

**Meeting Summary
Western Regional Air Partnership
Emission Forum Meeting
July 1-2, 2003
Portland, Oregon**

Attendees

<u>Name</u>	<u>Affiliation</u>
Alice Edwards, EF Co-Chair	Alaska DEC, Air Quality Division
Dennis Schwehr, EF Co-Chair	WEST Associates
Brock LeBaron, EF Member	Utah DEQ, Air Quality Division
Wayne Leipold, EF Member	Phelps Dodge Copper Company
Michael Uhl, EF Member	Clark County (Nevada) Division of Air Quality
Mike Sundblom, EF Member	Arizona DEQ, Air Quality Division
Lisa Riener, EF Member	Quinalt Indian Nation
Sarah Kelly, EF Member	Institute of Tribal Environmental Professionals
Bob Palzer, EF Member	Sierra Club
Steve Aalbers, EIWG Member	Oregon DEQ, Air Quality Division
Pete Lahm, FEJF Co-Chair	US Forest Service
Tom Moore, WRAP Technical Support Staff.	Western Governor's Association
Jeffrey Stocum, EI Section	Oregon DEQ, Air Quality Division
Don Arkell, Visibility Program Coordinator	WESTAR
Mark Janssen, Mid-West RPO EI Coordinator	LADCO
Chris Fatagoma, EDMS Contractor	EA Engineering
Barry Rubin, EDMS Contractor	EA Engineering
Samir Badri, IAS System Programmer	Arizona DEQ, Air Quality Division
Wes Risher	Oregon DEQ
Chris Swab	Oregon DEQ
Lee Gribowicz	Wyoming DEQ

The Agenda for this Emission Forum meeting is attached as Appendix I of this memo. Presentation files are available in electronic format.

Meeting Summary

The question of forum membership was discussed in light two current requests to join the EF. The Forum's recommendation was that Bret Singer from Lawrence Livermore Laboratories and Lori Campbell from Nevada Air Quality be appointed by the Co-Chairs after submitting a letter of application and resume. Current EI Workgroup members were given the opportunity to also seek a formal status change to EF members by the same process, if they so desired.

The group heard a report from EA Engineering, presenting the status of the Emission Data Management System (EDMS) "Needs Assessment", and they given direction for changing seven specific portions of the report. Comment was requested from other interested parties by July 16th, and the report will be finalized July 25, 2003. The report will serve as a "template" for constructing the EDMS database, providing recommendations for elements such as where the database will reside, how it will be managed and how the public will be granted access to the emission inventory information. The EF will now work to issue an RFP on constructing the system, with target completion in mid-2004.

At this meeting, the group heard a report from Dr. Samir Badri on the revised Integrated Assessment System emissions projection model. The former IAS has been renamed the Emission Control Cost Forecaster for Industrial Sources (ECCFIS) model, and can now perform "quick & dirty" emissions

projections for the years 2010, 2020, 2030 & 2040, using existing economic parameters and control assumptions that were present from the GCVTC use of the IAS. There was some discussion as to the current usefulness of this model, but it was decided to complete the model and make it available to interested parties in a downloaded self-extractable file.

Regarding the Emission Forum's windblown dust model, Project Manager Michael Uhl has been making some revisions to the emission factors proposed by Environ, causing a delay of the completion of the project. The CMAQ module and the 1996 PM₁₀/PM_{2.5} windblown dust inventories for the WRAP region are now anticipated to be available by September '03.

Tom Moore gave the group a status report on the activities of the Regional Modeling Center. After correcting a number of errors, the final §309 "All Controls" run (Annex Milestones, P2 & Optimal Smoke Management techniques) is now scheduled for completion in July '03, with a complete draft of the Technical Support Document (TSD) to be out on July 15th.

Sarah Kelly gave the group a report on the Tribal Data Development Workgroup's Tribal Emission Inventory Software Solution (TEISS) for calculating emission inventories on tribal lands. The TDDWG originally planned to have this EI software tested this summer, but they have requested some elements added to the project, thereby moving the completion of the TEISS to December '03.

