

- We enhanced section 9.3 (Meteorological Input Data) to develop concepts of meteorological data representativeness, minimum meteorological data requirements, and the use of prognostic mesoscale meteorological models in certain situations. These models (*e.g.*, the Penn State/NCAR MM4^{11,12,13} or MM5¹⁴ model) assimilate meteorological data from several surface and upper air stations in or near a domain and generate a 3-dimensional field of wind, temperature and relative humidity profiles. We revised recommendations for length of record for meteorological data (subsection 9.3.1.2) for long range transport and complex wind situations. In paragraph 9.3.1.2(d) we specifically allow the use of at least three years (need not be consecutive) of assimilated mesoscale meteorological data.

- We revised subsection 9.3.2 (National Weather Service Data) to inform users that National Weather Service (NWS) surface and upper air meteorological data are available on CD-ROM from the National Climatic Data Center. Recent years of such surface data are derived from the NWS's Automated Surface Observing System (ASOS). We revised subsection 9.3.1.2 to address the possible occurrence of ASOS data within 5-year sets of meteorological data.

- We revised subsection 9.3.3.1 to clarify that, while site-specific measurements are frequently made "on-property" (*i.e.*, on the source's premises), acquisition of adequately representative site-specific data does not preclude collecting data from a location off property. Conversely, collection of meteorological data on property does not of itself guarantee adequate representativeness. The subsection was also enhanced by improving the discussion of collection of temperature difference measurements; a paragraph was developed that focuses on measurement of aloft winds for

simulation of plume rise, dispersion and transport (some details for CTDMPUS were moved to its appendix A descriptions); a paragraph was added to address collection and use of direct turbulence measurements; and the paragraph that discusses meteorological data preprocessor has been enhanced.

- We revised subsection 9.3.3.2 by removing reference to the STAR processing routine because ISCLT and CDM 2.0 (for which STAR formatted data were developed) have been removed.

- We revised subsection 9.3.4 (Treatment of Calms) to increase accuracy.

Section 10

We updated section 10 to reflect current thinking and state-of-the-practice regarding model accuracy and uncertainty.

Section 11

As proposed, we made minor revisions to section 11 to reflect the new ambient air quality standards for fine particles and ozone. Because EPA has revised its emissions trading program for SO₂, we have deleted subsection 11.2.3.4.

Section 12 & 13

We redesignated section 13 (Bibliography) as section 12 (References) and *vice-versa*. We revised them by adding some references, deleting obsolete/superseded ones, and resequencing. You will note that a peer scientific review for CALPUFF has been included.

Section 14

In a streamlining effort, we removed section 14 (Glossary). Given current familiarity with modeling terminology, we no longer consider that maintenance of such a glossary is as necessary as it once may have been. For these and other reasons relating to Office of Federal Register policy (see discussion of appendix B below), we have revised the glossary and placed it on our Internet Web site.

Appendix A

We updated the introduction to appendix A (section A.0). As mentioned before, we added CALPUFF to appendix A. We removed the Climatological Dispersion Model (CDM 2.0), the Gaussian-Plume Multiple Source Air Quality Algorithm (RAM), and the Urban Airshed Model (UAM) from appendix A. These models have been superseded and are no longer considered preferred techniques.

Appendix B

We have moved the appendix B repository of alternate model summary descriptions to our Internet SCRAM Web site (<http://www.epa.gov/scram001>). Placement of this material on the Web site offers many advantages. In this format, we will be able to maintain the list and model descriptions more easily and inexpensively.

Several model developers have submitted new dispersion models for inclusion in this Web site repository of alternate models:

- Second-Order Closure Integrated Puff Model (SCIPUFF);
- Open Burn/Open Detonation Dispersion Model (OBODM);
- Atmospheric Dispersion Modeling System (ADMS);
- Comprehensive Air Quality Model with extensions (CAMx); and
- Urban Airshed Model—V (UAMV).

As described below, codes (executables) for these models, as well as applicable documentation, have been uploaded to our Internet SCRAM Web site. Finally, we deleted a model currently listed in appendix B, MESOPUFF II, which CALPUFF replaces.

Appendix C

As proposed, we also moved appendix C (Example Air Quality Analysis Checklist) from the CFR to our Internet SCRAM Web site. We believe this checklist is outdated, in need of revision, and would be more practical to maintain if posted on EPA's Internet SCRAM Web site.

Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735 (October 4, 1993)), the Agency must determine whether the regulatory action is "significant" and therefore subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (3) Materially alter the budgetary impact of entitlements, grants, user fees,

¹¹ Stauffer, D.R. and Seaman, N.L., 1990. Use of four-dimensional data assimilation in a limited-area mesoscale model. Part I: Experiments with synoptic-scale data. *Monthly Weather Review*, 118: 1250–1277.

¹² Stauffer, D.R., Seaman, N.L., and Binkowski, F.S., 1991. Use of four-dimensional data assimilation in a limited-area mesoscale model. Part II: Effect of data assimilation within the planetary boundary layer. *Monthly Weather Review*, 119: 734–754.

¹³ Hourly Modeled Sounding Data. MM4—1990 Meteorological Data, 12-volume CD-ROM. Jointly produced by NOAA's National Climatic Data Center and Atmospheric Sciences Modeling Division. August 1995. Can be ordered from NOAA National Data Center's Internet Web site @ www.nddc.noaa.gov/.

¹⁴ <http://www.mmm.ucar.edu/mm5/mm5-home.html>