

Final Meeting Minutes

WRAP EMISSIONS FORUM / EMISSION INVENTORY WORK GROUP

May 14-15th, 2001 @ Spokane, Washington

The Emissions Forum and Emission Inventory Work Group convened in Spokane, Washington at 1:00 PM on May 14th and met through May 15, 2001 at 3:00 PM.. Attendees included:

<u>Name</u>	<u>Affiliation</u>
Lee Gribovicz, EF Co-Chair	Wyoming DEQ, Air Quality Division
Dennis Schwehr, EF Co-Chair . . .	WEST Associates
Bill Fishback, EF Member	Exxon-Mobile Oil Company
Brock LeBaron, EF Member	Utah DEQ, Air Quality Division
Roy Doyle, EIWG Member	Colorado Health Dept./Air Quality
Aaron Worstell, EF Member	Natl. Park Service/Air Resources Div.
Roger Turner, EF Member	Shoshone-Bannock Tribes
Wayne Leipold, EF Member	Phelps Dodge Copper Company
Carrie MacDougall, EF Member ..	Clark County (NV) Air Resources
Mike George, TOC Co-Chair	Arizona DEQ, Air Quality Division

Meeting Summary

The three major "*short term*" products from the Emission Forum are:

- the 1996 Base Year WRAP Region Emission Inventory
- the 2018 Base Case WRAP Region Emission Inventory Projection
- the 2018 Control Case WRAP Region Emission Inventory Projections

The three major "*long term*" issues to be addressed by the Emission Forum are:

- WRAP Region Emission Inventory Database Development
- WRAP Region Emission Inventory Preparation Guidance
- WRAP Region Emission Inventory Improvements

At this meeting the forum discussed preliminary results of the 1996 Base Year Emission Inventory for the WRAP Region, as compiled by the contractor, PES (Mark Saeger, Project Manager). Concerns regarding the accuracy of some of the point source data was expressed by some stakeholders, and it was decided that a final effort would be made to allow States/Tribes to review the data for corrections. Other issues were discussed regarding this '96 WRAP inventory, including: fugitive dust concerns, biogenic emissions, Canadian emission data, final state point source data, 2nd tier of Great Plains states emissions, and Mexican emission data.

Regarding the 2018 emission inventory projections, the status of two Request for Proposal's (RFP's) was presented. The first project will be to obtain ***Economic and Population Growth Factors*** to utilize in projecting the 1996 base year inventory forward to 2018. This Economics/Population RFP was published April 27th, with contract issuance targeted for early June, 2001.

The second project will compile the necessary data and complete the ***2018 Emission Projections*** for two scenarios: the 2018 Base Case and the 2018 Control Case. The RFP tasks will include: 1) identifying

existing major point sources in WRAP states that were not originally part of the GCVTC "transport region" (WA, MT, ND & SD), with start up date and existing pollution control levels for those sources; 2) developing a "new source profile" for pollution control equipment/efficiency in various source categories; 3) developing retirement factors for source categories in the thirteen state WRAP Region (AZ, CA, CO, ID, MT, ND, NM, NV, OR, SD, UT, WA & WY); 4) defining existing national, state, local & tribal air quality regulations that will be implemented through 2018 to control emissions from existing area and point sources; 5) identifying additional retrofit control options, costs and efficiencies for existing area and point sources; 6) combining the economic and population growth information from the first contract into emission growth factors that will be used in the Integrated Assessment System (IAS) model to project 2018 emissions; and 7) running the IAS model with the growth, retirement and control information to obtain the two 2018 emission inventory projections (base & control cases). Options were requested for the cost to include the 1st tier of adjacent Great Plains States (NB, KA, OK & TX), and separately to include the 2nd tier of Great Plains States (MN, IA, MO, AK & LA) in the above tasks. This Emissions Projections RFP was published May 7th, with contract issuance targeted for late June, 2001.

Regarding the "*long term*" activities of the Emission Forum, a draft budget was crafted to provide funding for these activities. The budget targeted 2001 spending of about \$70K for database activities, \$125K for EI guidance and about \$210K for EI improvements.

The Forum also reviewed the final Emission Inventory Preparation Survey Report, recommending distribution to WRAP modelers and WESTAR to help guide their activities as they relate to emission inventories. A status report was made on the progress of the IAS Re-Engineering contracts (complete the end of May '01), and other inventory related issues such as compiling the Year 2000 stationary source SO₂ inventory for comparison against the GCVTC 13% reduction projection, and possible expansion of the market trading program to other pollutants (NO_x & PM).

