

Raleigh-Durham, North Carolina Carbon Monoxide Maintenance Plan

Effective Redesignation Date: 09/18/1995 (60 FR 39298)

Background of the Plan: In a March 15, 1991, letter to the EPA Region 4 Administrator, the Governor of North Carolina recommended the area of Raleigh/Durham be designated as nonattainment for CO, as required by section 107(d)(1)(A) of the 1990 CAA (Pub. L. 101-549, 104 Stat. 2399, codified at 42 U.S.C. 7401-7671q). The cities were designated nonattainment and classified as "moderate," under the provisions outlined in sections 186 and 187 of the CAA (See 56 FR 56694 (Nov. 6, 1991) and 57 FR 56762 (Nov. 30, 1992), codified at 40 CFR part 81, Sec. 81.334). The National Ambient Air Quality Standard (NAAQS) for CO is 9.5 ppm. CO nonattainment areas can be classified as moderate or serious, based on their design values. Since Raleigh/Durham had a design value of 10.9 ppm (based on 1988 and 1989 data), the area was classified as moderate. The Raleigh/Durham CO nonattainment area consists of Durham and Wake Counties. The Raleigh/Durham area was redesignated to attainment on August 2, 1995.

Summary of the Plan: On August 9, 1991, the North Carolina Department of Environmental Management (NCDEM), submitted a maintenance plan and a request to redesignate the Charlotte area from nonattainment to attainment for carbon monoxide (CO). The Charlotte CO nonattainment area consists only of Mecklenburg County. Subsequently, NCDEM submitted supplemental material to the Charlotte submittal on October 7, 1994. Included with this package was a request to redesignate the Raleigh/Durham area from nonattainment to attainment for CO. The Raleigh/Durham CO nonattainment area consists of Durham and Wake Counties.

Control Measures: Under section 187(a) areas designated nonattainment for CO under the amended CAA and classified as moderate were required to meet several requirements by November 15, 1992. Consequently, these requirements are pertinent only for the Raleigh/Durham area. These requirements included a 1990 Emission Inventory, an Inspection and Maintenance (I/M), and an Oxygenated Fuel Program. EPA has reviewed and is approving in this notice, North Carolina's 1990 Base Year Emission Inventory. Section 211(m) further required North Carolina to submit an oxygenated fuels regulation for the Raleigh/Durham area. NCDEM submitted a complete Oxygenated Fuel SIP on November 20, 1992, which was approved by EPA on June 30, 1994. On August 5, 1994, NCDEM submitted a complete I/M SIP, which was approved by EPA on June 2, 1995. Under the pre-amended CAA, EPA approved the North Carolina SIP control strategy for the Charlotte nonattainment area, satisfied that the rules and the emission reductions achieved as a result of those rules were enforceable. The control measures due to an I/M program generates annual CO reductions of about 12 percent. The fleet turnover under the Federal Motor Vehicle Emission Control Program produced annual CO emission reductions of 6 percent. There were additional emission reductions of 19 to 21 percent in the Raleigh/Durham area due to the implementation of an Oxygenated Fuels program during the winter seasons of 1992 and 1993.

Contingency Measures: The level of CO emissions in the Raleigh/Durham area will largely determine their ability to stay in compliance with the NAAQS in the future. Section 175A(d) of the CAA requires that the contingency provisions include a requirement that the State implement all measures contained in the SIP prior to redesignation. Therefore, North Carolina has provided contingency measures with a schedule for implementation in the event of a future CO air quality problem. The plan contains triggering mechanisms to determine when contingency measures are needed. The Raleigh/Durham contingency plan's primary trigger will be a violation of the CO NAAQS. A secondary trigger will be activated within 30 days of the State finding either: (1) The periodic emissions inventory exceeds the base inventory by 10 percent or more, or (2) a monitored air quality exceedance pattern indicates that an actual CO NAAQS violation may be imminent. A pattern will be

deemed to indicate an imminent violation if (a) one exceedance of the standard per year has been monitored at a single monitor for two successive years and those exceedances are at least greater than 20 percent above the standard (i.e., 10.8 ppm or above) or (b) the monitored air quality exceedance pattern otherwise suggests that a CO NAAQS violation is likely. Within 45 days of the trigger, the State will activate the pre-adopted regulations discussed below to become effective at the beginning of the next CO season. When other measures are needed to ensure that a future violation of the CO NAAQS does not occur, the State will complete the adoption process within one year of the secondary trigger. In case of a primary or secondary trigger, NCDEM will implement one or a combination of the following contingency measures: implementing either a 2.7 or 3.1 percent Oxygenated Fuel program, expanding the I/M program coverage, enhanced I/M, transportation control measures, or employee commute options program. EPA finds that the contingency measures provided in the State submittal meet the requirements of section 175A(d) of the CAA.

Emission Reductions: On November 16, 1992, the State of North Carolina submitted a comprehensive inventory of CO emissions of the Raleigh/Durham and Charlotte areas. The inventory includes emissions from area, stationary, and mobile sources using 1990 as the base year for calculations. The area wide CO emissions inventory for baseline year 1990 was 641.25 tons/day and a projected total of 630.85 tons/day by 2005.

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