MEETING SUMMARY
WRAP Emission Forum Meeting
Reno, Nevada
July 14-15, 2004

Meeting Attendees:

Dennis Schwehr, WEST Associates
Alice Edwards, Alaska DEC
Chris Ramsdell, ID DEQ
Brock LeBaron, UT DAQ
Lori Cambell, NV DEP
Brenda Harpring, NV DEP
Jenifer Williams, ITEP
Bob Palzer, Sierra Club
Mike Sundblom, AZ DEQ
Michael Uhl, DAQEM Clark County
Wayne Leipold, Phelps-Dodge
Tom Moore, WRAP Technical Coordinator
Cathy Messerschmitt, NTEC/WRAP Tribal Coordinator
Jeff Stocum, OR DEQ (phone)
Roy Doyle, CO DEQ (phone)
Heather Lancour, NM EPD(phone)

EDMS Project Status Report/QA Plan/Testing/Training:

Alice Edwards and Dennis Schwehr provided a brief status report of the EDMS project. The beta version is now available to start looking at. Pechan delivered drafts of the quality assurance project plan, testing plan, and user guide on Friday, July 9th. There is a need for specific testing from Emission Forum members. In addition we may want some independent testers to focus on specific areas. Jenifer Williams mentioned that the independent testers for TEISS looked at usability, the user's manual, and GIS interface. She noted that it really helped to have a lot of people looking at the product. The cost for TEISS independent testing contractors were 18K and 15K. They spent around three months completing the testing. Michael Uhl suggested that we may want to have testing for the public aspects of the system as well (maybe a focus group type of setting with a contractor leading the effort). The public look would be more at the content and information portion of the system. It is important to make sure that the basic understanding of the information is there and that there is enough documentation to allow a casual user to understand what is presented. States and tribes can test functions and usability for users that have some knowledge of emissions.

The Forum needs a schedule of which aspects of system are ready to test when. The group would like to cast a broad net to states and tribes to test usability and functions of the system. Types of testers include technical staff, planners, management users. The Forum could hire contractor support testers to run the EDMS through its paces.

The Forum devised the following strawman testing proposal:

1) Pechan – initial/internal testing
2) Emission Forum testers – check to see if what we put in what is shown
3) Contractor support testers – put EDMS through its paces (2 $20K contracts)
4) General testers- various (modeling, monitoring, emissions) technical staff, planners, management
5) Public (help options)

The group felt that tutorials would be useful and that having them on line could be helpful. The on line help would also be important.

The group wanted to understand how to get feedback to Pechan for corrections noted during the testing. Need to define and clarify these feedback formats. It was mentioned that Pechan plans to use Bugzilla to track bugs as well as work sheets.

The forum members felt it was important to lay out a testing schedule. The testing may end up being phased as various modules are completed. Pechan will be loading the preliminary NEI 2002 data for testing so that testers have data to look at. This should be done very soon. The testing schedule should consider:

1) When should each group of testers be scheduled to test?
2) Which modules should each group test?
3) What features should be tested – complete system [order]
4) How much funding should be available for contractor support? The forum felt about 75K of 2004 funds should be made available. It would be necessary to define when this will occur and the form/scope of test. Would cap test contracts with dollar amounts.

The following persons expressed an interest to assist with testing: Wayne Leipold, Mike Sundblom, Michael Uhl, Heather Lancour.

<u>EDMS Gap Filling</u>

Dennis Schwehr mentioned that we still need to find out the best way to fill gaps in system. We need to develop a protocol as to what to do. It was noted that we need to get Pechan to tell us very specifically what gaps exist and the options there are to fill those gaps. This will be agency specific in some instances. Should make the data sources into a table that can be reviewed. Data sources include 1) Preliminary 2002 NEI –grown from 1999 EPA NEI; 2) Actual 2002 CERR submittal; 3) Existing regional-consistent WRAP Region EIs (on-road, off-road).

We also need to have the ability to resolve conflicts when data inconsistencies cause modeling problems. The forum also agreed that we need a technical protocol for state/tribal overlap. Other conflicts can likely be addressed when they arise through mediated discussion between the entities and WRAP staff. The group felt that we could likely adopt the approach for conflict resolution set out in the WRAP strategic plan.

It was pointed out that the EDMS will be populated with the 2002 data submitted to NEI following the first EPA QA pass and subsequent corrections by data providers. Windblown dust, NH3 and biogenics data from RMC will be used to fill gaps in these data that are not provided by states and tribes.

