

## Conference Call Notes for March 22, 2005 Dust Emissions Joint Forum

### Participants:

Susan Hardy	Richard Countess	Tom Moore	Wayne Leipold
Jean-Paul Huys	Duane Ono	Scott Hanks	Lee Gribovicz
Lee Alter	Chat Cowherd	Gail Cooke	Shawn Kendall
Bruce Friedl	Julia Lester	Karen Magliano	Vic Etyemezian
Earl Withycombe	Mike Edwards	Jin Xu	Ken Cronin

### ★ New Member ★

Ken Hamilton had been wanting to get a more technically oriented representative of the agricultural community involved in the Dust Forum, and after some searching he had found Roel Vining of the Air Quality & Atmospheric Technology Development Team for the Natural Resources Conservation Service. There was no opposition to the additional help, and the Co-Chairs will add Mr. Roel Vining's name to the circulation list for DEJF information.

### ★ Causes of Dust Analysis ★

Vic Etyemezian explained that there are two prongs to DRI's current work. First they are working on the association between meteorological data with windblown dust showing up at IMPROVE monitoring sites. They are using the RAWS, Airport Met data, and the CASTNET sources of met data for comparison. The second area they are exploring is the percentage of coarse mass that results of wildfires. It was pointed out that on the worst dust days, we can have impact from something outside of fire and windblown dust. For example some high dust days come from Asian dust transport. There was a discussion on the chemical signatures that DRI is using to identify the components of the IMPROVE monitoring samples. The Project Oversight Committee set up a call on April 18<sup>th</sup> at 11AM Mountain Time to make a detailed review of the status prior to the next general DEJF call.

### ★ PM<sub>2.5</sub> Fine Fraction Analysis ★

Midwest Research Institute was awarded the contract to compare the PM-2.5 monitoring Federal Reference Method (FRM) to the cascade impactor used to determine AP-42 emission factors for fugitive which has been suspected of having a "particle bounce" problem, such that higher PM<sub>2.5</sub> concentrations are measured than are actually present.

Duane Ono recently traveled to Kansas City to look at the aerosol wind tunnel and sampling methods that are being used. He was happy to see that MRI can maintain very consistent dust concentrations in the range of 1,000 - 5,000  $\mu\text{g}/\text{m}^3$ . These high concentrations are being generated to assess the effect of a heavy dust plume that may pass the sampler from a heavy windstorm or from some mechanical generation (ie/ unpaved road traffic, Ag or mining work). They are getting PM<sub>2.5</sub> ratios in the range of 25-50% in fine Arizona road dust, with these results pushing the high end of what they have seen from field monitoring. And they are indeed seeing a high bias with the sampling results from this initial testing. In a preliminary test, the cascade impactors MRI used to determine the AP-42 PM-2.5 emission factor for fugitive dust were showing about 35% higher values than the "Partisol" FRM measurements. If this trend continues, it will likely result in a proposal to lower the PM-2.5 emission factor in AP-42 for fugitive dust sources.

They will be running Owens Lake dust shortly, and they will be getting additional samples from Gail Cooke in New Mexico and Tina Anderson in Wyoming. Susan Hardy wondered whether Utah will provide soil samples, and Scott Hanks explained that Utah AQD Management is still

considering how they will participate in this project. Shawn Kendall noted that Arizona is planning on gathering another couple of samples as well.

Chat Cowherd wants comments on the March 10<sup>th</sup> dated "Site-Specific Test and Quality Assurance Plan" (distributed prior to this call) by the end of this week. Soil samples need to be in by around April 30<sup>th</sup> at the outside. The project committee set a call for April 21<sup>st</sup> at 11 AM Mountain to review the results from Task 1 to determine if the PM-2.5 measurements from the cascade impactor had a systematic bias as compared to the FRM sampler.

★ Dust Natural/Anthropogenic Definition ★

After poor response the first time, the WRAP re-issued this RFP the first of the year, with an enhanced SOW include more case studies, and make more clear the WRAP's intentions. Environ was awarded the project in late February (\$65K contract still being finalized at this time), and Julia Lester was on the phone this date to report on Environ's plans for the project. She explained that they are just getting started, and are beginning by undertaking a source by source review of available data available to categorize natural and anthropogenic dust sources.

★ DEJF Projects: Windblown Dust Model ★

The Emissions Modeling is complete with Phase II upgrades to the windblown dust inventory from utilization of the 12 KM grid, using updated crop data and etc. Environ is now in the middle of analyzing the results, and the report will be released to the Dust Forum for initial review.

★ Dust Conference ★

The South Coast Air Quality Management District is co-sponsoring this conference along with the West Coast Chapter of the AWMA and the DEJF. It is set for May 10-11<sup>th</sup> in Palm Springs, California. Lee Alter noted that he has around 70 participants registered to hear presentations on four dust sectors: construction, mining, agriculture and road dust, along with the overview of the state of dust analysis.

★ IWG & Planning Team Meeting Report ★

Mike Edwards noted that the IWG talked about development of templates for §308 SIP's, and the group was favorably impressed with the web based Dust Handbook.

The Planning Team went through the WRAP budget plans and found that requests were about 24% over available funding at the beginning of the meeting. In new money, the DEJF had asked for \$20K additional for working on the Definition of Dust, and another \$30K for work on the fine dust fraction. The DEJF had also added \$80K for a new project for dust control evaluation in New Mexico, with all of this \$130K funded. Another project for \$50K to characterize Mexican dust was denied, and the \$10K budget for the Dust Conference was moved to WGA Administration. Thus the DEJF effectively received \$120K out of the original \$180K request.

★ Next Call ★

The DEJF calls are held on the fourth Tuesday of each month, with next call falling on April 26<sup>th</sup> at 11:00 AM, Mountain Time.