Meeting Details

★ Announcements ★

Mike George announced the meeting of the Technical Oversight Committee and the Technical Co-Chairs to be held July 16-18th for the purpose of assessing the progress of the technical forums implementation of the §309 RHR Annex, planning activities for the balance of 2001, and creating the Technical Budget for the next fiscal year.

Brock LeBaron noted that the "Jump Start" modeling contractor was having problems obtaining the updated MOBILE 6 model for use in the WRAP modeling. The EPA has not yet released version 6 to the public, but has only provided a "beta version" for the states to review. Mr. LeBaron was to contact the Mobile Sources Co-Chair, John Kowalczyk, to try to facilitate the release of the update to MCNC.

Two new Emission Forum members were attending their first meeting; Aaron Worstell of the National Park Service Air Resources Division, replacing Don Sheperd; and Carrie MacDougall representing Clark County, Nevada (Las Vegas). Ms. MacDougall explained that Clark County was merging their Planning and Air Quality functions, and that she would take over management of the Air Quality program around the first of June.

★ 1996 Baseline WRAP Emission Inventory ★

The Emission Forum has a \$60,000 contract with Pacific Environmental Services (PES Project Manager; Mark Saeger) to compile the 1996 WRAP region base year emission inventory, utilizing the EPA's 1996 NET as the initial basis for this inventory. PES augmented and updated the NET with information solicited directly from the WRAP region states.

The preliminary 1996 Emission Inventory compiled by PES for the 13 state WRAP Region (AZ, CA, CO, ID, MT, ND, NM, NV, OR, SD, UT, WA & WY) and for the four Great Plains states bordering the WRAP (NB, KA, OK & TX); is currently available for downloading at the WRAP website (<http://www.wrapair.org>), on the **Emission Forum** page of the "**Committees and Forums**" section of the site. Summaries of this data have been made in EXCEL spreadsheet format; broken down into total emissions by state, and then further broken down into summaries of the emissions for each county within the state. These EXCEL spreadsheets are also available on the WRAP website.

These EXCEL spreadsheets had been sent out to Emission Forum members for review (5/10/01 E-Mail), and several stakeholders have expressed concern that they have detected problems with these '96 inventory compilations. Wayne Leipold felt that the total SO₂ from Pinal and Gila counties in Arizona should total to about 8,000 tons more for three copper smelters located in these counties, than reflected in the inventory summary. He also noted concern that the 1996 SO₂ emissions from the Hidalgo Smelter in New Mexico were about 1,800 tons low. CV Mathai was concerned with the Navajo power plant SO₂ emissions, which Arizona forum participants agreed should be closer to 70-80,000 tons. Sally Otterson reported that Washington couldn't provide some point source data from some counties in the eastern half of the state, because there was no segment level information.

It was noted that any corrections must go through the states, therefore stakeholders must work closely with state EI personnel to correct any errors they find. It was decided that Mike George will contact Mark Saeger of PES to send out the inventories to the state EI personnel for one last round of comment. A deadline was set for June 8th, to get responses back from the states.

Brock LeBaron was looking at modeling schedule and noted that REMSAD model performance evaluations are scheduled for July. He felt that the EF needed to communicate with the "Jump Start" contractor, Marc Houxyoux of MCNC, and with Gail Tonnesen, the Program Manager for the Regional Modeling Center (RMC) at UC-Riverside, to make sure that they were aware of the progress of the emission inventory development. He agreed to make contact with these contractors to assure coordination on the WRAP technical modeling effort.

A deadline of June 15th was set for final comment on this 1996 inventory.

★ '96 EI Issues: Fugitive Dust ★

Last Fall, the WRAP gathered an expert panel to assess problems with fugitive dust emission inventories, especially with regard to windblown soil erosion, and fugitive dust from paved and unpaved roads. That expert panel conducted a December '00 workshop for public review of their findings, and the "Draft Final Report" of that workshop, along with a two page summary of their eleven findings, are now both available for downloading on the WRAP website.

The EPA has constructed simple maps of the paved and unpaved road dust components of the 1996 NET, and found that these data show stark demarcation of western state boundaries. This indicates that

there is substantial variability in the way these dust components are derived, with speculation that the activity data is very inconsistent. Also, there is skepticism as to how much of this dust rises high enough in the atmosphere to avoid surface level removal mechanisms (ie/ impaction, deposition) and actual participate in regional transport.

