement. There was much discussion regarding whether or not the checklist should contain a disclaimer that there are issues with recycling when fabric is used. Mr. Newman stated that if someone is interested in this treatment, the recycling challenges should be included in the checklist. Mr. Birdsall stated that there should be caution before deciding to put down the treatment and before deciding to pull it up. Mr. Mueller noted that having a checklist for undersealing and cross stitching would be beneficial. Mr. Newman stated that whether or not fabric is considered a preservation technique isn't the main focus. It's important that the treatment be done correctly.

*Update: 1-31-10*

*Mr. Jackson emailed the ETG members the revised Fabric Application Checklist: "The revisions to the Fabric Application Checklist have been made and it is now ready for ETG members to review and comment. The Checklist has been reviewed/approved by the Asphalt Interlayer Association (AIA) and the State of California, Department of Transportation (Caltrans). Modifications that are shown (in blue) were made since AIA/Caltrans review, based on a national study. The goal to make the Checklist a national resource.*

*Current plans are to have the Fabric Checklist available at the First International Conference for Pavement Preservation (ICPP) in April in Newport Beach, California. To meet this timeline, it will be necessary for you to review and provide comments by Tuesday, **February 23, 2010**. Please send your comments to Ms. Lita Davis at [Ldavis1117@aol.com](mailto:Ldavis1117@aol.com), providing the page number from the Checklist that you are commenting on. Lita will then share all comments with FHWA."*

### ADOT Preventive Maintenance Effectiveness

**PRESENTATION- ATTACHMENT #20** Mr. Peshkin stated APTech is still working on the final report. There was some discussion regarding how the study might be improved but Mr. Peshkin stated that the report will show how the results of how the test was originally set up.

### **Support Research Programs**

#### Development of Caltrans Treatment Selection Program

Mr. Rouen gave a presentation on Pavement Preservation Strategy Selection. **ATTACHMENT #21**

#### FLH Polymer Modified Emulsion Study

Mr. Voth stated that the study is completed and getting ready for publishing. He anticipates that it will be ready for the April 2010 International Conference. Additional information is noted in the conclusion handout. **ATTACHMENT #22** The report will be available at the NCPP website after the final editing. In brief, they were looking at general to medium low volume roads, and uses for polymer modified asphalt. The literature review is a great resource. Low temperature recovery looks promising, the sweep test and low temperature results are positive. There are still gaps but Mr. Voth is hopeful that the pooled fund studies will address those items. Mr. Voth would like this study to be a catalyst for further study.

#### SHRP 2 R26, Pavement Preservation for High Traffic Volume Roadways

The project is over and a final report should be available through SHRP 2 by mid-year. Details will be provided at the next PPETG meeting.

Mr. Jackson welcomed the Emulsion Task Force members and guests to the PPETG meeting.

#### Reorganizing of FP2

Mr. Birdsall stated that Foundation for Pavement Preservation is now FP2, and the corporate structure is now a trade association. Mr. Moulthrop is the Executive Director. They want to align with the PPETG and the National Center. They have secured a Washington firm to represent the interests of pavement preservation. The Foundation established the Pavement Preservation Excellence Award that is presented to a public agency that has implemented a successful pavement preservation program. The award has been renamed the Jim Sorenson Memorial Award. Mr. Birdsall added that AEMA has rewritten the Emulsion Manual and it is available at [http://www.aema.org/index.php?option=com\\_content&view=article&id=83&Itemid=39](http://www.aema.org/index.php?option=com_content&view=article&id=83&Itemid=39). There will be web-based training available in April. There will be a charge and Mark Ishee is an instructor. Mr. Birdsall will provide the training information to Mr. Galehouse so it can be posted on the NCPP website.

## **Support PP Centers for Excellence and Regional and State Organizations**

### California Pavement Preservation Center Project Database

Mr. Rouen made a presentation on the Caltrans Pavement Preservation Database.