EDMS Training

The forum members indicated that some training may be needed in order for them to conduct beta testing. This would need to occur sooner than this fall. Perhaps a walk through via internet/phone tutorial would work. Will also need training in fall when system is complete

There was a question on how EDMS security levels are going to be determined. WRAP should provide the list of users for higher levels of access to Pechan. Pechan will also provide tester training materials.

2004-2005 Work Plan and EDMS PHASE II Task Prioritization:

The forum went through the 2004 and 2005 work plan and EDMS Phase II tasks to determine priority and need based on strategic plan needs and budgetary concerns. It was noted that the draft 2005 work plan for the forum needed to be reduced to around 500K. On-going EDMS operational costs are already $180K (60K for hosting and 120K for DBA and Analyst).

EDMS Phase II (see EDMS discussion handout, dated 7/9/04)

1. Emission Projections – Concern was raised about the projected expense for this task. Need to decide on funding level to forecast emissions to 2018. Item is important and needs to be completed soon. Need to determine whether point/area should be done inside or outside of the model.

2. Oil & Gas Inventory Improvements – Timing is important for this task to be useful for modeling. Stationary Source forum wants this information. Do not necessarily need to do this within the EDMS work, could contract outside.

3. Fire Emission Improvements -

   Pete Lahm and Mark Fitch of the FEJF joined the discussion to provide input. The 309 base needs are the highest priority, followed by a need to deal with emission reduction techniques. EDMS need to display fire information for regional coordination, tabulate on an annual basis, and deal with emission reduction techniques.

   There is some concern about what will be delivered in Phase I of the project. This impacts what is needed for Phase II from a budgeting perspective. Pechan needs to describe how current fire module development and Phase II fire tasks will be completed in the absence of Glenn McDonald.

The FEJF prioritization of the bulleted items in the working document were – (3, 4, 2, 5, 1 is the priority order from top to bottom of bullet list in document.)

- Specify daily smoke management activity data protocol for transmission and display on the EDMS.
- Specify EDMS protocol to accept/use/display state and tribal reported fire emissions data with supporting activity data.
- Incorporate FEJF-specified fire emissions model into the EDMS, to ensure regionally consistent estimates.
- Specify EDMS fire activity data reporting formats based on inputs to FEJF-specified fire emissions model.
- Develop EDMS tools and procedures to use in estimating emission changes from annual emissions goals and regional control strategy scenarios.

The work plan bullets would need to be fleshed out by Pechan and a more detailed scope of work/budget provided for each task. The first two are the most critical for 2005.

The related funds in the FEJF spending plan were for a technical coordinator to move Phase I forward and linkage with tracking system defaults. Some augmentation of the default process may be needed. The FEJF will be generating regional projections for fire for modeling purposes. There may be some need for states to be able to look at projections based on types of ERTs. It is very difficult to project emissions for fire – not a next year task. It was determined that we need to get prices on bullets as well as storage of projections being developed. There was also some discussion on how the FEJF work fits within EDMS.

4. CEMS to EDMS Comparison – The group reviewed the data coming out of the VISTA project as background. There is an apparent disconnect between the SMOKE profiles and the CEMS data. The questions posed was: Do we want to take a look at this and try and make some adjustments to the emission inventory if needed? It was noted that this could be done outside of EDMS. Need to improve the SMOKE profile based on the CEMS data. The forum felt that perhaps the profile corrections should be done at the RMC. It is possible that at some point there could be a need for the CEMS data to flow into EDMS to allow tracking for point source controls. In general, the forum believed this task could be better handled at the RMC. Tom Moore agreed to take this need to the modeling forum/RMC.

5. Acceptance of XML data – Michael Uhl noted that it is fairly easy to convert files from XML to the other formats accepted by the EDMS. Therefore, we may be able to push this task off into the future, one to two years.

6. Automated Cloning of Databases – This can be done manually at this point. The group was concerned about the cost associated with this project and felt it was not time critical to complete in 2005.

7. Low Graphics Version of EDMS – The group noted that this was an important feature for those without high speed internet connections. The forum felt this task could be delayed a year. In the interim, we could ask Pechan to come up with a way to track feedback related to slow loading so that we can figure out whether this is an actual concern.

