

(iii) EPA has determined that the improvement in air quality in the area is due to permanent and enforceable emission reductions, (iv) EPA has determined that the maintenance plan for the area has met all of the requirements of section 175A of the Act, and (v) the state has met all requirements applicable to the area under section 110 and part D of the Act.

EPA has issued a variety of relevant guidance memoranda interpreting the statutory criteria for redesignations and maintenance plans, most notably including a memorandum dated September 4, 1992, signed by the Director of EPA's Office of Air Quality Planning and Standards. In addition, regulations governing the evaluation of PM₁₀ monitoring data are in appendix K to 40 CFR part 50.

B. Review Under Statutory Criteria

1. Has the Area Attained the Standards?

Title 40 CFR part 50, appendix K provides for evaluating three years of representative monitoring data. Indiana monitors PM₁₀ concentrations at numerous locations in Lake County. Detailed results of this monitoring are available in EPA's Air Quality System (AQS) and on the Internet at <http://www.epa.gov/air/data/>. Indiana's submittal summarizes these air quality data.

For the most recent three calendar years, *i.e.*, 1999 to 2001, Indiana collected PM₁₀ air quality data at five monitoring locations, including locations in Gary, Hammond, and East Chicago, where emissions are highest and the highest concentrations are expected. All sites recorded annual average concentrations below the annual average standard in all three years. Four of the five sites also recorded no exceedances of the 24-hour standard and thus clearly meet this standard. However, the fifth site, located in Gary at 201 Mississippi Street near the USX steel mill, recorded three exceedances in the 1999 to 2001 period. Thus, further analysis is necessary to determine whether this site meets the 24-hour standard.

The procedures in appendix K to 40 CFR part 50 for assessing compliance with the 24-hour standard estimate the number of days per year that the site is expected to exceed the level of the standard (150 micrograms per cubic meter). If a monitoring site collects complete information, the number of expected exceedances is simply equal to the number of measured exceedances. However, if data from a monitor are missing or inadequate for one or more days, these procedures provide for the

assessment of the additional number (potentially fractional) of additional exceedances estimated to have occurred on unmonitored or inadequately monitored days. The number of expected exceedances is then the sum of the number of measured exceedances plus the additional inferred number of exceedances expected for unmonitored or inadequately monitored days. The number of expected exceedances is thus the likely total number of exceedances that a monitor would have recorded had it obtained complete data.

Since PM₁₀ concentrations often vary by season, appendix K provides for estimation of expected exceedances separately for each quarter year. A location is attaining the standard if the monitor has a three-year average number of expected exceedances (rounded to the nearest tenth) of 1.0 or less.

The above Gary monitor recorded two exceedances in 1999, no exceedances in 2000, and one exceedance in 2001. The exceedances in 1999 both occurred in the last quarter. The monitor at this site is a continuous instrument that records hourly average values. The data obtained were adequate (at least 18 hours per day) to be considered complete for every day during the quarter. Therefore, the number of expected exceedances for 1999 at this site is equal to the 2.0 measured exceedances. The year 2000 had 0.0 expected exceedances. For 2001, the monitor recorded one exceedance in the first quarter out of 87 days with adequate data; three days in the first quarter had either no data or insufficient data. This leads to an estimated exceedances of 1.03, which rounds to a 2001 expected exceedances value of 1.0. Average expected exceedances for 1999 to 2001 then is 1.0. Consequently, this site is attaining the standard. More generally, since the monitoring includes representation of the worst-case locations in Lake County, EPA concludes that all of Lake County is attaining the PM₁₀ standards.

2. Has EPA Fully Approved the Applicable Implementation Plan?

The principal relevant element of the SIP required under Part D of Title I of the Clean Air Act for Lake County is a plan for attaining the particulate matter standards. Indiana submitted this attainment plan on June 16, 1993, with subsequent supplemental submittals. EPA approved this attainment plan on June 15, 1995, at 60 FR 31412. Indiana submitted separate rules addressing requirements for nonattainment area new source review; EPA approved these rules as satisfying applicable

requirements on October 7, 1994, at 59 FR 51108. While Clean Air Act section 172(c)(9) identifies a requirement for contingency plans, EPA has concluded that areas that are attaining the standards need not submit such contingency plans. (See 57 FR 13564, published April 16, 1992.) This reflects EPA's view that contingency plans under section 172(c)(9) are designed to address the possibility of an area failing to achieve the expected air quality improvement, that the need for such plans no longer exists after an area attains the standard, and that an area that has attained the standard and has a maintenance plan can rely on the contingency plans in the maintenance plan to address any recurrence of violations. Thus, EPA concludes that it has approved all required SIP elements for the Lake County particulate matter nonattainment area.

3. Is Attainment Due to Permanent and Enforceable Emission Reductions?

Indiana's SIP requires permanent emission reductions at a wide range of facilities including those facilities that Indiana's modeling has demonstrated to be the key contributors to prior air quality problems. The emission reductions result from installation of air pollution control equipment to capture and control particulate matter that was previously emitted. The reductions also result from ongoing measures to reduce emissions from plant roadways and storage piles. Enforceable emission limits adopted in Title 326 Indiana Administrative Code Article 6 and approved by EPA (as compiled at <http://www.epa.gov/region5/air/sips/sips.htm>) assure the permanence of these emission reductions. EPA thus concludes that permanent and enforceable emission reductions have enabled this county to attain the standards.

4. Does the Maintenance Plan Assure Continued Attainment?

Under section 175A of the Clean Air Act, maintenance plans must demonstrate continued attainment of the standards for 10 years after the redesignation. Thus, Indiana demonstrated maintenance through 2012. This demonstration focused on industrial sources, especially steel mills, which were the predominant cause of prior nonattainment in Lake County. Indiana compiled estimates of industrial source emissions for 1999 and anticipated emissions for 2012, projecting a 21 percent decline in emissions during that period. This indicates, in turn, that the area can be