

Four Corners Air Quality Task Force
Cumulative Effects Workgroup Conference Call
September 20, 2006

Kevin Golden, EPA; Mike George, NPS; Mary Uhl, NM; Doug Blewitt, BP; Craig Nicholls, BLM; John Vimont, NPS, Mike Lazaro, DOE; Rita Trujillo, NM

The Cumulative Effects workgroup conducted a conference call to continue discussions from the previous workgroup calls on the approach for conducting task 2 of the workplan. This call was specifically to discuss the outline of a CAMx/CMAQ scope of work that Doug Blewitt had prepared. Following edits by the workgroup the document would be forwarded to a contractor to obtain a cost estimate for the work. Funding for the work would potentially be provided by industry.

The workgroup discussed a number of technical aspects of the proposed work including emissions inputs to the model, the number of years of meteorology to be used in the analysis, and testing of the model and potential funding. Based on the discussions, the draft was subsequently edited and the revised version is shown below. Doug reported that while funding was not yet certain there was a strong possibility that some level of industry funding would be available. Kevin reported that while no firm agency money was yet available, EPA Region 6 may be able to contribute \$60,000 for task 2 technical analysis efforts. The revised workplan was to be submitted to a contractor by Sept 15, and the contractor would be asked to provide a bid by September 21. The workgroup would review the bid and another call was scheduled to discuss it on Tuesday September 26th at 10:00 AM MDT. Kevin G and Craig also said that they would contact TRC to obtain a firmer estimate of the costs for conducting the task 2 analysis using Calpuff from the CBM EIS (rather than CAMx/CMAQ)

**Modeling Scope of Work for Mitigation Assessment for Four Corners Area
Cumulative Effects Group
September 15, 2006**

The Four Corners Cumulative Effects Group is seeking a cost estimate for a modeling analysis of potential air quality benefits of mitigation options in the Four Corners Area. Specifically, the group is seeking modeling of primary pollutants, secondary particulates (involved in visibility reduction), deposition and ozone in the Mesa Verde and Weminuche Class I Areas and the surrounding areas in the Four Corners region. In order to provide realistic estimates of improvement in air quality as a result of mitigation options, it is important that accurate modeling of the pollutants be conducted. Any positive or negative bias in the modeling will result in inaccurate estimates of air quality benefits from the mitigation options that are being evaluated.

Because the Cumulative Effects Group is concerned about model accuracy, it desires a photochemical grid model (CAMx or CMAQ) to be run with a minimum grid resolution of 4 kilometers. There are two possible starting points for such an analysis one being the New Mexico Early Action Compact (EAC) Modeling analysis. It is the Cumulative Effects Group's understanding that this analysis used CAMx and was based on a nested grid with the Four Corners Area having a 4 kilometer grid resolution. However, the group is not sure if this inventory contains SO₂ emissions. If this inventory does not contain SO₂ emissions, then these emissions need to be included. A second option would be to use the WRAP base case emission inventory and re-grid the emissions using a four kilometer grid for the region of concern and retain the 36-kilometer grid for the remainder of the modeling domain. The Cumulative Effects Group is seeking guidance from the contractor regarding which approach is the most cost effective.

For either approach, the Cumulative Effects Group seeks to revise the selected emission inventories used by including emission inventories developed as part of the Northern San Juan EIS into the CAMx modeling run. The Northern San Juan emission inventories contain emission sources located in Colorado, New Mexico and on the Southern Ute Reservation (SUIT). Since neither the EAC nor the WRAP inventories contain detailed emissions on the SUIT, the emissions from the Northern San Juan EIS need to be included into the modeling. In addition, the inventories need to include emissions from new oil and gas sources that were part of the EIS.

This work needs to be completed by March 2007.

Specific Tasks:

- 1) Obtain one year of MM5 meteorological modeling results for input to CAMx having a sufficient grid resolution to match the CAMx 4 kilometer grid.
- 2) Emission inventory development should consist of the following sub-tasks.
 - a.) Revise existing starting inventory by including Northern San Juan EIS SUIT sources and deletion of duplicate sources.

- b) Develop an existing base case plus proposed EIS sources (note: there were 308 new sources modeled in the Northern San Juan EIS).
 - c) Develop five mitigation cases for selected source groups (i.e., oil and gas, transportation, power, etc.) as defined by the Cumulative Effects Group.
- 3) Run baseline conditions with CAMx without the EIS sources and compare modeling results to the IMPROVE monitoring data at the Weminuche and Mesa Verde Class I Areas. This is not meant to be a detailed model evaluation but rather an indication of the accuracy of the CAMx model for various pollutant species.
 - 4) Model baseline conditions with proposed EIS sources (This will be baseline conditions for mitigation options).
 - 5) Run five mitigation cases and examine the air quality benefits of suggested mitigation options compared to the base case and the base case with EIS proposed sources.
 - 6) Prepare a report summarizing the results.
 - 7) Option 1: Develop a program for multiple years of meteorological data.
 - 8) Option 2: Apply WRAP emission growth factors to base case sources (except for Four Corners oil and gas emissions) .
 - 9) Option 3: Model five additional mitigation cases.

Please provide the Cumulative Effects Group with a cost estimate for each task, each optional program and a per run cost as well as the estimated time to complete the project. Upon contract award, the Cumulative Effects Group will meet with the contractor to finalize the scope of work. The Cumulative Effects Group welcomes any suggestions regarding the suggested scope of work that would improve the efficiency of the study.

Please provide a budgetary cost estimate and technical issues to the Cumulative Effects Group by September 21, 2006.