8. Method for Biogenic/Dust Feedback Loop – The RMC is calculating both of these emission categories and sending to the EDMS at annual-county levels. States don't have a way to have the RMC use the state supplied data for these categories. Need to ask the RMC if they can assimilate any state supplied data outside of the EDMS and just use EDMS to store the aggregated data for display. The forum felt this could be delayed until after 2005.

9. Use of Exchange Method for File Transfer – Since EPA and the data providers are not yet ready to institute this method, the forum felt this could be delayed 1-2 years. Perhaps put on the same timing as the addition of XML data formats. The WRAP has a way of sharing data now that can be used.

10. Auxiliary Point Source Data – The data is already available in the NEI and the system should be designed to the maximum capacity of the data that is available and fill when no data is available from the states. The forum felt this type of report should be handled under the routine operations of the system.

11. Biogenic Emissions at less than Annual Resolution – Most states don't have this information to load into the system, so it may not be that useful at the current time. Smaller local agencies may have this information on a small scale, but this may be less important to the larger WRAP modeling domain. The forum felt this could be delayed until after 2005.

12. Capability to Store and Retrieve Emission Model Input Files – The forum felt this would be an important enhancement to the system. The EDMS needs to be able to store the metadata that was used to generate the emissions modeling for MOBILE6, dust model, biogenics model, etc.. This is also not based on any unknowns at this point. Input files already exist in many cases. The forum recognized that this is not time critical, but felt it worth pursuing in the short term should the budget allow for it.

13. Capability to Geo-Code Certain Area Source Categories – The idea is to allow geo-coding of minor sources such as landfills, other minor point sources. The forum thought this could be deferred until it is determined that states and tribes feel it is needed for their regulatory programs.

14. Permit Tracking Capability – (May want to combine with 10). The forum understood that this could be useful for a cap and trade program, but felt that this could wait at least a year before being developed.

Tom Moore will contact Pechan and request additional detail and costing for the tasks selected.

EDMS Hosting & Operation – This task was seen as necessary for the forum's 2005 work plan.

EDMS Testing – Based on the discussions related to testing the EDMS, the forum desires to reprogram funds to allow for contract assistance to independently test certain aspects of the EDMS in 2004. Forum indicated that $75K was needed for this task.

Non-Road Update – Forum members expressed interest in re-running mobile and nonroad emissions for 2002 and projection years. Want to be sure that the estimates reflect the latest models and have the most up to date inputs from agencies. This would involve surveying states to insure the correct inputs are being used. Also need to determine which states included new non-road and on-road estimates as part of their CERR reporting and which did not so that state-approved data is included. It was also noted that there is no Alaska non-road and on-road mobile inventories. Forum felt the cost for this task should be increased to $125K.

Develop & Expand Representative Community EIs – The Alaska project is underway. The forum discussed whether it was still valuable to do this type of project for the remaining WRAP region. It was determined that this project was still of value and could be of benefit in addressing tribal and other rural data gaps in the emission inventories. Include $93K for Phase II.

EI Improvements for Speciation and Temporal Allocations – After discussion (see SCC project summary) it was determined that this project should be moved to the RMC. Tom Moore agreed to take this need to the modeling forum and RMC.

Canadian & Mexican Emissions – The forum opted to delete this project so that funds could be reprogrammed to higher priority efforts. It was believed that Mexican and Canadian EI's are of sufficient quality to omit the previously budgeted funds for QA work. In addition, changing any data as a result of QA would require another round of Mexican and Canadian approvals.

2002 Base Year EI – This was a $45,000 project that was included in the 2004 budget in case we had problems getting an EI developed through the EDMS. At this point in the year, the forum believed the funds could be better allocated to higher priority efforts. This project was deleted.

Aviation Cruising Emissions – The RMC was unable to do a sensitivity analysis that was needed to determine whether these emissions were worth pursuing. The forum opted to delete this project until such time as the modeling forum could provide additional information that shows a project would be warranted.