The group also heard about proposals for "Inter-RPO" cooperation on various Emission Inventory related projects, and agreed that it was a good idea to participate in two of those proposals: 1) a newer, more specific NH₃ emissions calculating model from Carnegie Mellon University, and 2) a revised OPen Emissions Model (OPEM) to improve emissions processing to spatial and temporal allocation. OPEM would take the best features of the existing SMOKE and EMS emission processors in a "transparent" and easier to use software.

There was an EPA presentation on the "Networked Environmental Information System for Global Emission Inventories" (NEISGEI - "nice guy") proposal. The "conceptual framework" for NEISGEI is to tie together web-based EI information from all sources and all spatial & temporal scales, and provide the air pollution community access for access and manipulation of all worldwide EI data. This system is still in the design phase and actual availability is not anticipated for at least a few years.

The final main topic of this meeting was preparation of the Emission Forum's 2004 Budget and Workplan. A draft budget was prepared for \$770,000 in new money for 2004. This budget will prepare a 2002 "like" surrogate emission inventory for Phase I of the WRAP Strategic Plan, and begin work on the "actual" 2002 inventory for Phase II of that Plan. The EDMS will be built, and a variety of EI elements will be improved (mobile, international emissions, stationary source Chemical Speciation/Temporal Allocation, etc). As noted, the WRAP will participate in "Inter-RPO" emission projects for improved ammonia inventories and emissions processing. Finally, the forum will look at some projects specific to Alaska such as representative Community EI's and Aviation emissions.

Meeting Details

★ Forum Membership ★

Dennis Schwehr began discussion by described the Emission Inventory Workgroup (EIWG), which was set up by the Emission Forum in the past, primarily to accommodate State EI experts when the Forum was compiling information on SO₂ stationary sources for the Market Trading program. He raised the question of whether this structure had now outlived its usefulness. He noted that Lori Campbell from Nevada Air Quality & Bret Singer from Lawrence Livermore Laboratories have asked for EF membership. Before the Co-Chairs acted on these applications, he was seeking input from the forum on two issues: when and under what circumstances should new Forum members be added, and what should the function of the EIWG be.

Lee Gribovicz explained that the WRAP Charter & By-Laws mandate balance on the forums for various WRAP stakeholder groups (state government, Federal Land Managers, EPA, industry groups, environmental representatives, academia, etc). The forum Co-Chairs may appoint forum volunteers at will, but are responsible for attempting to maintain a diversity of views among the members. He noted that this issue was probably more critical in Policy related forums such as the Fire or Market Trading Forums, where strong opinions are voiced on WRAP direction. It was generally conceded that the Technical Forums are subject to less controversy. Lee noted that the original mission of EIWG was passed, but that we still sorely needed the aide and counsel of State EI professionals. He explained that the EIWG allows a convenient mechanism for official WRAP recognition for state/tribal participants so that they can receive travel authorization and be eligible for expense reimbursement, without overloading the Emission Forum with state representatives. Regarding participation, it was the general consensus that both EF & EIWG Members had complete freedom to participate in the Forum activities without any limitations.

As an industrial representative, Wayne Leipold noted that although industry still wanted a voice to assure the EI work was accurate, with the transition to §308 work, he felt that we needed state and tribal personnel more than ever.

The consensus of the group was that Brett Singer should be accepted as an Emission Forum member, but the question of Lori Campbell's status was still up in the air. Dennis worried whether other EIWG members would be irritated if Lori was placed directly on the Forum, so he felt that those current EIWG members should be given the option of being formally designated EF members should they desire.

Brock LeBaron didn't have concern with the number of state representatives on the Forum, but he felt that there ought to be a formal membership process where the applicant provided a letter of application and resume. He felt that this would assure that the person would be more involved in Forum activities.

EIWG members Steve Aalbers and Mike Sundblom didn't feel that they needed any further recognition, and both expressed the feeling that their participation had never been limited in any way by their status. It was pointed out that although Roy Doyle wasn't present at this meeting, he had always expressed the desire to maintain a low profile.

The consensus of the group was to retain the EIWG, but to offer Lori Campbell and other EIWG members the opportunity to apply for regular membership to the Forum as they desired.

