

use of the most recent 5 years of meteorological data, there was some concern about the reliability of ASOS data. We revised guidance to specifically address this concern by allowing flexibility in the choice of ASOS or observer-based observations depending on which provided the most representative meteorological information.

#### Final Action

Today's action amends appendix W of 40 CFR part 51 as detailed below:

#### CALPUFF

The public comments provided constructive suggestions but did not suggest altering promulgation of the CALPUFF modeling system. We will therefore promulgate use of the CALPUFF modeling system as follows:

##### (A) Long Range Transport

CALPUFF will be adopted as a refined model for use in sulfur dioxide and particulate matter ambient air quality standards and PSD increment impact analyses involving (1) transport greater than 50km from one or several closely spaced sources, and (2) analyses involving a mixture of both long range and short-range source-receptor relationships in a large modeling domain (e.g., several industrialized areas located along a river or valley). The screening approach outlined in the IWAQM Phase 2 report is available for use on a case-by-case basis that generally provides concentrations that are higher than those obtained using refined characterizations of the meteorological conditions.

Given the judgement and refinement involved, conducting a long range transport modeling assessment will require significant consultation with the appropriate reviewing authority, and for Class I analyses the appropriate FLM. To facilitate use of complex air quality and meteorological modeling systems, a written protocol may be considered for developing consensus in the methods and procedures to be followed.

##### (B) Complex Winds

(1) On a case-by-case basis, the CALPUFF modeling system may be applied for air quality estimates involving complex meteorological conditions, where the assumptions of steady-state straight-line transport both in time and space are inappropriate.

(2) In such situations, where the otherwise preferred dispersion model is found to be less appropriate, use of the CALPUFF modeling system will be in accordance with the procedures and

requirements outlined in paragraph 3.2.2(e) of the *Guideline*.

The public comments provided constructive suggestions, but did not suggest altering the meteorological data requirements for refined modeling assessments using the CALPUFF modeling system. Therefore, we will promulgate use of the CALPUFF modeling system with the following meteorological data requirements. For long range transport and for complex winds situations, there are two possibilities:

(A) If only NWS or comparable standard meteorological observations are employed, then five years of meteorological data should be used.

(B) If mesoscale meteorological fields are employed with appropriate NWS observations, then less than five years but at least three years of meteorological data may be used. Following the suggestions provided in public comments, we revised the *Guideline* to emphasize that appropriate NWS observations should be used in conjunction with mesoscale meteorological data.

In response to the suggestions provided in public comments, we: (1) Created a series of frequently asked questions to provide additional technical information to users, which will be made publicly available via Earth Tech's Internet Web site, (2) expanded the meteorological and precipitation data formats that can be processed, (3) have tested and made changes as necessary that allow the modeling software to be compiled by several Fortran compilers, thus making the code more robust to various choices in compilers, and (4) will maintain and make publicly available via our Web site, a list of technical papers and reports that describe testing and evaluation of the CALPUFF modeling system in a variety of situations and thus provide a basis for wider use of the CALPUFF modeling system.

For appropriate applications, CALPUFF *may be* used during the one-year period following the promulgation of today's notice. After one year following promulgation of today's notice, CALPUFF should be used for appropriate applications.

#### Other Modeling Systems

We have removed UAM-IV from appendix A for urban ozone applications and removed reference to ROM and RADM for regional scale applications to reflect the current state-of-science. Similarly, we have identified Models-3/CMAQ and REMSAD as example modeling systems that have been evaluated and peer reviewed for

regional scale applications, and make clear that this does not preclude the use of other models.

We have removed appendix B and appendix C from appendix W and placed equivalent counterparts on our SCRAM Internet Web site. Former appendix B will simply become a list of alternative model summaries, and should be readily updated as new models in the proper format are submitted and not on a restrictive schedule. Given the current status of ADMS and SCIPUFF, as well as OBODM, CAMx and UAMV (an update to UAM-IV), all have now been included in the web-based Alternative Models list.

As proposed, we have referenced OLM and CAL3QHC for use in specific circumstances, and removed RAM and CDM from appendix A.

#### Meteorological Data Issues

The terminology for "site-specific" has been implemented as proposed since there was a lack of negative comment. The prevailing concept is, as commenters recognized, *representativeness*, and this is now emphasized in our guidance.

Due to limitations of ASOS data for use with standard dispersion models, paragraph 8.3.1.2(a) of appendix W has been revised to indicate that where the latest 5 years of data includes ASOS data (now the typical situation) discretion should be used. Where judgment indicates ASOS data are inadequate for cloud cover observations, the most recent 5 years of NWS data that are observer-based may be considered for use.

In response to public comment, we have updated our meteorological data processors (*i.e.*, MPRM and CALMET) to allow processing of meteorological data formats from the National Climatic Data Center necessary to operate associated air quality models; no further updates to MPRM are necessary at this time. The meteorological monitoring guidance<sup>6</sup> has been updated.

#### Final Editorial Changes to Appendix W Preface

You will note some minor revisions to reflect current EPA practice.

#### Section 2

In a streamlining effort, we removed section 2.2 and added a new section 2.3 to address model availability.

<sup>6</sup> Environmental Protection Agency, 2000. Meteorological Monitoring Guidance for Regulatory Modeling Applications. EPA Publication No. EPA-454/R-99-005. U.S. Environmental Protection Agency, Research Triangle Park, NC. ([www.epa.gov/scram001](http://www.epa.gov/scram001)).