Workplan Summary: Based on the discussions summarized above, the forum developed a draft budget for consideration by the Planning Team in Denver on July 20-21. The proposed project list and budget was as follows:

Project Code	Project Title	Total for 2004 & 2005
EDMS	2005 EDMS Hosting/Operation	**180,000**
EDMSTest	2004 EDMS Testing	**75,000**
EDMS1	2018 base case and control strategy Point and Area Source EI Projections [some $ needed in EDMS, could be built inside EDMS or contracted outside and them put in EDMS]	**100,000**
EDMS2	Oil & Gas EI Improvements [could be built inside EDMS or contracted outside and then put in EDMS, EI project only]	**55,000**
EDMS3	Fire Module Improvements [prioritize 5 tasks, more detail costs on #1,2,3,4,5; with Glenn MacDonald leaving is a replacement needed, either as Pechan staff or subcontractor	**121,000**
EDMS12	Capability to store and retrieve emissions model (e.g. Mobile6, etc.) input files and data	**45,000**
EF2	Representative Community EIs – Phase II	**94,473**
EF3	Update on-road and non-road input data with surveys, then generate EIs for 2002, 08, 13, 18	**125,000**
	Total	**795,473**

Emissions Forum Budget

2004 existing $ available		315,473
2005 new $ request, placeholder #		480,000
	Total	795,473

Representative Community EI/Alaska Aviation Status Report (Alice Edwards):

Alice Edwards provided a status report on the two Alaska EI projects that are underway (see presentation). The Representative Community EI project has a contractor in place. The Sierra Research/ANCET team are beginning work on the project and will be coordinating efforts with Jerry Pardilla, the WRAP/NTEC Alaska Tribal Coodinator. The project is to be completed by March 2005.

The Alaska Aviation project RFP was issues on July 14th. Lori Campbell and James Carlin are assisting in the contract process. The plan is to select a contractor this summary and complete the project by March 2005.

SCC Project Report (Zac Adelman, CEP):

(See 6/3/04 memo) Zac Adelman provided an update of where this project was at, challenges encountered, and some recommendations. Based on the work completed to date, he noted that one basic challenge is trying to figure out who the contacts are at the states that could assist in resolving issues. He also recommended that a kick off call might be useful in getting things started. Area source reviews will be more difficult than the point source reviews for state staff. He noted that it might be better to work with EPA on those source categories. In addition, there

is a need to figure out where the profiles were developed from. It is very difficult to QA the profiles as not all profiles have descriptions. Some are used as surrogates for a broad range of SCCs. Intuition can be used more successfully in looking at whether temporal profiles make sense. It may make more sense to have states involved in SCC review as well as EDMS contractor. The question is how do we proceed for the new data being developed? It is unclear whether states have updated any SCC concerns in the 2002 emission inventory submissions. We could repeat the last exercise and generate spreadsheets – could give raw reports out and work from that.

The forum felt that we should focus state review on SCC issues. We could use rankings to look for concerns from states. They felt that we should use the EDMS to manage the SCC issue on the emission forum side and make corrections. The forum also felt that the speciation and temporal profile issues should be reviewed and corrected at the RMC.

To move this project forward, it was decided that Zac will restart using the 2002 NEI data which will be entered into EDMS once the first QA pass and corrections have been made. Zac will resubmit the questionable sources to states and tribes for correction. Therefore the project is being delayed until the new 2002 data is contained in the EDMS. In the interim, the forum needs to provide a contact list for Zac.

Tribal Update (Jenifer Williams, ITEP):

Sarah Kelly is transmitting area source tribal data to Pechan for use in EDMS. This data was sent to EPA but has not been incorporated into the NEI. The TDDWG is also working on collecting data related to oil and gas sources on tribal lands within the WRAP region. There have been two TEISS trainings and two more are scheduled. A demo was also made at the TDDWG meeting in June. Tom Moore suggested that we bring together the ITEP oil and gas project work with the SSJF project so that there is a consistent inventory for the sector. There was some discussion about the types of sources and how to coordinate these efforts. The TDDWG, SSJF, and EF need to work together to figure out how to make all the oil and gas efforts come together to meet WRAP objectives

EI Projections:

As a summary, it was noted that fire projections are being handled by FEJF, while windblown dust, NH3, and biogenics will be generated at the RMC. That leaves the Emission Forum with the point and area source projections as well as updates for the nonroad and onroad mobile sectors. Jim Wilson from Pechan gave a summary of how we have handled point & area sources in past efforts. The IAS algorithm has been used to project some of the point source categories, while others (EGUs, smelters) were handled separately. They used growth factors and some control factors for area source categories. For this round, it is not clear how many scenarios will need to be developed. Perhaps we will need to look at 4-5 big picture scenarios. First we need a 2018 base case and then we need to determine control strategy scenarios.