Because confidence in these fugitive dust emission numbers has waned, the decision was made to temporarily "zero out" these fugitive dust estimates in the WRAP '96 Base Inventory, pending a decision on how best to represent the dust components of the inventory. The TOC established a Workgroup (the "Dirt Forum"), headed by Co-Chairs John Kowalczyk of the Mobile Sources Forum and Marc Scruggs of the Research & Development Forum, with their charge being to explore the problem in more depth and make recommendations as to what strategy the WRAP should use in the short term to fill this data gap. For the Emission Forum, Brock LeBaron, Wayne Leipold and Sally Otterson had already taken the task of reviewing last Fall's fugitive dust report, therefore they were asked to participate in this TOC workgroup. New EF member Carrie MacDougall also brings a significant level of expertise on fugitive dust, having experience with wind tunnel studies and PM non-attainment SIP's in the Las Vegas desert area. Therefore, she agreed to be added to the Dirt Forum participant list.

In looking at the problem, it was noted that other organizations were also concerned with and investigating fugitive dust issues, therefore a May 7th telephone conference call was held to coordinate WRAP activities with the EPA and WESTAR. A summary of that call was prepared by Mr. Kowalczyk, and is now available on the WRAP website.

In discussion of the status of this issue, it was noted that because the Mobile Sources and R&D Forums are leading the evaluation effort, there wasn't anything specific that the Emission Forum could do, other than communicate our sense of urgency that this issue must be resolved prior to the mid-July date for finalizing the 1996 Base Year inventory. It was noted that Wayne Leipold and Doug Latimer are the TOC liaisons to the Emission Forum, and that communications between forums should go through these liaisons. With Wayne and TOC Co-Chair Mike George present, they agreed attempt to expedite the process of the Dirt Forum.

★ '96 EI Issues: Biogenic Emissions ★

At the March '01 Technical Co-Chairs/TOC meeting, the Modeling Forum noted that the SMOKE emissions data pre-processor has a BEIS module capable of calculating biogenic emissions as part of the WRAP modeling. It was suggested that it might be more consistent to utilize these uniformly compiled biogenic emissions, however there was concern that there might state/tribal objection to supplanting the biogenic category with the SMOKE results, if these agencies had indeed supplied locally derived biogenic emission data to PES.

Brock LeBaron suggested that biogenic data is all pretty universally obtained from some variation of the BEIS model, and that the chance of strong objection was minimal. Therefore a May 10th E-Mail was sent to the WRAP State Agency Directors, tribal representatives, and EI personnel to request comment on the WRAP's proposal to go with a regional approach for this biogenic source category (attached under Appendix VI), with a response requested by May 31st.

This date, it was noted that California might have provided their own biogenics estimations from their model (BIOME), but not many others were likely to have anything but BEIS based calculations. It was

decided that the Emission Forum must take a "wait & see" stance, whether the state/tribal jurisdictions respond favorably to this proposal.

★ '96 EI Issues: Canadian Emissions ★

It was noted that Canadian law had some confidentiality provisions which restricted the distribution of point source emission data. As of this meeting. The EPA's Greg Stella was working on obtaining Canadian data, but no one present at this meeting had any further information on the status of the negotiations. Wayne Leipold had suggested that if only province or grid wide emissions totals could be obtained, it would be possible to treat the data as area sources, or model the whole Canadian sector as some type of "boundary condition".

It was agreed that Lee Gribovicz would contact Mr. Stella (and Mark Saeger) on the status of the emissions talks, while Brock LeBaron would talk to Marc Houxyoux, to see what the modelers suggest if we don't get direct emissions from Canada. It was agreed that the bottom line was that we needed to have something representing this emission regime, and that quite possibly the WRAP might have to adopt whatever method the EPA used for their national modeling.

It was also determined to be prudent to go to the border states (WA, ID, MT & ND) to ask if they know of big point sources or anything else they think is important to emission inventories in British Columbia, Alberta, Saskatchewan and Manitoba. Lee Gribovicz will make contact with these northern tier states on this issue.