It was also noted that Wayne Leipold had accepted membership to Dust Emissions Joint Forum. With his additional TOC duties, he didn't feel that he could maintain a full presence on the Emission Forum as

well, therefore it was noted that the Co-Chairs should be looking for an industrial representative as Wayne's replacement on the EF.

★ Emission Data Management System (EDMS) ★

Chris Fatagoma of EA Engineering gave a presentation on the TASK 3 final report of the EDMS "Needs Assessment" project. He gave the history of the project, and noted that the three main tasks were:

- determine the emission data to be reported and tracked by this database
 - perform a comparative analysis of existing systems to see whether any would satisfy WRAP needs
 - prepare a report providing recommendations for developing the WRAP EDMS, housing the system, and accomplishing a long-term maintenance and operation

Conclusions of the project were that the WRAP EDMS would require different information such that none of the existing systems will satisfy WRAP needs. The system would be internet based, and include a strong GIS component. The system will address point, area, fire, mobile, windblown dust, and biogenic source categories. It will track the 9 pollutants (VOC, NO_x, SO₂, PM₁₀, PM_{2.5}, EC, OC, CO & NH₃) involved in visibility evaluation, and will include special RH tracking functions for elements such as Market Trading stationary SO₂ sources, Clean Air Corridors, mobile source emissions and dust impacts to Class I areas.

Tom Moore asked whether it was important to EI track the components of generic pollutants like VOC, and Mark Janssen noted that the RPO Data Exchange Protocol (DEP) included a speciation directive. Lee noted that it was implicit in the WRAP's participation in the development of the DEP that we would be utilizing the final product. Thus it was concluded that the final EA "Needs Assessment" report needs to address this RPO developed protocol.

Chris went over the Data QA/QC recommendations and Data Reporting/Query capability for the system. The report includes a section on user access to allow state/local/federal agencies and the public full access to the detail and summary emission inventory information. He also presented a list of the data elements that are to be included in the point source, area source, mobile source, biogenic source, windblown dust, and fire modules of the system.

Pete Lahm had suggestions for some additional data elements that should be added to the fire list (temporal data elements, input from the Federal sources, agricultural/private range burning, etc). EA agreed to modify the recommendations accordingly.

It was concluded that the system should be constructed in two phases, with Phase I consisting of a full WRAP region Emission Inventory and Phase II for expansion to other pollutants, activity data and tracking functions.

The conceptual schedule is that alpha and beta tests on the Phase I EDMS will be completed by late 2003. In early 2004, the WRAP would initiate a live Phase I system, and would spend the balance of 2004 collecting and inputting the 2002 data.

The recommendations include establishing a strong GIS component, and the issue of including the modeling grid was raised. It was concluded that the EDMS should include a "shape file" of the WRAP domain modeling grid.

The question was raised regarding how to include tribal inventories into the WRAP database. It was concluded that the EF RFP should specifically include a directive to define how this tribal data will be incorporated to avoid double counting state information.

The questions raised during this meeting include these issues:

1. Data Exchange Protocol
2. fire input from Federal, Ag & private burning data sources
3. shape files of model grid
4. Alaska
5. tribal (double counting)
6. "top 10" lists in standard reports
7. advanced diagnostics and Mid-West RPO QA

EA was specifically directed to address these seven concerns in their final report.

In addition the draft will be posted on the WRAP website, and notice sent out to the general WRAP membership and forums soliciting comment. The comments will be due by COB on July 16th, and the report will be completed by July 25th. The report will address the seven issues raised at this meeting, and will summarize those other comments received from the general WRAP membership.

★ IAS Re-Engineering ★

Dr. Samir Badri gave a presentation the status of the IAS re-engineering project he has adopted (see presentation). He talked about the old Integrated Assessment System (IAS), the changes made to the renamed Emission Control Cost Forecaster for Industrial Sources (ECCFIS) model, and proposals for additional changes that Dr. Badri could make if the forum wanted any more modification of the program. He explained that the ECCFIS model had the following elements:

11 western states, Texas, Canada & Mexico
2466 cells in 62 regions
3 cell emission categories (0-25,000, 25-100,000 & >100,000 TPY)

The new ECCFIS incorporates air pollutant emission inventory data integration with relational database capabilities, and expands the spatial & temporal capacity of the program.

