

Attainment Demonstrations,” from Merrylin Zaw-Mon, Office of Mobile Sources, to the Air Division Directors, Regions I–VI. November 3, 1999. Web site: <http://www.epa.gov/oms/transp/trafconf.html>.

4. Memorandum from Lydia Wegman and Merrylin Zaw-Mon to the Air Division Directors, Regions I–VI, “1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking.” November 8, 1999. Web site: <http://www.epa.gov/oms/transp/trafconf.html>.

5. Memorandum from John Seitz, Director, Office of Air Quality Planning and Standards, “Mid-Course Review Guidance for the 1-Hour Ozone Nonattainment Areas that Rely on Weight-of-Evidence for Attainment Demonstration.” Web site: <http://www.epa.gov/scram001/tt25.htm> (file name: “MCRGUIDE”).

6. Memorandum, “Guidance to Clarify EPA’s Policy on What Constitutes “As Expeditiously as Practicable” for Purposes of Attaining the One-Hour Ozone Standard for Serious and Severe Ozone Nonattainment Areas.” John S. Seitz, Director, Office of Air Quality Planning and Standards. November 1999. Web site: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

7. U.S. EPA, (1991), Guideline for Regulatory Application of the Urban Airshed Model, EPA-450/4-91-013, (July 1991). Web site: <http://www.epa.gov/ttn/scram/> (file name: “UAMREG”).

8. U.S. EPA, (1996), Guidance on Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS, EPA-454/B-95-007, (June 1996). Web site: <http://www.epa.gov/ttn/scram/> (file name: “O3TEST”).

9. Memorandum, “Ozone Attainment Demonstrations,” from Mary D. Nichols, issued March 2, 1995. Web site: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

10. December 29, 1997 Memorandum from Richard Wilson, Acting Assistant Administrator for Air and Radiation “Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM₁₀ NAAQS.” Web site: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

VII. How Does the Rhode Island Submittal Satisfy the Framework?

This section provides a review of Rhode Island’s submittal and an analysis of how this submittal satisfies the framework discussed in Section V. of this notice.

A. What Did the State Submit?

The attainment demonstration SIP submitted by the Rhode Island Department of Environmental Management for the Rhode Island area

includes a modeling analysis using the CALGRID model. The SIP was submitted in proposed form on January 27, 2003. The SIP is subject to public notice and comment and a hearing will be held on February 27, 2003.

Information on how the photochemical grid modeling, the RACM analysis, the mid-course review and the Motor Vehicle Emissions Budgets are consistent with the CAA and EPA guidance is summarized below.

As explained earlier, the Rhode Island area attained the one-hour ozone standard as of 1999, its statutory deadline under the CAA. Moreover, the Rhode Island nonattainment area continued to have air quality meeting the one-hour ozone standard until the 1999 through 2001 time period. In its attainment demonstration, Rhode Island provides evidence that the area will once again attain by 2007.

Rhode Island chose a 2007 attainment date because it has determined that the current violations are due to upwind emissions, some of which cannot be reduced until as late as the beginning of the 2007 ozone season. The additional reductions that will occur in upwind areas, as well as in Rhode Island, include the following programs: (1) EPA’s NO_x SIP call, which will be implemented by May 31, 2004, with states expected to fully comply with their budgets by 2007; (2) EPA’s Tier 2 standards, which will impose new tailpipe standards for motor vehicles and reduce the sulfur content of fuel, and will be phased in beginning in 2004; (3) EPA’s NO_x requirements for highway heavy-duty engines (*i.e.*, trucks and buses), which beginning in 2004 require new diesel trucks and buses to be 50 percent cleaner than today’s models; (4) new nonroad diesel NO_x standards, which started in 1996 with increasingly more stringent standards being phased in through 2006; and (5) a number of upwind states will adopt new VOC controls for architectural coatings and consumer products that will go into effect in 2004.

Rhode Island also notes that New York, New Jersey and Connecticut have CAA attainment dates of 2007, which is when these upwind states will have fully implemented all measures necessary for them to attain the standard. Also, as discussed in section VII.H there is nothing more Rhode Island can do to advance their attainment date. Attainment in Rhode Island will be achieved when transport of ozone into Rhode Island is reduced below the one-hour standard, and the Rhode Island attainment plan discussed below shows this will not occur until November 15, 2007. Based on this

information, EPA agrees that an attainment date of November 15, 2007 is as expeditiously as practicable and EPA proposes approval of this attainment date for the Rhode Island area.

B. How Was the Photochemical Grid Modeling Conducted?

The key element of the attainment demonstration is the photochemical grid modeling required by the CAA. The Rhode Island SIP used the CALGRID model which was approved for use by EPA since it was found to be at least as effective as the guideline model which is UAM-IV. The modeling domain for CALGRID extends from southwest Connecticut, northward 340 km to northern Vermont, and eastward to east of Nantucket, Massachusetts. For the Rhode Island nonattainment area, the domain is consistent with EPA guidance since it contains adequate areas both upwind and downwind of the nonattainment area. The domain also includes the monitors with the highest measured peak ozone concentrations in Rhode Island. Since the CALGRID modeling was done for a much larger domain that includes not only all of Rhode Island but also includes all of Massachusetts, most of Connecticut, southern New Hampshire, southern Vermont, and most of southern Maine, the CALGRID model has several “source” areas and several receptor areas. The only receptor area of import to this notice and the Rhode Island SIP submittal is the Rhode Island serious ozone nonattainment area. For the purposes of this notice, only model results in Rhode Island will be used, unless otherwise noted. As shown below, EPA believes the modeling portion of the attainment demonstration is consistent with EPA guidance.

The model was run for 10 days during four distinct episodes (August 14–17, 1987, June 21–22, 1988, July 7–8, 1988 and July 10–11, 1988). These episodes represent a variety of ozone conducive weather conditions, and reflect days with high measured ozone in a variety of areas within the entire domain. This is because, as stated above, the domain covers several nonattainment areas, and in order to model the meteorology that causes high ozone, several different episodes were needed. The episodes chosen for New England do include the worst ozone episode for Rhode Island over the last 15 years. The CALGRID model results for the first day of each episode are not used for attainment demonstration purposes, because they are considered “ramp-up days.” Ramp-up days help reduce impacts of initial conditions; after ramp-up days, model results are more reflective of actual