The Economic Analysis Forum is developing uniform criteria and assumptions for forecasting. To project point and area sources, we will need control strategies and socioeconomic

information. The EAF is trying to develop consistent socioeconomic information for the WRAP, but that effort has not yet been completed. We need to coordinate with the EAF to be sure we are being consistent.

There are a couple of options for projection development – we could develop tools within EDMS (e.g. like IAS) or hire a contractor to develop a forecast that is then put into EDMS. If we do it within EDMS, multiple users could someday generate their own forecasts. It is generally more costly to develop software and apply it to the existing system to generate a forecast. The forecast would still need to be incorporated into EDMS as a separate EI. The EDMS is the home for these projections once they are developed.

The forum discussed whether to bring tools into the system or to do projections outside and bring the results into system. They discussed IAS and whether there were better tools available. The question is do we incorporate new growth factors into the algorithms? We need to determine what updates might be desirable. The forum asked Pechan to refine the proposal for the emission projections. It would also be useful to get an estimate for developing projections outside of EDMS. Building the functionality into EDMS may allow a tool that helps assist if multiple scenarios are needed by states or tribes, but how many would take advantage of this? Need to refine the Pechan estimate to make sure we understand what is involved for the costs. Jim Wilson noted that it would be useful to know ahead of time whether intermediate year EIs are needed. That way they could be built in.

RMC Ammonia Project:

Gerry Mansell gave presentation of progress made on this effort (see presentation). The model is being run right now with some outputs as soon as next week. It should provide an improved ammonia inventory for WRAP modeling. It covers major source categories: livestock, agricultural lands, native lands, domestic. It will improve spatial and temporal allocations. Ir is GIS based. They are not considering emissions from fires or mobile sources (they will be covered by the appropriate forum). The model is mostly using Chinkin emission rates for animals and Battye values used for horses and sheep. On soil emissions, they used Potter adjustment for soil pH (this factor can make a significant difference, 9-45%). The model output is gridded and hourly. The inventory is to be generated by end of July. They will also be cleaning up model graphics, developing the report and model user guide.

Inter RPO Update (Tom Moore):

Tom Moore gave a quick update on the inter-RPO EI projects that are underway:

- One is the 2002 national wildfire EI. An RFP was put out with an option for Canadian and Mexican emissions. They received several bids. They scored the US proposals (not the Canada/Mexico options) – Air Sciences is being awarded the contract. The work is to be completed by the end of this year. They looked at the optional Canadian inventory but did not have enough funds. So they have deferred that part.
- The inter-RPO ammonia emission model is being done by a team headed by the University of California Riverside. It will be a process based model. Elaborate manure

management trains are being followed. They will come out with model that anyone can run for single or multiple operations. The project is moving along with design to be completed around the end of the year. There is a listserv at UC Riverside if you want to stay in the loop. This is primarily a livestock ammonia emission model. The project is being overseen by the Midwest RPO.

- The third project is the open emission model – its name has changed from OPEM to CONCEPT. The idea is that this is going to be a community model which people can add to over time. Patrick Barickman from Utah is sitting on the steering committee. It is difficult to make an open model with such a complicated technical approach. The first version is to be done at the end of this year, beginning of next year. It will be an alternative to SMOKE at some point. This project is also being overseen by Midwest RPO.
- There is a new inter-RPO project for later this fall. MANEVU is wanting to come up with an EDMS for the other RPOs – sort of a data warehouse. It will be a data exchange location with QA/statistics and GIS display capability. They have 150K available, with data from 4 RPOs to consolidate. It will not interfere with our EDMS project. This project is still being defined.

In other inter-RPO news, the RPO directors recommended that everyone use 2018 for the projection year for the SIPs. Some intermediate years are being explored by other RPOs for use in PM and Ozone planning.

Next Meeting/Next Steps:

It was suggested that the forum's fall face to face meeting be combined with EDMS training needed for testers. We agreed to look for a location in a major city with a training facility the week of October 18th. Forum members are checking on the availability of facilities at TAMS/ LasVegas, Boise State, and Arizona. Will also discuss possibilities with Pechan.

A teleconference will also be arranged toward the end of August, first part of September.

Dennis and Alice agreed to let the Forum know the outcome of the WRAP Planning Team meeting. We may need to jump start a couple of projects depending on the outcome of the budget discussions.