



## WRAP Regional Modeling Center - Simulation Specifications

**Scenario Name:** 2002 Plan b Simulation

**RMC Code:** "plan02b"

**Date Specifications Prepared:** March 24, 2006

**Time Window for Modeling/Analysis:** emissions modeling start date, targeted tech memo publication date, start simulation March 27 (??), complete results analysis by April ??

**Description:** 2002 Annual 36-km CMAQ air quality model simulation using typical 2002 emissions

**Purpose/Objective:** Evaluate the regional haze air quality for typical 2002 conditions. Provide 2002 baseline air quality and visibility conditions in the Western Class I Areas for evaluation uniform rate of progress and glide slope calculations.

**Expected Analysis Methods:** Specific analysis methods will generally be determined based on the nature of the simulation and the stated purpose and objectives. These typically involve a number of standard post-processing products used to elucidate relevant modeling results and analyses and aid in summarizing and interpreting the simulation results. For the present simulation these would include:

- Standard displays of spatial distribution of concentrations of relevant pollutants (Sulfate, Nitrate, PM, OC, EC, etc..) for various temporal periods (daily, monthly, seasonal and annual totals)
- Spatial plots of model predictions
- Stacked-bar charts of contributions to light extinction for the 20% best and 20% worst days at each IMPROVE site
- Others ...???

### Input Data:

Emissions – emission data and QA found at: <http://pah.cert.ucr.edu/aqm/308/emissions/???.shtml>

- Derived from Basoe02b emission inventory
- BEIS3 biogenic emissions (includes soil NO emissions)
- Typical 2002 fire emissions from all fire types
- Windblown fugitive PM dust emissions – all components from WRAP WB Dust model
- All NH3 emissions from WRAP NH3 model
- Stationary point source emissions based on temporal profiles (No CEM data)
- Documentation on input data, model settings, and modeling/QA procedures provided through standard reporting products: [WRAP 2005-06 Emissions Workplan \\$mmdyy.xls](#)
  - Simulation schedule and input files
  - SMOKE configuration information/settings
  - Documentation of problems encountered with corrections, outstanding issues, and other important information about simulation clean02a
  - Parent EI and maps/tables of changes for this run
  - Detail dependent on purpose/objective and results analysis methods

## Other Inputs and Model Settings

- Initial and Boundary Conditions based on GEOS-CHEM simulation (??)
- Model version, settings and configuration same as for 2002 Base B (“base02b”)
- Time period simulated – annual, typical year, meteorology for 2002 used

## **Results**

Summary tables and maps

Relevant Output Products – data displays found at: <http://pah.cert.ucr.edu/aqm/308/cmaq/???.shtml>

- Relevant model output products include daily, seasonal and annual spatial distributions of Regional Haze contributing pollutants.
- Model output concentrations will serve as indication typical (baseline) 2002 conditions
- Results of this simulation will be compared with previous 2002 base case version b (“base02b”).
- Comparisons with other simulations as appropriate

## Summary of Key Findings

TBD

Interpretation/Recommendations – report found at: <http://pah.cert.ucr.edu/aqm/308/docs/???.shtml>

TBD