**ATTACHMENT #23** Mr. Rouen stated that Chico State developed the database and it is available at

[http://www.ecst.csuchico.edu/cp2c/innovation\\_database/innovation\\_database.php](http://www.ecst.csuchico.edu/cp2c/innovation_database/innovation_database.php).

He stated that it will be about 2 to 3 years before the full system will be implemented. He stated that the Maintenance Division will use the database as a reporting tool for the pavement preservation maintenance activities. He stated that anyone has the ability to log on as a guest and create a password. There is a Google Map® link to find exactly where the projects are located. Ms. Davis suggested that the photos be shared with the National Center and Mr. Rouen confirmed he would provide the photographs.

### NCPP Pavement Preservation Technical Appraisals

Mr. Galehouse did a live internet review of the FHWA National Technical Appraisal database. It is an ongoing survey and will be available for viewing within a month. Mr. Galehouse will email the website and password information for each state's data to the Chief Engineers that participated in the survey. The states will also be able to see the National data. Topic areas include general information, division, programs, public and political, and quality assurance. As Administrator, Mr. Galehouse can access each state's individual results. Mr. Newman would like the national level information available to everyone. Mr. Jackson asked Mr. Hurguy how Arizona handled the information obtained as a result of participating in the survey. Mr. Hurguy stated that they participated in the survey at the request of the local FHWA office and that not all the feedback was warmly accepted but it has all proven to be beneficial. Arizona will implement approximately 2/3 of the recommendations and the other 1/3 is being reviewed to see if the recommendations are best for Arizona.

### Texas Pavement Preservation Center Summer 2009 Newsletter

Mr. Yetkin Yildirim, Texas Pavement Preservation Center (TPPC), presented their Summer 2009 newsletter which is available at

<http://www.utexas.edu/research/tppc/news/TPPC%20Newsletter%2015.pdf>.

Mr. Yildirim briefly discussed the sand patch test and suggested the PPETG review the material discussed in the newsletter. Parties that are interested in the training offered by TPPC should email Mr. Yildirim and he will contact them directly. Mr. Mueller stated that the Pavement Preservation Journal will send a topic to the TPPC and they will send out a call for papers. The papers are reviewed and submitted for publishing in the PP Journal.

## **Portland Cement Concrete Pavement**

### Full Depth Slab Replacement Video

Mr. Rouen showed the Rapid Set® DVD, *Construction Cement Highway Repair*. The video is available at [http://www.rapidset.com/Video/POA/POA\\_Video.html](http://www.rapidset.com/Video/POA/POA_Video.html), *Full Concrete Pavement*.

## **Pooled Fund Studies**

### UDOT/University of Utah – Pooled Fund Study Proposed by Federal Lands

Mr. Kevin Van Frank, Utah Department of Transportation, stated that there has been some discussion about the need for a performance-based emulsion specification, including weather criteria. Several years ago, AASHTO was approached to fund the study but the project was rejected. The ETF is to the point to determine the characteristics that are relevant to the performance of chip seals. In this regard, there will be a statement on the scope of a pooled fund study at the end of February or March and the ETF will take a look at it. The focus is to gather materials, in accordance with the current technology available, and test the validity of the performance capabilities. They will encourage States to recommend chip seals with a high probability of failure to participate in the study. Mr. Van Frank feels that the study will be regional, select projects from users groups, and contract with resources that are regional. Mr. Larry Scofield, American Concrete Pavement Association (ACPA), added that the intent is to deliver a specification and not to study chip seals. He stated that the best information already available will be incorporated in developing the specification. Mr. Van Frank stated the most of the research Federal Lands has done was funded by industry. Mr. Sorenson committed \$20K towards the specification and several states have also agreed to help with funding. Mr. Franco added that the majority of the money will be spent on collecting the data and it will cost very little for actual testing. They hope the States are encouraged to participate by the Chief Engineers. Mr. Denehy stated that Applied Pavement Technology will be notified when the solicitation is available and that the agencies that will be impacted need to know it is available. They are asking each State for \$20K but their commitment will involve more than just funding.

