

**WRAP Dust Emissions Joint Forum Conference Call  
May 25, 2004**

*Notes courtesy of Lee Gribovicz.*

Participants included:

Duane Ono	Gail Cooke	Ken Hamilton	Gerry Mansell
Mike Edwards	Kermit Snow	Bev	Mohammed
Lee Gribovicz	Mel Joseph	Chenausky	Omary
Lee Alter	Barbara Trost	Bruce Friedl	Chat Cowherd
Wayne Leipold	Debbie Becker	Susan Hardy	Dale Gillette
Bob Gruenig	Tom Pace	Dave Dubois	Earl
Don Arkell		Jin Xu	Withycombe
			Patrick Gaffney

The agenda for this call is posted on the DEJF website, and the affiliation of these participants is listed on the second page of that agenda.

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Call Details

' Co-Chair Status '

On the last call Lee Gribovicz announced that Mike Edwards from the Idaho State Department of Environmental Quality had volunteered to step in and replace Carrie Mac Dougal as the new DEJF Co-Chair. Mr. Edwards was approved by both the Initiative and the Technical Oversight Committees (IOC/TOC) thus the appointment is now formally complete.

' Next Meeting '

Lee Alter noted that the tentative dates now selected for this next DEJF meeting are July 27<sup>th</sup> beginning at 8:00 AM, and continuing on July 28<sup>th</sup> from 8 am to 3 pm. The city selected is Reno, Nevada, but the logistic details of hotel and meeting room have not yet been finalized, so don't make your plane reservations yet.

This date Duane Ono led a discussion on the Meeting Agenda, and it was confirmed that the contractors will be providing updates on the 5 major DEJF projects, accompanied by member discussion on where the forum will be going with the projects next year.

Because DRI has an office there, it was felt that it would be convenient if some DRI local representatives could give an update on fugitive dust topics, in addition to the report on the 20% Worst Days Analysis contract before them. Susan Hardy wondered about whether we would have information on Source Apportionment Analyses, and

Duane noted that John Watson & Judy Chow are experts in this field with DRI in Reno.

Lee Alter pointed out that the forum had discussed an extra outreach effort to reach tribes that are interested in Dust Forum activities. It was suggested that the Co-Chairs check with Bob Gruenig, Toni Richards & Cathy Messerschmitt about contacting tribes in Nevada and California that might be within driving distance of Reno. And it was suggested that Lori Campbell of the Nevada Air Quality Division would also have contacts within the Nevada Tribal community. Duane Ono felt that this might be a good time to have a presentation on the state-of-the-art detailed windblown dust measurements & modeling that are taking place at Owen's Lake. Another possible topic was reviewing new work on satellite imagery in determining regional dust emissions. Chat Cowherd noted that MRI is working on a pilot study, using the "IKONUS" commercial satellite for identifying dust source areas in Clark County, Nevada. He noted that this satellite has one visible and four infrared bands for taking satellite images. Duane mentioned that different entities were vying for satellite time on this unit, and he noted that his agency had been "out bid" for time at least once. Therefore he suggested that we want to coordinate our efforts, so that we're not bidding against one another. Chat felt that he would be ready to at least discuss this project, if not having already completed the study by the July meeting date, and agreed that he could make a presentation on this work. Wayne Leipold noted that there are shortcomings with this methodology and wants to make sure that the speaker discuss these limitations to paint a complete picture of satellite imagery.

Lee Gribovicz noted that we are looking at a lot of "technical" presentations for this meeting, and he cautioned that we need to make sure the agenda allows plenty of time to look at SIP related issues for the States and Tribes. Mike Edwards noted that the State agencies would have to be adopting fugitive dust control strategies as part of the next round of §308 / §309 RH SIP's, and he wondered about whether the forum might consider holding some sort of workshop on the fugitive dust control methodologies that are currently in use. It was felt that this might be a good project for including in next year's dust forum budget.

Susan Hardy also suggested that the Forum consider some sort of Conference or Workshop, where each stakeholder or interest group described their objectives and interest in the dust discipline. It was acknowledged that this also might be a good idea to bring to the July meeting for further planning.