Other ideas expressed was that we might simply apply some sort of emission factor based on population, assuming that Canada would likely have similar emissions per person as those U.S. border states. It was suggested that most of Canadian industrial output is exported, therefore such a method would likely underestimate those industrial sector emissions. It was suggested that some other surrogates (ie/ land use, employment, etc.) could be derived to somehow estimate a rough estimate of the border emissions. The Emission Forum decided to wait until June 1st to see if the EPA talks come together, otherwise an EF conference call would likely be needed to refine the alternatives.

★ '96 EI Issues: Other Stationary Source Data ★

PES was having some trouble obtaining final emission data from Arizona and Utah, but it was reported that all necessary data from these two states is now in place.

★ '96 EI Issues: 2nd Tier Great Plains States ★

Recent talks have focused on a 2nd tier of Great Plains states which might have some impact on the WRAP region (primarily North & South Dakota). This Minnesota through Louisiana tier consists of five states: Minnesota, Iowa, Missouri, Arkansas and Louisiana. PES has indicated that compiling the '96 WRAP Base Year Inventory was costing about \$3K per state, thus adding this "MN to LA" strip to our inventory effort under similar compilation guidelines would add about \$15,000 to the PES contract.

Discussion noted that technically, from a modeling standpoint, these emissions should not be very significant to most of the WRAP states; certainly not for the §309 demonstration. It was felt that this

issue is more politically based, with the WRAP having committed to providing Regional Haze Rule (RHR) evaluation tools to all members of the WRAP.

It was suggested that because of the distance, we could probably just use the '96 NET, and try to get MCNC to roll it in to the modeling effort. There was some thought that we might have to get PES to incorporate these '96 NET files into the feed inventory. Brock LeBaron agreed talk with Mark Houxyoux about ideas for filling this gap, while Mike George would talk to Mark Saeger about how difficult it would be to add this '96 NET.

★ '96 EI Issues: Mexico Emission Inventory ★

The Eastern Research Group (ERG Project Manager; Paula Fields) is working under a subcontract for PES to develop the northwest Mexico emission inventory. Currently ERG has worked for emission inventories in only the three northwest Mexico states of Baja California Norte, Sonora and Chihuahua, but area sources in these EI's were mostly extrapolated from urban area emissions compiled for three border towns: Ciudad Juárez, Mexicali, and Tijuana (some limited information is also available from Nogales). The major point sources of Nacozari (~14,000 TPY SO₂) and Cananea (~150,000 TPY SO₂) copper smelters (Cananea present in 1996, but shut down in 1999) located near the Arizona-Sonora border, and the large Carbon I and II coal-fired power units (~3,000 MW total unscrubbed, emitting over 100,000 TPY SO₂) located in the state of Coahuila De Zaragoza, were identified in the Grand Canyon work, and were included in ERG's inventory. Fifteen other point sources in Chihuahua and Coahuila were identified from other inventories, but data was available for SO₂ only. Smaller point source may have been included in the three urban inventories.

Mike George has noted that there are some studies indicating impact on Arizona and New Mexico Class I areas from Mexican states further east, including Coahuila, Nuevo Leon and Tamaulipas. Other states that might come into play could include Baja California Sur, Sinaloa, Durango and Zacatecas. However, this date the Emission Forum considered the question of adding other Mexican states to the 1996 inventory, and concluded that there is not enough time or WRAP resources to add any further work to the ERG contract. Given the distance from most of the §309 region, and the fact that there are other EI efforts on-going for Mexico which could lead to better data by the time §308 SIP's are due, it was decided that we would have to make do with the information currently gathered by ERG.

ERG has completed a February 5th Draft of a report on their Mexico inventory efforts. That report indicates that they focused on the same list of pollutants compiled by the WRAP (SO₂, NO_x, PM_{2.5}, PM₁₀, NH₃, & VOC {speciated OC, EC}), but that there were some problems in getting compatible data for some of these pollutants. For example, they obtained a generic hydrocarbon, rather than VOC because of inconsistent Mexican reporting of ROG, TOG and HC. The report also notes that some assumptions had to be made regarding conversions of TSP to PM₁₀ and PM_{2.5}. The report also indicated that failed to extrapolate emissions to the entire Mexican state for a number of area source categories (wind erosion, biogenics, wildfire, railroads, aircraft, cattle feedlots, brick manufacturing, bus terminals, surface coating operations, etc.), because they did not have enough data to accurately define that extrapolation.

Recently, ERG asked the WRAP for permission to share this report with other Mexican EI researchers, but we delayed response pending an initial review by the Emission Forum. There were some questions, and members really didn't have time to digest the report on this first exposure. Still the forum decided to

accept the report as the best we have available, and give permission to ERG to share this as a **DRAFT** Report, outside the WRAP.