### Validation and Implementation of Hot Poured Crack Sealant

Mr. Denehy distributed the HANDOUT for the TPF Studies, Detailed View.

<http://www.pooledfund.org/projectdetails.asp?id=1233&status=1> Performance-Based Guidelines for the Selection of Hot-Poured Crack Sealants has been published and the next step is a comprehensive field study. They have developed a table with the sealant grades on it but in order to continue the study, they must perform field tests and validate the study. The second step is laboratory validation, with round robin testing.

## **Greenhouse Gas Emission**

### Greenhouse Gas (GHG) Emissions

Mr. Francois Chaignon, Colas, started the discussion on greenhouse gases with a presentation on Calculating CO<sub>2</sub>e. [ATTACHMENT #24](#) In addition to the points covered in his presentation, he stated that a pavement with a smooth ride will save approximately 4.5% in gas. Mr. Mueller stated that the Moving Cooler Report documents the GHG increase since 1990, and can be viewed at <http://www.movingcooler.info/Library/Documents/Moving%20Cooler%20Executive%20Summary.pdf>. Mr. Scofield stated that he's had several phone calls from contractors wanting to calculate their carbon footprint, which is incorporated into their contracts. There is a need for a collective database with an approved method and a technical procedure to follow. Mr. Colin Durante, Pavement Technology Inc., stated that APWA is

having a webinar on the calculation of the carbon footprint, at a cost of ~\$100.00. The training is available at <http://www.apwa.net/bookstore/detail.asp?PC=PB.E922>. Mr. Durante stated he hosts a simple calculator at <http://www.pavetechinc.com/Calculator.htm>. *The file to access the website to calculate the green effect into the pavement preservation efforts is on this CD as a separate file.* Mr. Chaignon stated that Colas has software that shows pavement preservation compared to HMA rehabilitation to determine the reduction of CO<sub>2</sub>e based on the treatment. Right now, the software is for internal use only. Mr. Hussain Bahia, University of Wisconsin, stated that results will vary depending on the software. He stressed the need for an organization to make some sense of the numbers. He is very concerned that the materials being used are being trivialized. Mr. Chaignon stated that the different fuels and moisture content are taken into account with the software. Mr. Bahia concluded this discussion by complimenting Colas for addressing the topic and stated that academia needs hard science from an unbiased group to get specific numbers that everyone can use.

**ATTACHMENT 25** Environmental Benefits of Pavement Preservation presentation, Fred Mello, Consultant to BASF

**ATTACHMENT 26** AASHTO 12/11/09 Journal, EPA Declares Greenhouse Gases a Danger; Vehicle Emission Regulation Next Step

**ATTACHMENT 27** Climate Change Draft Scoping Plan, Measure Documentation Supplement, prepared by the California Air Resources Boards for the State of California

**ATTACHMENT 28** Daily Journal of Commerce 12/08/09, EPA greenhouse gas decision worries contractors.

**ATTACHMENT 29** Executive Summary, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007

The entire report on the 2009 U.S. Greenhouse Gs Inventory Report at

<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>.

**ATTACHMENT 30** Greenhouse Gas and Climate Change Impact Analysis, Placer County Air Pollution Control District, August 26, 2009

#### Reduction of VOC Content of Asphalt Emulsion

Mr. Denehy presented Mr. Everett Crews' presentation on Volatile Organic Compound Emission. **ATTACHMENT #31** It was a recap of a presentation Mr. Crews presented at the Northeast Pavement Preservation Partnership Annual Meeting in November 2009.