Lee noted that this project is now several years old, and he had received notice in mid-2002 that the new program would be posted on a website for EF members to use on line. Dr. Badri had been sent a list of names for password distribution, but Lee noted that he had heard nothing further over the past 6-8 months. Dr. Badri explained that he had run into security problems using the ASU website. ASU has insisted that programs go through a certification process that ensures the server is protected from virus, hacking and other security problems and Dr. Badri has been unable to address those concerns as yet.

Dr. Badri then made a demonstration of the capabilities of ECCFIS, and explained his proposals for system enhancement. Items he felt should be incorporated included:

- the system should be web-based (security issue)
- the system would also do cost analysis
- the system would be enhanced for GIS capability

-the system would give user ability to change the economic default values [retirement, control assumptions, growth, etc])

Lee Gribovicz noted that the model would do "quick & dirty" emissions projections (2010, 2020, 2030 & 2040 only), and wondered whether the program was still useful to the WRAP community. He felt that the first thing necessary was to get this model out to WRAP stakeholders to experiment with, so they could determine where it might prove beneficial.

Dr. Badri explained that a quick way to get ECCFIS out was to convert it to ACCESS, put in on a website, and let people download a self-extractable file to run it. One problem is that there currently is no user manual available, and must still be written. It was decided that the EF Co-Chairs would request Arizona management to allow Samir enough work time on the project to incorporate the 1996 WRAP EI data, and covert ECCFIS to ACCESS. Then the product would be given back the Co-Chairs for distribution to WRAP stakeholders to determine utility of the program.

★ Windblown Dust Project ★

Michael Uhl then gave an update on Environ's windblown dust program (see PowerPoint presentation). Gerry Mansell of Environ joined the discussion via telephone. Michael reported that they had worked up through to Task 2 of the RFP (Task 1: Analysis of Wind Tunnel Study Results, Meteorological and Land Use Data /// Task 2: Development of Emission Inventory Specific Emission Factors), when the Project Managers (Carrie MacDougall and Michael Uhl) began to raise concerns over Environ's methods for deriving the wind tunnel emission factors.

Because of this concern, Michael began working with the wind tunnel studies to refine these emission factors. His PowerPoint presentation explains the technical details of how the emission factors will be revised. But he noted that his time is limited and there was some Forum concern that Environ wasn't meeting the terms of the RFP. However Clark County is willing to donate Mr. Uhl's time at this point, in order to improve the final emission inventory calculations.

Environ already has computer code developed by Mohammed Omary (a SMOKE module which inputs gridded, hourly data into the emissions processor), but these emission factor revisions must still be incorporated into that code. Thus, the best guess for timing is that the emission factor revisions can be completed by the first of August, and the final computer module and PM₁₀/PM_{2.5} inventories will be available approximately September 1st.

Lee noted that there is interest in this project from the other RPO's and the EPA, thus planning for the next Emission Forum meeting will partially revolve around when the results from this project can be presented. Tom Moore suggested that we also needed to involve the Modeling Forum as the project nears completion, so that they are well aware of how these windblown dust inventories are being developed.

★ RMC Project Status ★

Tom Moore than gave an update on the status of projects being worked on by the Regional Modeling Center. He noted that because of a number of errors (vertical layer emissions losses, OSM/BSM fire anomalies & etc), the final §309 "All Controls" Modeling Run (MTF Annex, P2 & OSM Ag/R fire policies) has been delayed (see PowerPoint presentation for more detail). He is now hoping for completion around mid-July, with a version of the Technical Support Document to be absolutely produced by a "drop dead"

date of July 15th (there may be some additional information added after that, but the document will be essentially complete at that point).

There are two projects that the RMC is working on for the EF: the NH₃ Study and a Temporal Allocation/Chemical Speciation project (TA/CS). Regarding the NH₃ Study, he noted that the RMC is working on a literature review, and has begun to identify some of the uncertainty in the emissions factors and activity data, including temporal and seasonal variability.

Carolina Environmental Programs (CEP) is to work on the TA/CS project, but has not yet started. The planned schedule is to complete a draft of the needed improvements in August '03.