★ 2018 Projections ★

2018 Base Case RFP

This RFP asks contractors to obtain **Economic and Population Growth Factors** to utilize in projecting the 1996 base year inventory forward to 2018. This Economics/Population RFP was published April 27th, and a bidder conference call was held May 8th, with four contractor participating. Bids are to be in May 29th, with a contract issuance targeted for early June, 2001.

2018 Control Case RFP

The second project will compile the necessary data and complete the **2018 Emission Projections** for two scenarios: the 2018 Base Case and the 2018 Control Case. The RFP tasks will include: 1) identifying existing major point sources in WRAP states that were not originally part of the GCVTC "transport region" (WA, MT, ND & SD), with start up date and existing pollution control levels for those sources; 2) developing a "new source profile" for pollution control equipment/efficiency in various source categories; 3) developing retirement factors for source categories in the thirteen state WRAP Region (AZ, CA, CO, ID, MT, ND, NM, NV, OR, SD, UT, WA & WY); 4) defining existing national, state, local & tribal air quality regulations that will be implemented through 2018 to control emissions from existing area and point sources; 5) identifying additional retrofit control options, costs and efficiencies for existing area and point sources; 6) combining the economic and population growth information from the first contract into emission growth factors that will be used in the Integrated Assessment System (IAS) model to project 2018 emissions; and 7) running the IAS model with the growth, retirement and control information to obtain the two 2018 emission inventory projections (base & control cases). Options were requested for the cost to include the 1st tier of adjacent Great Plains States (NB, KA, OK & TX), and separately to include the 2nd tier of Great Plains States (MN, IA, MO, AK & LA) in the above tasks.

This Control Case RFP was published May 7th, with a contract issuance targeted for late June, 2001.

During this meeting, the issue of retirements differences between utilities and the "other" source categories were discussed. The fact that a certain percentage of "other" industries are expected to retire and be replaced with new, cleaner technology, rather than go through a full life span before being replaced, results in an overestimation of control and an under-prediction of emissions. In the RFP, we are asking the bidders to reassess the retirement rates of each source categories, and obtain their construction or start-up dates. The difficulty of getting data to support a specific retirement for the other source categories, was pondered. Carrie MacDougall suggested looking first at the biggest quantitative emission sources, and then make projections for those categories. It was pointed out however, that each pollutant will likely have a different suite of generation sources, which would complicate the approach.

★ Other Pollutants ★

Regarding future SO₂ emission control, the 2018 projections will be relying on the Market Trading Program backstop milestones for the control case emission inventory, Regarding NO_x and PM however,

the emission projection RFP asks the contractor to define what additional controls may be feasible and cost effective. The MTF will likely be initiating discussions on development of a trading program for these other pollutants, and our future year inventory will have to be reconciled back with any program the MTF generates.

★ Emission Survey ★

Pechan Associates in Durham, North Carolina received a \$22,000 contract from the EF in September '00, to conduct a survey of non-tribal air quality agencies to determine the state of preparation and availability of EI data from these WRAP region agencies. The WRAP regional emission inventory database will contain emissions data supplied from these state, local and tribal air quality agencies, and the survey was set up to evaluate what gaps the WRAP might face in reliance on this state/local/tribal data.

Pechan provided a report of the results of that survey at the Emission Forum Las Vegas meeting in February. The report is currently available on the WRAP website, on the **Emission Forum** page of the "**Committees and Forums**" section of the site.

The EF had identified contacts at all 13 WRAP region state Air Quality organizations, and also in selected County Air Quality agencies (California's 35 local districts, Clark (Las Vegas) and Washoe (Reno) counties in Nevada, and Bernalillo county (Albuquerque) in New Mexico. In addition, although EI's were compiled at the state level in Arizona and Oregon, their EF representatives wanted to involve some of their County Districts. Only the State of New Mexico and Clark County around Las Vegas, Nevada did not respond.