#### **Emulsion Task Force Report**

#### Committee Report and NCHRP-14-17, Manual for Emulsion-Based Chips Seals for Pavement Preservation

Mr. Roger Hayner, Colas Inc., presented his committee update. **ATTACHMENT #32**

Mr. Mike Voth distributed the conclusion from the Polymer Modified Emulsion (PME) Study. **ATTACHMENT #33**

Mr. Andrew Hanz, University of Wisconsin – Madison, provided the draft copy of the Standard Method of Test for Determining Asphalt Binder Bond Strength by Means of the Bitumen Bond Strength (BBS) test. **ATTACHMENT #34** A committee was formed to

coordinate review of these draft procedures by the ETF. **Mr. Hanz will submit two test procedures with supporting documentation to Mr. Hazlett by the end of 2010.**

- ATTACHMENT #35** Emulsion Task Force Final Meeting Notes
- ATTACHMENT #36** Mission Review and Goals
- ATTACHMENT #37** Emulsion Task Force Attendance List
- ATTACHMENT #38** Emulsion Subcommittee List
- ATTACHMENT #39** ARC Project Emulsion Task Force Update, Improvement of Emulsion' Characterization and Mixture Design for Cold Bitumen Applications
- ATTACHMENT #40** FLH Study Conclusions and Recommendations to the ETF
- ATTACHMENT #41** FLH-PME Field Project
- ATTACHMENT #42** How Specifications and Tests are Accepted by AASHTO
- ATTACHMENT #43** Emulsion Applications Research Needs Survey
- ATTACHMENT #44** Michigan Chip Seal Research Project
- ATTACHMENT #45** Effects of Pavement Surface Type and Sample Preparation Method on Tack Coat Interface Shear Strength
- ATTACHMENT #46** NCHRP 14-17 Project Updated from Texas A&M University, Manual for Emulsion-Based Chip Seals for Pavement Preservation
- ATTACHMENT #47** Emulsion Uses MOD

## **Pavement Preservation: Acceptance and Implementation**

### Asphalt Recycling and Reclaiming Association

Mr. Thomas did a presentation on how the Asphalt Recycling and Reclaiming Association can champion pavement preservation efforts. **ATTACHMENT #48** Mr. Mueller suggested they continue with training issues and publishing articles. Mr. Thomas asked that the ETG membership email him suggestions at [tthomas@roadsciencellc.com](mailto:tthomas@roadsciencellc.com). He added that their website, ARRA.org is a valuable resource and has an on-line technical library.

### Trade Magazines

Mr. Montenegro did a presentation on how trade magazines are a valuable resource in the education of pavement preservation. **ATTACHMENT #49** Mr. Montenegro distributed an article, *Fed Push More Use of Pavement Preservation*, that was published in February 2009 in Associated Construction Publication. **ATTACHMENT #50**

### Treatment Performance Variability NYSDOT

Mr. Thielke presented a presentation on NYSDOT Pavement Preservation Overlay Performance. **ATTACHMENT #51** Mr. Peshkin asked if they have ever thought about applying a thin treatment, earlier in the life of the pavement. Mr. Thielke stated that they are working towards that by refining the treatments. The NYSDOT does a coding system that is done at the Region level. The pavement management group has started the process but it has not been completed. The data showing the cost effectiveness of pavement preservation depends on the Region and contractor availability. Mr. Scofield stated that there are several states working on oxidation timing and triggers for a

preservation study and they might contact NYSDOT. Mr. Thielke stated that they are finalizing the data and hope to it available by the next PPETG meeting.

### **Meeting, Conference, and Events**

#### First International Conference on Pavement Preservation

Mr. Mueller did a presentation on the April 13-15, 2010 conference in Newport Beach, CA. [ATTACHMENT #52](#) and [ATTACHMENT #53](#)

### **Last Words**

Mr. Jackson and Mr. Newman thanked everyone for their dedication. The next PPETG meeting will be held in May or June 2010 and the location has not been selected. Members will be notified once dates are selected.

The meeting adjourned at 12:30pm on December 15, 2009.