#### ' Report on SF Meeting & 2005 Planning '

Mike Edwards had attended the May 13<sup>th</sup> TOC meeting in San Francisco and gave a brief report on the activities at that meeting. He explained that the meeting begin with a presentation from Jeff Ehman off Pangaea Information Technologies, on the **WRAP Integrated Geospatial Information Management Strategy** (WIGIMS) project. This is a project to incorporate all the geospatial technical information produced by the WRAP (ie/ emission inventories, modeling results, monitoring values) into a single display where all the information can be considered holistically. Thus data from WRAP

websites like the EDMS, VIEWS, RMC and COHA would be available on a single GIS map to allow the user to evaluate the "big picture". Mike went quickly to summarize the project details, and explained that the recommended option is to adopt a "**Distributed - Mediated Standardization**" where users would access the data from a mediator such as DataFed ( Data Federation homepage is locate at [www.datafed.net](http://www.datafed.net) ) which contains a catalog of national data sources.

Mike went on to explain that the majority of the meeting was then dedicated to reviewing the progress of the Technical Forums' activities (including DEJF), and discussing guidelines for developing 2005-2007 Workplans and Budgets. He noted that the WRAP traditionally has had over \$4 MM in EPA grant money annually, but with addition competition from the other RPO's, that the 2004 Grant (2005 WRAP spending) would be reduced about 25% to \$3.08 MM. It was felt that there was plenty of money for the WRAP Forum's to complete their necessary tasks, but that they were being asked to prioritize and direct their funding to focus on §308 & §309 SIP's and TIP's.

Mr. Edwards noted that the WRAP schedule now calls for an initial workplan draft submitted to Tom Moore by June 25<sup>th</sup>. Then the WRAP Planning team will meet in Denver July 20- 21<sup>st</sup> to review the overall workplan/budget, with a goal of having our WRAP draft finished by August 20<sup>th</sup>. Then the WRAP Workplan/Budget would be finalized by September 10<sup>th</sup>, and brought before the WRAP Board for final action at their October meeting.

Lee Gribovicz pointed out that this schedule was a little tighter than had been discussed on the last DEJF call, thus he suggested that the Co-Chairs need input from DEJF members sooner than had been projected. The current dust forum projects may be continued next year to build on this year's results. Duane asked each of the Dust Forum Project Leaders to provide projections for next year's budget on continuing their projects. Other forum participants may also want to suggest new projects for next year. A deadline of June 11<sup>th</sup> was set for leaders and other forum members to get suggestions to the Co-Chairs. Mike Edwards will summarize the project proposals to include in next year's draft workplan. The next call will be held on June 22<sup>nd</sup>, at which time the Co-Chairs will go over their Draft Workplan.

#### ' DEJF Projects: 20% Worst Days Analysis '

Dave Dubois and Jin Xu of DRI gave an update on this project. This DRI work would "develop and document a methodology for assigning worst dust days at IMPROVE monitors within the WRAP domain to a set of source classes" and to "use the methodology to categorize worst dust days in the WRAP domain over the period 2001-02".

This date Dave informed the call participants that the contract has been completed and the money (\$50K) has been appropriated. Jin explained that they are looking at Worst dust days events, on local, regional, transcontinental scales. They are looking at all data, and taking a second look at suspected significant categories. Dave explained that

he is completing a meteorological analysis to determine representative areas where the methodology can be tested to look at localized events. It was confirmed that team members will be able to attend the July DEJF meeting to provide an update on the work.

Duane raised the question as to whether they have identified Asian dust contributing on the Worst Days and the DRI representatives noted that they had seen global impacts in at least one incidence. They were asked if there is any coordination with the micro-inventories completed by the In & Near Forum, and Mr. Dubois confirmed that they are planning on communicating with that Forum.

#### ' DEJF Projects: Dust Handbook Project '

The Review Team for this project consists of Wayne Leipold, Susan Hardy, Jean-Paul Huys, Don Arkell, Rob Farber, Ed Berry, Lee Alter & Duane Ono. Countess Environmental (working with Midwest Research's Chat Cowherd) is the contractor for this Web-Based Handbook project. The contract was awarded in April, and this date Chat explained that the first draft project workplan had received comments. It was revised and resubmitted to Duane Ono this month. They also have a Draft Chapter completed, to show the format to be utilized in the Handbook. They have received verbal comments on this Chapter, and one set of written comments as well. They are using AP-42 as main source of dust Emission Factors, but are also looking at localized work that has been completed on EF's. Chat noted that July 9<sup>th</sup> is the submission date for the first Draft handbook

Dr. Cowherd also noted that they are pushing ahead on the development of the Handbook Website. He felt that they would have a template or structure off the website by July, leading to completion of the project by the end of the year. He noted that Wayne Leipold and Susan Hardy had provided language for the Handbook making it clear that we are simply providing information on calculating dust emissions from the source in this Handbook, as distinguished from emissions that actually disperse to a receptor.