Pechan's general conclusions were:

- state agencies have greater EI capabilities than do local agencies
- better funding & staff levels are the likely reason for this state advantage
- point & area EI's are more comprehensive, than for mobile & biogenic sectors
- lack of training in mobile & biogenic estimation techniques limits this data

The report went on to attempt to answer a number of questions that the EF had developed in designing the survey. Pechan found that about half of the point source inventories are compiled statewide, while a successively smaller portion of area, mobile and biogenic inventories represent the entire state. There was a lack of uniform and up-to-date emission factors, particularly for PM_{2.5} and its precursors. Variability was found in the inventory update cycles, the currency of the latest baseline inventory, and for the emission projection models used. For those agencies that compiled the data, point source inventories were generally compiled annually, while the other sectors were most often compiled every three years. Again, for those agencies that had an inventory, the most common base year was 1996. MOBILE 5/6 and NONROAD were the most universal emission projection models used. The pollutants covered by the point, area, mobile, biogenic and geogenic inventories varied significantly, as did the methodology for calculating the inventories, the activity data and spatial surrogates used, and the spatial and temporal resolution of the data.

Discussion this date centered on how best to utilize this survey information. In an E-Mail, Sally Otterson noted that Idaho, Oregon and Washington had used the survey in targeting sources in their Northwest Regional Technical Center 105 project, and that Oregon and Washington are using the survey to help

craft the Columbia River George National Scenic Area study plan. Numerous suggestions were made that the survey should be shared with MCNC working on the Jump Start project, the Regional Modeling Center and WESTAR.

Wherever the final WRAP regional database finally resides, that caretaker will use this survey in the design of the final WRAP EI system.

★ IAS Re-Engineering ★

The Integrated Assessment System (IAS) model has three basic pieces: 1) base year data, 2) control actions of how base year data changes over time & 3) sector demand data to show growth. The EF issued a contract to Shawn Kendall to re-engineer this model aided by the Arizona DEQ's technical help from their software expert Dr. Samir Badri. The "new" IAS will have an ACCESS based database system, with a front-end consisting of "forms" and "reports". The system will have the capability to predict a future year emission inventory using economic and population based emission growth factors. The model will also be able to produce a visibility forecast scenario, and cost information in units of \$/ton, \$/μg and \$/β_{ext}. Mr. Kendall will produce a technical design reference manual/user guide for use by subsequent operators of the system. The system will be "web enabled", so it can be downloaded for general use. According to Mike George's report at this meeting, the target date for completion of this project is currently the end of May, 2001.

★ Database Development/EI Protocol ★

The Emission Forum has been discussing the eventual development for a WRAP Regional Database to house the EI information compiled for RHR implementation. This date EF members discussed the possible uses of such a database, including:

- tracking MTF milestones (SO₂ only, every year)
- tracking Clean Air Corridors (SO₂ only, every year)
- tracking fire program emissions
- providing for future visibility modeling
- tracking the mobile source emissions budget
- provide for public information (GIS components)
- QA functions

The forum attempted to envision when it would be necessary to have this database system operational. There was some sense that the database was a §308 issue, but with the milestone/CAC tracking functions, it also becomes critical for states to implement their §309 SIP's. Therefore, it appears that the database would be required by the end of 2003. With approximately 24 months lead time required to develop the system, it appears that the Emission Forum must act on this project by the end of this 2001 calendar year.

It was pointed out that there are more commercial products being developed to handle Emission Inventory duties, such as ISTEPS, and the Forum would be well advised to investigate some of these "off the shelf" products, along with any custom development efforts.

Mike George had prepared an April 18th summary of previous discussions on the WRAP Regional EI Database, and Lee Gribovicz committed to sending out this summary to EF members, for consideration at the next EF meeting.

The discussion then turned to the issue of preparation of the emission inventories themselves, and some members felt that this matter must be dealt with before we tackle the problem of where the inventories eventually reside. There was a sense that we should address how these EI's will be calculated (manual), and then decide how you'll manage the information (database).

There was concern over EI consistency issues; where EI preparation methods vary significantly between political jurisdictions. The idea was advanced that we may need to obtain activity data from state/local/tribal agencies, rather than the emissions themselves, so that these calculation discrepancies could be minimized. However, it was pointed out that such a procedure would increase the cost of the WRAP EI effort significantly, because you then have to provide a means to generate the emissions from calculations. It was also pointed out that we don't really have the consistency issue for such emission sources as biogenics or mobile sources, where the same models were relatively universally applied to get emission information (ie/ BEIS & MOBILE 6). A suggestion was made that maybe the WRAP could get the activity data only for "problematic" emissions sources, such as for the currently debated issues surrounding paved and unpaved road fugitive dust.