Regarding Source Apportionment, the RMC has developed new modules for CMAQ to use tagged species to track emissions sources. This has been implemented for nitrogen gas phase species, but they still need to complete this for aerosols. They expect to complete this in December '03, in time for review by the Modeling Forum and others at a January /04 MF workshop.

Regarding CMAQ Development, they have added an update to the CB-4 mechanism, and have continued to do various QA analysis on emissions inventories for §309. Preparing an emissions QA checklist/protocol for use of the SMOKE emissions processor is a high priority for the next 2 months, for review at an early October Modeling Forum meeting

Model Evaluation will be a priority through the end of 2003, and the RMC is planning to redo the 1996 base run with the various updates now available (ie/ windblown dust, fire, bug fixes, etc).

★ Tribal Emission Inventory Software Solution (TEISS) Status ★

Sarah Kelley gave a presentation on the status of the project and demonstrated the current version of TEISS. TEISS currently has an AP-42 methodology for fire, but TEISS also will track the parameters that the FEJF has specified for tracking (start & end date/time, blackened acres, location and anthropogenic/natural classification).

The TDDWG originally planned to have this EI software tested this summer, but they have requested some elements added to the project, thereby moving the completion of the TEISS to December '03. Total costs have been \$193K.

★ RPO EI Discussions ★

Lee Gribovicz described the origin of the EI discussion group stemming from the initial 2001 RPO meeting in St. Louis. At that meeting, it was decided to develop three different discussion groups to talk about cooperation in the technical triad of Modeling, Monitoring & EI's.

The EI Discussion Group had developed a preliminary list of types of project where there may be economy of scale and efficiency gains from cooperative work between the RPO's. The WRAP emission related forums (EF, FEJF, DEJF, TDDWG) must now decide whether these proposals are beneficial to the WRAP, and if so, they must be incorporated them into our workplan and develop a budget to share funding with the other RPO's

Lisa Reiner noted that one of the projects mentioned was "how to deal with tribal emission inventories", and she was concerned whether there was tribal participation in these RPO discussions. Lee explained

that the RPO EI representatives simply raised this issue as a concern over states trying to appropriately include tribal inventories into their EPA NEI submissions, without double counting some categories like area and mobile source emissions. He noted that by putting this matter on the EF agenda, we were trying to bring the discussions back to the WRAP stakeholders. She was assured that the tribes will be notified when the specific discussions on tribal inventories are initiated.

Don Arkell noted the AMC's prototype §308 SIP/TIP template was being reviewed by CENSARA, MARAMA & NESCAUM, and he wondered whether there were any policy related discussions going on between RPO's. Tom Moore & Lee explained that the RPO Directors were having regular telephone calls, and they would be talking about policy related issues, but they didn't know whether there were specific discussions regarding sharing a §308 SIP/TIP template.

There were two relatively high priority items that must be worked on in the near term: (1) development of a new emissions processor model and (2) development of a new ammonia model. Mark Janssen of the Midwest RPO had proposed these projects, and he provided some background on the two topics.

NH₃ Model

Mark noted that the Carnegie Mellon University (CMU) ammonia model is currently the standard for calculating emissions from animal populations and fertilizer application. It calculates month specific emissions, but the problem is that it uses National level emission factors. He explained that there is considerable difference in ammonia emissions from a cow in Texas, in the summer on dry ground, as compared to the same cow in Wisconsin, in January with snow covering the ground. Basically the current CMU model doesn't contain sufficient specifics of meteorology and localized conditions, so he feels that we need a new highly temporally and spatially resolved ammonia model.

Mark noted that Rob Pinder @ Carnegie Mellon is doing some work along these lines, defining farm practices throughout the country. The Midwest RPO would like to support this work, and they think that it would probably cost around \$250K to build this high resolution model. He explained that the Midwest RPO is willing to put up \$100K, and they are asking for about \$50K from the other RPO's to complete the funding. They are shooting for an answer from the WRAP by mid-July.