#### ' DEJF Projects: Improved PM<sub>2.5</sub> Fraction Estimates '

This project is to complete an evaluation of the accuracy of calculated values for the PM<sub>2.5</sub> fine fraction of dust. Midwest Research is also working on this project, and Dr. Cowherd noted that they have completed a draft SOW on May 12<sup>th</sup>. The proposal is to conduct laboratory based wind tunnel studies for developing known dust clouds. These dust clouds would then be measured by 4 TEOM reference monitoring devices (2-PM<sub>10</sub> & 2-PM<sub>2.5</sub>), and compared against values monitored by traditional cyclone impactor sampling system heads. They would measure 4-5 concentrations ranging from around 500 up to about 20,000 µg/m<sup>3</sup>. They would be looking at various types of soils, and are planning on evaluating about 5 different samples. One type will be from the Owen's Lake region, and they will be taking recommendations on others from the DEJF membership. Bev Chenausky suggested that they look at alluvial soils.

This work could begin around June 15<sup>th</sup> if the contract is completed, but MRI hasn't provided any cost estimates as of yet. The workgroup established for this project consists of Rob Farber, Barbara Trost, Bruce Friedl, Gail Cooke, Duane Ono, Roger Isom, Cathy Messerschmitt & Don Arkell, and they will look to finalize a contract when the cost proposals are received.

Dr. Cowherd had indicated that because of the resuspension methodology to be use, he felt that the data could be representative of mechanically generated, as well as windblown dust. However, Tom Pace didn't think that they'll get a true PM<sub>2.5</sub> concentration because he didn't feel they would be accurately generated during this lab study. He felt that the results probably wouldn't be representative for paved roads, where the activity actually generates PM<sub>2.5</sub> (grinding down dust particles), but might be better on other mechanical generation such as Ag tilling or construction dust. Chat agreed that there are questions and this issue needs to be checked out, maybe through follow-up field or in-situ testing.

#### ' DEJF Projects: Natural vs. Anthropogenic Definition '

Draft definitions of **Dust** ("Particulate matter that is or can be suspended into the atmosphere as a result of mechanical, explosive, or wind-blown suspension of geologic, organic, synthetic, or dissolved solids. Dust does not include non-geologic particulate matter emitted directly by internal and external combustion processes") and **Fugitive Dust** ("Dust that does not enter the atmosphere through a vent, duct, stack, or tailpipe") were reviewed on the March DEJF Call, along with a table of examples for "Natural" and "Anthropogenic" sources of dust.

Feedback and comments were received from DEJF members and SIP Planners, and Lee Alter will be preparing edits, based on these comments. This date he explained that he had not completed any revisions at this point, but planned on completing the proposal in the next month or so.

#### ' DEJF Projects: Windblown Dust Model '

Phase I Report on this project was finalized March 12<sup>th</sup> (available on the DEJF website), and discussions on Phase 2 refinements are now proceeding with Environ and the Regional Modeling Center. This date Gerry Mansell reported that he, Mohammed Omary, Gail Tonnesen and Tom Moore had a call on this matter last week. They are currently looking at alternative methods for calculating windblown dust using some "global models", either in their entirety or by taking useful portions for incorporation into the WRAP model. They will summarize their review and compare the techniques against the current "MacDougall Method", in about a week. Then they'll make recommendations to the review committee (Lee Gribovicz, Tom Pace, Duane Ono & Dale Gillette). A call was targeted for June 18<sup>th</sup> to discuss the recommendations with this committee. Gerry noted that one of the most troubling aspects of the current model is the threshold velocity, and they'd probably be proposing some revised algorithm for

that dust generation threshold, along with additional fluxes regarding soil types and disturbance levels.

After this Committee call, Mike & Duane will run the conclusions through forum membership for consensus. It has continually been noted that the WRAP needs the windblown dust inventory by about August, in order to stay on schedule with the §308/§309 modeling effort. Thus it was emphasized that time is of the essence in this project.

' Next Call '

The DEJF calls are to be held on the fourth Tuesday of each month, with next call falling on June 22<sup>nd</sup> at 11:00 AM, Mountain Time (10 AM, Pacific). The main focus of this next call will be the Draft DEJF workplan & budget.