The question was also raised as to how the WRAP was going to encourage state/ local/tribal jurisdictions to produce a relatively consistent emission inventory. The suggestion was made before that the WRAP could produce some sort of "guide line manual for EI development", and hold workshops to introduce and reinforce proper methodology for the agencies' EI personnel.

The point was made that the WRAP EI development model, where states and tribes send in data to the Regional database, was very similar to EPA's national model for the National Emission Inventory (NEI). Roy Doyle made the point that once the data is submitted, that it becomes federal data, and the state no longer has the "label" warranting that the information is accurate.

To further address this EI Protocol question, a Workgroup was created consisting of Lee Gribovicz, Dennis Schwehr, Roy Doyle, Brock LeBaron, Sally Otterson and Carrie MacDougall. It was suggested that the workgroup invite participation by the Mobile, Fire and Modeling Forums in attempting to reach resolution of this issue.

★ Future Emission Forum Budget ★

The three major "*short term*" products from the Emission Forum are:

- the 1996 Base Year WRAP Region Emission Inventory
- the 2018 Base Case WRAP Region Emission Inventory Projection
- the 2018 Control Case WRAP Region Emission Inventory Projections

The three major "*long term*" issues to be addressed by the Emission Forum are:

- WRAP Region Emission Inventory Database Development
- WRAP Region Emission Inventory Preparation Guidance

- WRAP Region Emission Inventory Improvements

It appears that the Emission Forum might have in the range of \$400,000 funding for 2001. It was clarified that the EPA FY '01 budget runs from October, 2000 through September 2001, but that agency takes from about October-April to decide how much money will be distributed to the RPO's. The WRAP then looks at a workplan by about July of the fiscal year, and the WRAP Co-Chairs typically prepare a budget for their forums around June-July (meeting currently scheduled for July 16-18th this year). Then the WRAP historically receives their money about October, 2001 (about a one year delay).

The three "*short term*" products ('96 base year inventory & '18 projections) are currently funded through the Emission Forum's FY 1999 & 2000 budgets, however the \$130K for making the 2018 projections may be insufficient to adequately complete the tasks. There was \$116.5K allocated for database development, but with the cumulative small overruns on other projects, there may be closer to \$100K left in the account. Brainstorming database development for a project beginning in January '02, with work estimated for approximately 8-9 months, the forum felt that this project could be completed for around \$80K. With the uncertainties in the 2018 projections, the forum felt that perhaps \$70K of current monies should be left to address those contingencies. Thus that left about \$30K of the current budget applied to database development, leaving about \$50K required from the FY 2001 budget.

Other database issues including the requirement for QA/peer review of the 1996 emission inventory for about \$20K. Funding for a database manager and home was perceived as an issue to be tackled in future budgets after 2001.

Under EI Guidance, the forum projected about \$75K for producing the EI protocols and developing "fall-back" methods if state/local/tribal data proved insufficient. Training of EI personnel (in conjunction with the RMC) was projected to consume about \$50K. There was a "hidden" cost for the WRAP participant's in-kind work on this project, that would not show up in the budget.

The third task involved EI Improvements, and the forum projected about \$125K being necessary for the follow-up to the "Dirt Forum" work. Another \$75K could be spent on speciation and temporal profiles, while about \$10K was projected for literature review on new ammonia emission work.

Thus the preliminary 2001 Emission Forum budget would look something like this:

Database Development	\$ 70K
EI Guidance	\$125K
<u>EI Improvement</u>	<u>\$210K</u>
Total	\$405K

Dennis Schwehr will provide a more detailed report of this budget proposal.

★ Year 2000 Inventory ★

Regarding §309 RHR implementation, the GCVTC projected that Stationary Source SO₂ emissions from the nine transport region states, would decrease by 13% from 1990 levels in the year 2000. It is the

Emission Forum responsibility to compile this inventory to demonstrate the 13% reduction, and Wayne Leipold was designated the focal point, for this compilation.

Some clarification was required from the Market Trading Forum regarding the application of CEM bias guidelines to this 13% figure, but the forum decided that it would be desirable if we could get the states to "fast track" the preparation of 2000 SO₂ emission data from their "major" (>100tons) stationary sources. An alternative might be to go directly to the ± 300 individual sources, but it was pointed out that these firms generally don't like giving EI information to multiple recipients. Thus the states would likely have to send any letters requesting information from individual sources.