There was WRAP concern expressed by EF members about whether this work complements the work that the RMC is currently doing. The RMC is currently working on an ammonia GIS mapping product in the San Joaquin Valley of California; going through feedlot, soils & fertilizer emissions, spatial & temporal distribution, looking at correction factors for auto ammonia factors, composting sources and etc. They will utilize this work to correct emission factors for input to the WRAP CMAQ modeling. Lee noted that the RMC was given specific instruction in their contract to coordinate this work with a CENRAP ammonia project and with the work going on at CMU. Mark assured the Forum that there would be oversight participation from representatives of all RPO's that contribute funding to the project.

The EF generally concluded that getting involved in this project is a good idea, because it's clear that we need a well defined NH₃ inventory for RH modeling. But we need to insure that the RMC follows directions and does maintain open communication with this CMU effort to avoid duplicating effort.

OPen Emission Model (OPEM)

There are currently two main emission processors; EMS & SMOKE. Problems with these existing models include:

EMS - needs SAS programming language (\$19K - very expensive), and is not open for everyone to use.

SMOKE - is a complex "black box" (not transparent) that very few are accomplished at using.

Mark explained that the proposal is to combine the best features of both EMS and SMOKE to provide a very open, usable and readily accessible new emission processor (OPEM concept paper). It would be built out of free MS SQL language, and would be Linux based. Because analyzing the results is a very important element of emission processors, one focus would be to improve the reporting functions of the model to achieve high data transparency. There would be a very high level of QA to help avoid costly mistakes in emission processing, such that those that have plagued the \$309 modeling effort for the WRAP. Mark is collaborating with Zion Wang of UC-Riverside on this project, who also one of the scientists working with the WRAP at the RMC.

Regarding development, it is the intention to build this model over the next 18 months, costing about \$250K. They are requesting authorization of about \$30-\$50K from each RPO, but this more a commitment to a project rather than a specific dollar amount.

Alice noted that the Modeling Forum would also have to be comfortable with this new emission processor, before the WRAP fully committed to the project. But Dennis pointed out that the EF is just making a recommendation, and the TOC will be looking at the overall budget picture, including the reaction by the Modeling Forum to this proposal.

Other Projects

Wildfire - Lee noted that we currently have an inter-RPO call set up for the afternoon of July 9th to further explore how and where to implement inter-RPO cooperation on this topic.

Pete Lahm noted that the FEJF has a draft RFP for a national 2002 wildfire emission inventory under development, and they are planning a mid-2004 national workshop on wildfire. It was the general consensus that any funding in this area, should go through the FEJF, rather than through the Emission Forum.

NH₃ - It was generally concluded that it is up to each individual RPO to decide whether they look at research beyond animals & fertilizer.

EGU Inventories/Projections - This primarily a Mid-West RPO issue.

MOBILE 6 & NONROAD 2002 - There was no enthusiasm for national cooperation on this issue expressed in the RPO call.

Mobile Source PM_{2.5} - same as above

Mexico & Canada - EPA will set up a call to distribute this information out to the RPO's (no cost anticipated).

Open Burning - MANE-VU is organizing a call on this matter (*FEJF wants to know about the call and participate)

Current Controls - EPA is organizing a call on this matter (*Lee Alter is interested in this topic - this may be a Stationary Sources Forum issue??)

Non-EGU Point Source Projections - The WRAP has done some growth & retirement evaluation for our 2018 projections, but the RPO's have not yet talked about whether there is significant national interest in this issue.

The rest of the topics weren't discussed as yet, but are scheduled for the next RPO call on July 9th.

★ Networked Environmental Information System for Global Emission Inventories ★

By telephone, Brooke Hemming & Stefan Falke of the EPA RTP Office described the "Networked Environmental Information System for Global Emission Inventories" (NEISGEI - "nice guy") proposal (see presentation).

The "conceptual framework" for NEISGEI is to tie together web-based EI information from all spatial & temporal scales. This would allow merging and manipulation of all EI data to serve the entire air quality community (scientists, regulators, policy analysts, public, etc).

The system might consist of a user, middleware & AQ data from many distributed sources. User requests for data would go through a middleware mediator, and the data sets would be selected from the multitude of data for listing back to the user. Then the user would decide which of these data sets on the list might be useful, and then would request the middleware to provide the data in a standard format. The middleware would also allow the user to display the data and get reports for the desired request.

