

Louisville, Kentucky Ozone Maintenance Plan

(66 FR 53665, 10/23/01)

Background of the Plan: Under section 107(d) of the 1977 Clean Air Act, EPA promulgated the ozone attainment status for each geographic area of the country. In 1991, the Louisville area was designated moderate and the Kentucky portion was enlarged to include portions of Bullitt and Oldham counties. On March 30, 2001, the Commonwealth of Kentucky's Natural Resources and Environmental Protection Cabinet submitted: a request to redesignate the Kentucky portion of the Louisville moderate ozone nonattainment area to attainment for the 1-hour ozone National Ambient Air Quality Standard (NAAQS), a plan to maintain the 1-hour ozone NAAQS for at least the next 10 years, and the regional motor vehicle emission budgets (MVEBs) for transportation conformity purposes. In addition, on November 12, 1999, and May 23, 2001, Kentucky submitted source-specific Board Orders adopted by the Air Pollution Control Board of Jefferson County to control sources of nitrogen oxides (NO_x) at eleven sources in Jefferson County, Kentucky. On April 11, 2001, the State of Indiana's Department of Environmental Management submitted: a request to redesignate the Indiana portion of the Louisville moderate ozone nonattainment area to attainment for the 1-hour ozone NAAQS, the regional MVEBs for transportation conformity purposes, and a plan to maintain the 1-hour ozone NAAQS for at least the next 10 years. The Louisville moderate ozone nonattainment area (Louisville area) includes Jefferson County and portions of Bullitt and Oldham Counties, Kentucky, and Clark and Floyd Counties, Indiana.

Summary of the Plan: Effective November 23, 2001, EPA approved Kentucky's and Indiana's requests to redesignate the Louisville area to attainment for the 1-hour ozone NAAQS, provided both States revise their maintenance plans to include an enforceable commitment to revise the MVEBs using MOBILE6 and to revise the VOC MVEB so that the area's 2012 projected emissions do not exceed the 1999 attainment year emissions. EPA approved Kentucky's and Indiana's plans for maintaining the 1-hour ozone NAAQS through 2012, as revisions to the Kentucky and Indiana State Implementation Plans. The EPA also approved the MVEBs for VOC and NO_x in the submitted maintenance plans as adequate for conformity purposes. Final EPA approval of the maintenance plans, including the MVEBs, was contingent on Kentucky's and Indiana's final submittal of the above-cited revisions. Finally, the EPA approved the source-specific Board Orders submitted by Kentucky to control NO_x emissions from 11 sources in Jefferson County, Kentucky, as fulfilling the remaining NO_x reasonably available control technology (RACT) requirements of section 182(f) of the CAA for the Kentucky portion of the Louisville area.

Control Measures: A variety of control measures will be utilized including the following:

- Emissions Inventory
- Emissions Statement
- 15 Percent Plan
- VOC RACT Requirements
- Stage II Vapor Recovery

- Vehicle Inspection and Maintenance
- NOx Requirements
- RFG

This area is subject to the Federal Reid Vapor Pressure requirements. For a listing of the exact requirements please refer to <http://www.epa.gov/otaq/volatility.htm>

Motor Vehicle Emissions Budgets: The budget year 2012 MVEB for the Louisville area for VOCs is 50.93 tons/day and 48.17 tons/day, provided Kentucky and Indiana revise their maintenance plan submittals. The budget year 2012 MVEB for the Louisville area for NOx is 92.93 tons/day.

Contingency Measures: The Cabinet committed to submitting a revised plan eight years after redesignation and attainment tracking. Attainment tracking will include triennial reviews of actual emissions for the redesignated areas which will be performed using the latest emission factors, models, and methodologies. In the event of a monitored violation of the 1-hour ozone NAAQS in the Louisville area, Kentucky commits to adopt within nine months, and implement the regulatory programs within 18 months, one or more of the following contingency measures to reattain the 1-hour ozone NAAQS:

- A program to require additional emission reductions at stationary sources, either for specific types of processes or an across-the-board reduction for the larger stationary sources.
- More restrictive new source review requirements.
- A more rigorous vehicle emissions testing program or increase the area subject to the current programs.
- Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high-occupancy vehicles.
- Trip-reduction ordinances.
- Programs to limit or restrict vehicle use in downtown areas, or other areas of emission concentration, particularly during periods of peak use.
- Programs for new construction and major reconstructions of paths or tracks for use by pedestrians or by non-motorized vehicles when economically feasible and in the public interest.

The occurrence of either of the following two events will trigger Kentucky to evaluate existing control measures to see if any further emission reduction measures should be implemented: (1) if exceedances of the 1-hour ozone NAAQS are measured in any portion of the Louisville area, or (2) if a periodic emission inventory update reveals excessive or unanticipated growth greater than 10 percent in ozone precursor emissions.

Emission Reductions: Kentucky and Indiana, in their submittals, included their 1999 emissions inventories as their attainment year inventories. Both Kentucky's and Indiana's maintenance plans provided emissions estimates from 1999 to 2012 for VOCs and NOx, and indicate that these emissions in the Louisville area are projected to decrease from 1999 levels. Considering only the projected emissions, the results of this

analysis show that the area is expected to maintain the air quality standard for at least 10 years into the future after redesignation. However, Kentucky and Indiana also chose to include a safety margin, in addition to projected emissions, for both the VOC and NOx MVEBs. The inventories include point, area, mobile and non-highway source data for the Indiana counties of Clark and Floyd, the Kentucky counties of Jefferson, and Nonattainment Portions of Bullitt and Oldham and area wide inventory for the Louisville area. Using 1999 attainment year inventory as the base, the area-wide Louisville VOC emission is projected to decrease from 145.65 tons/day in 1999 to 133.51 tons/day in 2012. Furthermore, using a calculated 14.89 mobile source safety margin, the VOC inventory is projected to increase to 148.40 tons/day. Using the 1999 attainment year inventory as the base, the area-wide Louisville NOx emission is projected to decrease from 271.23 tons/day in 1999 to 153.56 tons/day in 2012. Furthermore, using a calculated 35.92 mobile source safety margin, the VOC inventory is projected to increase to 189.48 tons/day.

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