

B. Rhode Island Ozone Attainment Demonstration Submittal

Unlike other states with serious ozone nonattainment areas, Rhode Island did not in 1998 submit a final ozone attainment demonstration as a SIP revision pursuant to EPA's December 29, 1997 memorandum. Based on data collected from 1996–1998, EPA determined on June 9, 1999 (64 FR 30911) that the Rhode Island serious ozone nonattainment area had attained the 1-hour ozone standard. Consistent with EPA policy, since the Rhode Island area had attained the standard by November 15, 1999, its statutory attainment date, Rhode Island did not need to submit an attainment demonstration to EPA for EPA to take action on.⁶

The Rhode Island nonattainment area continued to have air quality meeting the one-hour ozone standard through the summer of 2000, and it was not until after the summer of 2001 that the Rhode Island area had air quality violating the one-hour ozone standard. At that point in time, this nonattainment area was once again required to have an approved attainment demonstration and ROP plan with respect to section 182(c)(2) of the CAA. Today, in this proposed rule, EPA is proposing action on the proposed attainment demonstration SIP submitted by the Rhode Island DEM on January 27, 2003. EPA has previously approved the state's 15% plan (63 FR 67594, 12/8/98) and 9% ROP plan (66 FR 30811, 6/8/01).

The Rhode Island Attainment Demonstration contains the following elements: (1) The required photochemical grid attainment demonstration modeling, supplemented with a weight-of-evidence (WOE) analysis showing how attainment will be achieved; (2) an analysis showing that Rhode Island is implementing all reasonably available control measures (RACM) and that no other RACM could be adopted in Rhode Island that would advance the attainment year; (3) motor vehicle emissions budgets for the attainment year, which are used for conformity determinations, and (4) contingency measures as required pursuant to section 172(c)(9) of the

CAA. Rhode Island Department of Environmental Protection will hold a public hearing on this Attainment Demonstration SIP on February 27, 2003.

The statutory attainment date for the Rhode Island Area was November 15, 1999. The area attained the standard as of its attainment date, but then subsequently experienced a violation. The CAA does not expressly address the appropriate attainment date for an area that attains the standard by its attainment date but then subsequently violates the standard nor does it address the planning requirements that apply to such an area. (CAA sections 179 (c) and (d) and 181(b)(2) establish requirements only for those areas that EPA determines do not attain the standard by their attainment date.) With respect to the attainment date, both subparts 1 and 2 specify outside dates for attainment and provide that attainment must be “as expeditiously as practicable.” CAA sections 172(a)(2) and 181(a)(1). With respect to control obligations, EPA generally attempts first to work with the State to submit a revised SIP and, where necessary, would issue a SIP Call pursuant to section 110(k)(5). *See e.g.*, 65 FR 64352 (Oct. 27, 2000). Here, Rhode Island is already well on its way to submitting a final attainment demonstration and has indicated that the demonstration provides for attainment as expeditiously as practicable, *i.e.* by November 15, 2007. We review Rhode Island's submission in the following sections.

IV. What Are the Components of a Modeled Attainment Demonstration?

The EPA provides that states may rely on a modeled attainment demonstration supplemented with additional evidence to account for inherent uncertainty in the modeling.⁷ In order to have a complete modeling demonstration submission, states should have submitted the required modeling analysis and identified any additional evidence that EPA should consider in evaluating whether the area will attain the standard.

A. Modeling Requirements

For purposes of demonstrating attainment, section 182(c) of the CAA requires serious areas to use photochemical grid modeling or an analytical method EPA determines to be as effective.⁸ The photochemical grid model is set up using meteorological conditions conducive to the formation of ozone. Emissions for a base year are used to evaluate the model's ability to reproduce actual monitored air quality values and to predict air quality changes in the attainment year due to the emission changes which include growth up to and controls implemented by the attainment year. A modeling domain is chosen that encompasses the nonattainment area. Attainment is demonstrated when all predicted concentrations inside the modeling domain are at or below the NAAQS or at an acceptable upper limit above the NAAQS consistent with conditions specified by EPA's guidance. When the predicted concentrations are above the NAAQS, an optional weight-of-evidence determination which incorporates, but is not limited to, other analyses, such as air quality and emissions trends, may be used to address uncertainty inherent in the application of photochemical grid models.

The EPA guidance identifies the features of a modeling analysis that are essential to obtain credible results. First, the state must develop and implement a modeling protocol. The modeling protocol describes the methods and procedures to be used in conducting the modeling analysis and provides for policy oversight and technical review by individuals responsible for developing or assessing the attainment demonstration (state and local agencies, EPA Regional offices, the regulated community, and public interest groups). Second, for purposes of developing the information to put into the model, the state must select air pollution days, *i.e.*, days in the past with poor air quality, that are representative of the ozone pollution problem for the nonattainment area. Third, the state needs to identify the appropriate dimensions of the area to be modeled, *i.e.*, the domain size. The domain should be larger than the designated nonattainment area to reduce uncertainty in the boundary conditions and should include large upwind sources just outside the nonattainment area. In general, the domain is considered the local area where control measures are most beneficial to bring the area into attainment. Fourth, the state needs to determine the grid

⁶ Policy guidance contained in a May 10, 1995 memorandum from John Seitz, Director of EPA's Office of Air Quality Planning and Standards, entitled “Reasonable Further Progress, Attainment Demonstration, and Related Requirements for Ozone Nonattainment Areas Meeting the Ozone National Ambient Air Quality Standard” recommends that ROP and attainment demonstration requirements, along with certain other related requirements, of Part D of Title 1 of the Clean Air Act are no longer applicable to an area once it has air quality data indicating that the one hour ozone standard has been attained.

⁷ The EPA issued guidance on the air quality modeling that is used to demonstrate attainment with the one-hour ozone NAAQS. *See* U.S. EPA, (1991), Guideline for Regulatory Application of the Urban Airshed Model, EPA-450/4-91-013, (July 1991). A copy may be found on EPA's web site at <http://www.epa.gov/ttn/scram/> (file name: “UAMREG”). *See also* U.S. EPA, (1996), Guidance on Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS, EPA-454/B-95-007, (June 1996). A copy may be found on EPA's Web site at <http://www.epa.gov/ttn/scram/> (file name: “O3TEST”).

⁸ *Ibid.*