Three projects are moving forward: the CAREN (California Air Resources Network), the integrated North American Emission Network (organized by the North American Commission on Environmental Cooperation), and the Fire, Smoke & Air Quality Network (organized between the National Science Foundation, the EPA & the USDA). More details of these projects are contained in the presentation.

★ 2004 EF Workplan & Budget ★

Tom Moore then gave a presentation on the current budget status for the Emission Forum.

2003 Budget Status

- Pechan finished work on the 2018 point & area projections, the Y2K stationary point source SO₂ emission inventory for the GCVTC 13% mandate and completed QA review of the 1996 baseline point & area inventories
- the EDMS "Needs Assessment" is essentially complete
- the RMC workplan includes the NH₃ evaluation (\$85K)
- the RMC workplan includes the chemical speciation project (\$75K)
- the EF has yet to begin work on the EDMS development (\$122K)
- ditto on Phase I of the Alaska representative community EI's (\$175K)

Of the \$122K budgeted for EDMS development, it was estimated that only about \$50K of that total could be spent, assuming a September '03 contract. Thus about \$72K would be carried forward on that project.

Regarding the \$175K for Community EI's, Alice Edwards is leading the effort, and it was concluded that a team of EF members needs to be identified to help develop that RFP.

Previous 2004 Long Term Estimates

- 190K EDMS (home & feeding \$100, QA & Training \$90K)
- \$50K Phase 2 Community EI
- \$50K Alaska aviation inventory

After the existing budget was reviewed, the EF turned its attention to the following list of possible Emission projects:

Possible 2004 Projects

- inter-RPO ammonia work
- OPEM emission projection
- chemical speciation/temporal allocation for P&A sources
- windblown dust
- Alaska biogenics EI
- Alaska aviation cruising EI
- Canada/Mexico EI's (review/QA/modeling preparation)
- development of 2002 "like" EI
 - mobile sources update NONROAD 2002
 - point sources base on 2000 MTF EI (verify w/ 2002 Acid Rain & states' corrections)
 - fire (FEJF)
 - dust (DEJF-coordinate w/ EF & utilize wind blown @ RMC; 2003 road dust)
 - area (grow '96 using 2000 census data?)
 - QA before & after use by AQMF & RMC
- "real" 2002 base year (WRAP Phase II Long Term Strategy - deliverable in late '04)

Regarding the 2002 surrogate inventory (P&A sources only), it was decided that it would be best to "grow" the '96 point source EI, using the same techniques and factors previously used for 2018 projections. This would be an extension of the current Pechan contract. It was pointed out however, that new sources constructed since 1996 would not automatically be in such an inventory. But the Forum thought that Pechan could probably identify most of these new sources for inclusion, using tools such as the Acid Rain utility database. It was decided to allocate \$20K, to get best data available, and Dennis Schwehr will manage this contract. Sarah Kelly noted that she would like to see the new tribal inventories prepared for the '99 NEI, to be included in this surrogate 2002 inventory as well.

Regarding the 2002 "like" area source inventory, it was suggested that the RMC could use SMOKE to grow these emissions using 2000 census data. Tom Moore will help manage this part of the project.

Regarding Non-Road & On-Road mobile emissions, it was noted that we already have a 2003 inventory for these sources. It was pointed out that we might have to do some "tinkering" with these numbers, so a \$50K placeholder was placed in the in the 2004 budget draft for any necessary adjustments. Tom will work with Mike Boyer to figure out what must be done

Regarding the EDMS the total budget was projected to require about \$450K, including (\$375 of new money, plus a projected 2003 carryover of \$75K). This would include:

- \$180K of additional development (added to 2003 spending of about \$50K)

- \$125K for the database "home & administrator" (assuming a functional EDMS by June '04, this would include ½ year of costs for a D.B.A. & analyst)
- \$35K for an EDMS User Manual
- \$20K for QA Procedures & Protocol
- \$90K for S/T/L training (data input & EDMS use)

Regarding Inter-RPO cooperation on the CMU NH₃ Emissions Model Revision & the OPEM emissions processor, the forum felt that these issues had strong overlap with the Modeling Forum. The EF recommended the WRAP enter into partnership on these projects, and budgeted \$50K a piece (\$100K total in '04). The work, especially on the OPEM processor, will likely be managed by the WRAP RMC.