It was decided that Lee Gribovicz would draft a letter to state and tribes authorities (State Air Directors, Bill Grantham @ NTEC, tribal contacts at EPA regions 6, 8 & 9), requesting priority to this task.

★ Emission Forum Membership ★

The WRAP Bylaws have guidelines for the composition of WRAP forums, and earlier in the year, the Emission Forum had lost some members. With Dennis Schwehr's new participation, we regained our utility industry contact, and when Bill Fishback confirmed that he was participating, we have a petroleum industry representative. Wayne Leipold's copper representation gives the forum a solid industrial base. Bobby Ramirez and Paul Mountcastle provide tribal representation, and the addition of Carrie MacDougall gives the Emission Forum a local government representative. State representation is provided by Lee Gribovicz, Sally Otterson and Brock LeBaron, while Doug Latimer and Bill Kuykendal provide EPA representation. Aaron Worstell's substitution for Don Shepard of the Park Service completes the FLM representation, but the forum still needs an academic and an environmental representative.

New representatives Carrie MacDougall and Aaron Worstell were requested to contact the WRAP webmaster to update the Emission Forum web page with current membership information.

Ideas are solicited for the remaining forum opening, and Lee Gribovicz suggested that he would approach a University of Wyoming professor for the academic post. It was suggested to approach John Neilson for possible names of an environmental representative.

★ Action Items ★

The list of Emission Forum action items included:

- Mike George will contact Mark Saeger to distribute the 1996 EI to states for review. Final comments are to be returned by June 8th.
- Brock LeBaron will communicate the status of the forum's EI preparation efforts to the Jump Start contractor and the RMC to help coordinate their activities.
- Emission Forum Co-Chairs need to be on the Modeling Forum E-Mail listings for Jump Start & RMC activities. Brock LeBaron will provide the contact information.

- Carrie MacDougall will be added to the list of Emission Forum Members participating in the WRAP "Dirt Forum"
- TOC Co-Chair Mike George and TOC EF Liaison Wayne Liepold will communicate the need to expedite the "Dirt Forum" activities to assure resolution by the July deadline for completion of the '96 Base Year Emission Inventory.
- Lee Gribovicz will contact Greg Stella on the status of EPA's negotiations for Canadian EI data.
- Brock LeBaron will communicate with Mark Houxyoux at MCNC to determine a "fall back" position if Canadian emission data is not forthcoming.
- Brock LeBaron will communicate with Mark Houxyoux at MCNC to determine a "fall back" position on emissions from the Minnesota-Louisiana 2nd tier of Great Plains states.
- Mike George will communicate with Mark Saeger at PES to determine what can be done to utilize generic NET emissions for the Minnesota-Louisiana 2nd tier of Great Plains states, and whether this information would require a cost adjustment to the '96 EI contract.
- Lee Gribovicz will approve release of the ERG Mexican EI report.
- Lee Gribovicz will provide the Pechan Emission Inventory Preparation Survey to MCNC, the RMC and WESTAR.
- Lee Gribovicz will distribute Mike George's database paper to the Emission Forum for future consideration.
- An EI Protocol Workgroup will be formed consisting Lee Gribovicz, Dennis Schwehr, Roy Doyle, Brock LeBaron, Sally Otterson and Carrie MacDougall. Lee Gribovicz will invite participation by the Mobile, Fire and Modeling Forums in this effort.
- Lee Gribovicz will initiate a conference call on the tasks of this EI Protocol Workgroup.
- Dennis Schwehr will write up the Emission Forum budget proposals.
- Co-Chairs Lee Gribovicz & Dennis Schwehr will present the EF budget and plans at the next TOC/Technical Co-Chairs meeting (July 16-18th).
- Lee Gribovicz will consult with the MTF regarding CEM bias on the Y2K EI.
- Lee Gribovicz will draft a letter to state/tribal representatives regarding year 2000 stationary source SO₂ information.
- Wayne Liepold will be the focal point for compiling Y2K stationary source SO₂ information, and will provide the current major SO₂ stationary source list to the EF Co-Chairs.

- Wayne Leipold & Bill Fishback will attempt to research retirement factors for their respective industry (copper smelters & petroleum refineries), and provide resultant information to Dennis Schwehr.

★ Next Meeting ★

No date was set for the next meeting, but timing was suggested around late August to early September when the 1996 Base and 2018 Projection Inventories are due. A possible location is the Regional Modeling Center @ Riverside, California.