

whichever is less. This limit is to be met beginning November 15, 1995. The SIP limit is to be met beginning November 15, 1995. The SIP revision provides a demonstration that this limit will attain the NAAQS in the nonattainment area. Therefore, Pennsylvania has ensured that reasonably available control technology, fuel specification, is required and that the control technology provides for achievement of the NAAQS by the statutory attainment date, which is November 15, 1995.

2. Reasonable Further Progress (RFP)

Pennsylvania's SIP revision provides for reasonable further progress (RFP). The SIP revision provides for RFP through interim emission limitations established in the Agreement. The Agreement specifies that the Warren Generating Station shall achieve a daily average emission rate not to exceed 3.0 pounds of SO₂ per million Btu (3.0 lb/mmBtu) heat input beginning January 1, 1993. An allowable emission rate of 2.5 lb/mmBtu is imposed on the Station beginning November 15, 1994. These emission limits clearly adhere to an ambitious compliance plan which will provide for attainment by the applicable date.

3. Contingency Measures

Pennsylvania's SIP revision provides for adequate contingency measures. The SIP revision requires the collection of continuous emission monitoring (CEM) data at the Warren Generating Station in accordance with the previously federally-approved procedures established in 25 Pa. Code § 123.25 "Monitoring Requirements for Sulfur Compound Emissions from Combustion Units" and subchapter C "Requirements for Continuous In-Stack Monitoring for Stationary Sources" (48 FR 2320). The collection of CEM data and the ambient air quality monitoring network currently operating in and around the nonattainment area provides a comprehensive program to identify violations of the NAAQS. The existing Agreement may be modified, as agreed to by both parties, to require further reductions as deemed necessary to achieve attainment of the NAAQS.

4. Stack Height Issues and Remand

Pennsylvania has chose to address stack height issues upon the resolution of the remand. The Warren Generating Station merges the exhaust from its four (4) boilers into one stack as part of its original design and operation in 1948. This constitutes dispersion credit for sources originally designed and constructed with merged or multiflue stacks (40 CFR 51.100(hh)(2)(ii)(A)).

These sources had originally been exempted under the stack height rules but that provision was remanded to EPA for reconsideration. Pennsylvania does not address this issue in the SIP revision. Therefore, it will have to revise its rules, including any affected emission limitations, to conform with resolution of the remand.

5. Existing Modeling Protocols

Pennsylvania's SIP revision is supported by a modeling demonstration using regulatory air dispersion models as defined by EPA's "Guideline on Air Quality Models (Revised)," July 1986. However, the Agreement allows for the completion of a model evaluation and equivalency study by Penelec. Penelec will perform a study comparing and evaluating the predictive results of the MPTER/RTDM (Multiple Point Gaussian Dispersion Algorithm with Terrain Adjustment (MPTER) and Rough Terrain Diffusion Model (RTDM), respectively) and LAPPES (Large Area Power Plant Effluent Study) models. The protocol for this study has been approved by Pennsylvania and EPA. The study is currently underway. Upon satisfactory completion of the study, Pennsylvania has indicated that it will revise its SIP, as appropriate, in accordance with the results of the study. Until such time as any future revised SIP is approved by EPA, the limits established by the Agreement and this SIP revision will remain in effect.

6. Test Methods and Averaging Times

Pennsylvania's SIP provides for the use of continuous emissions monitoring (CEM) as the means of compliance. The revision stipulates an hourly emission limit and requires the use of a Pennsylvania-approved method for calculating hourly emissions. Pennsylvania's federally approved CEM regulations (25 Pa. Code § 123.25 and subchapter C) define the general requirements for CEM operation and references the CEM guidelines in "Standards of Performance for New Stationary Sources," 40 CFR part 60 and "Minimum Source Monitoring Requirements," 40 CFR part 51 appendix P. An hourly emission limit for the source is shorter than the time period for the NAAQS for which the area is nonattainment (i.e., the 24-hour primary standard). The required limit is also adequate to determine compliance with the 3-hour secondary standard.

7. Emission Inventory

Pennsylvania's SIP revision provides an adequate actual emissions inventory from all relevant sources of SO₂ in the nonattainment area. Pennsylvania has

provided a current, actual emissions data and stack parameter information for the Warren Generating Station and various emission sources at the nearby United Refining facility.

8. Attainment Demonstration

Pennsylvania's SIP revision provides an adequate attainment demonstration, including appropriate air quality dispersion modeling. 40 CFR 51.112 requires nonattainment plans to include a demonstration of the adequacy of the plan's control strategy. The Commonwealth's demonstration employs the applicable air quality models, data bases, and other requirements specified in appendix W of 40 CFR part 51 ("Guideline on Air Quality Models (Revised)" (1986), supplement A (1987), and supplement B (1993) (hereinafter, the Guideline)). This demonstration includes the following information: model selection and descriptions; model application and assumptions made during application of selected models; receptor grids; meteorological data; ambient air monitoring data and background concentration; model source input; and modeling results.

Model Descriptions—The air quality dispersion modeling analysis performed for this demonstration employed the MPTER and RTDM Guideline models. The Guideline provides a description of the models along with guidance on their application. MPTER is limited to predicting concentrations at elevations below stack height. In this analysis, the MPTER code was altered to accommodate the algorithm used in Industrial Source Complex Model (ISC2). The ISC2 algorithm was added to address the requirements of the interim terrain concept; the assessment of receptors between stack height and plume height. RTDM is employed to calculate concentrations at receptors whose elevations are greater than or equal to plume height.

Model Application—MPTER and RTDM were both applied to the modeling domain in accordance with the recommendations of the Guideline. The default mode of RTDM was employed. Likewise, the regulatory mode of MPTER was used with the applicable restrictions for complex terrain.

Receptor Grids—Three sets of receptor grids, with a total of 725 receptors were used for this demonstration. One grid was located in Conewango Township, the nonattainment area. The other two grids were located to the south and east of the Township. These grids were developed to adequately assess the impacts of the