Following up to the 2003 work on Chemical Speciation and Temporal Allocation the forum budgeted \$25K as an '04 placeholder for completing the project. Again, the Modeling Forum and the RMC will manage this project.

Regarding Wind Blown Dust it was recommended that the DEFJ take a further look at the emissions algorithm, validation of model performance, and wind tunnel studies on clay soils (follow James protocol).

All Fire emissions work remains the province of the FEJF, but the EF retains the responsibility of compiling that information with the other source sectors to produce the full 2002 Emissions Inventory.

Regarding the "Real" 2002 Emission Inventory for Phase II of the WRAP's Long Term Strategy, it was noted that we'll collect 2002 data somewhere around mid-2004, and the EF will have to deliver a finished product by the end of that year. For contingency in filling gaps and making minor adjustments, the Emission Forum budgeted \$35K for 2004.

In addition the forum realized that 2003 emissions for Major Stationary SO₂ Sources must be tracked under the §309 Annex, and budgeted \$10K for that work in 2004.

Regarding international EI's from Mexico & Canada, it was noted that there were improved inventories being developed for both countries. The EF budgeted \$5K as a contingency for addressing any small formatting/data input problems that might occur.

Regarding Alaskan Projects, the Emission Forum budgeted \$100K for Phase 2 of the Community EI's project. The forum noted that they would probably have to address "scope creep" as the project was expanded to other states outside of Alaska.

Emission inventory development for the Alaska aviation sector was budgeted at \$50K for 2004.

Regarding aviation cruising level emissions, it was the EF recommendation for the RMC to conduct some modeling sensitivity analysis to determine whether any additional effort was necessary to develop refined emission estimates.

Regarding an Alaska biogenics EI and an Alaska modeling grid, the Emission Forum recommended that these projects be delivered to the RMC for completion.

APPENDIX I

Emission Inventory Forum Meeting Agenda

July 1-2, 2003 @ Portland

AGENDA
WRAP EMISSION FORUM MEETING
July 1-2, 2003

July 1

Introductions (Alice Edwards, Dennis Schwehr)	(8:00-8:15)
Agenda Review (Alice Edwards, Dennis Schwehr)	(8:15-8:30)
Emission Forum Membership (Alice Edwards, Dennis Schwehr)	(8:30-9:00)
Emission Data System Needs Assessment (EA, Chris Fatogoma) EA to Present Draft Final Report/Forum to Provide Comments	(9:00-10:00)
Break	(10:00-10:15)
Emission Data System Needs Assessment EA to Present Draft Final Report/Forum to Provide Comments	(10:15-11:00)
IAS/ECCFIS Re-Engineering Update (Samir Badri)	(11:00-12:00)
Lunch	(12:00-1:00)
Fugitive Dust Project – Status Report (Michael Uhl)	(1:00-2:00)
RMC Project Status Reports (Tom Moore) NH ₃ Temporal Allocations and Speciation Project Modeling projects update	(2:00-3:00)
Break	(3:00-3:30)
Tribal Emission Inventory Software Update (Sarah Kelly)	(3:30-4:30)

July 2

RPO Emission Inventory Discussion Group – Update	(8:00-8:30)
2002 Base Year EI	(8:30-10:00)
new EI, gaps/data filling, back up plan	
Need for test EI for modeling	
Communications on EI issues during 2002 EI development	
How do we address on-going comments to EI over time?	
Break	(10:00-10:30)
NEISGEI (Brooke Hemming)	(10:30-11:00)
2004 Work Plan and Budget	(11:00-12:00)
WRAP schedule for development	
present draft	
identify additional needs	
Lunch	(12:00-1:00)
2004 Work Plan and Budget	(1:00-2:30)
continue discussion	
finalize plan	
Summarize Action Items from Meeting (Alice Edwards, Dennis Schwehr)	(2:30-3:00)
Wrap Up and Next Meeting	(3:00-3:30)