

Four Corners Air Quality Task Force
Cumulative Effects Workgroup Conference Call
July 13, 2006, 10:00 AM (MDT)

Participants: Kevin Golden, EPA; Mike George, NPS; Mark Jones, NM; Mary Uhl, NM; Aaron Worstell, NPS; Doug Blewitt, BP; Kevin Briggs, CO APCD; Susan Johnson, NPS; Cindy Allen, CO APCD; Rebecca Reynolds, RRC, John Reber, NPS

The Cumulative Effects workgroup conducted a conference call to continue discussions on the draft workplan for the group, and provide initial comments on the mitigation options that have been tagged for consideration by the CE workgroup. Several of the participants in the call had not been involved in the previous call so Kevin Golden provided a brief summary of the draft workplan.

In Task 1 of the draft workplan the effectiveness of mitigation measures would be evaluated by calculating the emissions reductions associated with the potential control measure and comparing those reductions to current and projected emissions from other sources and source categories in the Four Corners region. Several commenters felt that the task 1 discussion should provide a clearer description of how the workgroup would deal with individual requests from the source workgroups. There may be some expectations by AQTF participants that the air quality benefits of each and every measure would be modeled and the workplan needs to clarify that this is not the case. There was also some concern that the number of potential measures may overwhelm the ability of the workgroup to analyze them, and that some grouping of measures may be necessary. Kevin G would draft some edits to try and address these concerns.

The workgroup briefly discussed the map of the emission inventory extraction area that was provided to the workgroup before the call. There was no objection to using the map which closely matches the region identified in the AQTF MOU.

For Task 2 of the draft workplan it was decided that there needs to be a discussion of the issues related to the WRAP emission inventory somewhere in the workplan. Since addressing the WRAP EI issues is beyond the scope of the CE workgroup, the item would be included in Task 3 where recommendations for future technical analysis are provided.

The workgroup discussed the pros and cons of the two options for evaluating the cumulative effects of AQTF control strategies. In Option 1, the WRAPs CMAQ regional haze modeling would be rerun to test the effects of across-the-board emissions reductions from source categories in the Four Corners area (such as a 20%, 40%, and 60% reduction in NOx.) The percentages selected would be selected to capture the range of reductions that may ultimately be recommended by the AQTF. Option 2 would be similar to option 1 except that instead of CMAQ the cumulative Calpuff analysis from the San Juan Coal Bed Methane EIS would be used.

Both Option 1 and Option 2 have drawbacks. The WRAP CMAQ modeling is based on a 36 km grid and modeling at that resolution may be insufficient to be able to realistically show the effect of emission changes in the Four Corners area. Reprocessing the emissions/meteorology data and rerunning CAMQ for the Four Corners area using a finer or nested grid may be possible but it is unclear whether WRAP or a contractor would be able to provide the analysis in a timely manner at a relatively low cost. The San Juan CBM EIS modeling used very low resolution 1990 meteorology data and the model itself uses a primitive chemistry. While the chemistry issues with Calpuff cannot be addressed, the meteorology data used in the analysis could be upgraded. Kevin G was assigned the task of scoping out the cost and time that would be necessary to conduct task 2 using Calpuff including the upgrades to the meteorology data. Kevin Briggs and Doug Blewitt were assigned the task of scoping out the costs and time associated with developing a finer grid application of CMAQ that would be applicable to the Four Corners area. The members would email back to the workgroup a report by July 24, 2006, and a conference call was scheduled for July 24th at 10:00 AM to discuss their findings.

The workgroup also discussed several of the mitigation option papers that were tagged for consideration by our group. Notes from the groups initial discussion of the first five of the option papers are shown below. For the remaining measures Mike George agreed to draft potential responses for discussion on a call to be held at 10:00 AM MST on July 24th. The draft would be sent out several days before the call.

CE discussion notes on Mitigation option papers tagged for consideration by cumulative effects workgroup

The following mitigation option papers from the Overarching subgroup were tagged for the Cumulative Effects Work Group:

- Mitigation Option: Tax or Economic Development Incentives for Environmental Mitigation: Assistance from the Cumulative Effects Work Group could be helpful in estimating the potential cost-benefit of this option.

We can look at the emissions benefits; cost benefit is complicated and beyond the scope and resources of this group.

The following mitigation option papers from the Rig Engine subgroup were tagged for the Cumulative Effects Work Group:

- Mitigation Option: Selective Catalytic Reduction (SCR): The Rig Engines Drafting Workgroup requires information on the estimated contribution of NOx emissions from rig engines and on the impact of ammonia emissions on visibility (what are local levels currently, how will increasing ammonia emissions impact visibility?).

We can look at NOx emissions. Ammonia is more complex at this point and we do not have the confidence in ammonia emissions data that we have currently. We will not be able to do modeling for this and so cannot comment on viz impacts from ammonia. We could look into the question of the potential changes in ammonia emissions. However,

there is not a wealth of information so we would need to review this to determine what could be done.

Ammonia monitoring is currently being done in the 4C by EPA Region 6 (passive monitors). This data should enable some of the above in the future.

- Mitigation Option: Implementation of EPA's Non Road Diesel Engine Rule – Tier 2 through Tier 4 standards: How much air quality improvement would be realized from implementation of the Tier 2 through Tier 4 standards by a specified (%?) fleet average of rig engines in the 4 Corners area – by timeframes specified in regulation or some accelerated schedule? Days of visibility improvement? Reduced flux of Nitrogen deposition? This question can't be answered until you get an inventory of engines and estimated emissions.

We can calculate emissions from Tier 2- 4 standards, changes in emissions. This group can use the WRAP 2018 inventory that takes into account implementation of EPA Tier 2- 4 to provide information on this mitigation option.

The following mitigation option papers from the Stationary RICE subgroup were tagged for the Cumulative Effects Work Group:

- Mitigation Option: Industry Collaboration: Will need to integrate any more recent emissions inventory data from the Cumulative Effects Group

We will do this.