ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[IL63–3–6803; FRL–5170–5]

Approval and Promulgation of Implementation Plan; State of Illinois

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: On September 13, 1994, the United States Environmental Protection Agency (USEPA) published direct final rulemaking approving 1990 base year ozone precursor emissions inventories for the Chicago, Metro-East St. Louis, and Jersey County, Illinois ozone nonattainment areas as a revision to the Illinois State Implementation Plan (SIP). On the same day, a proposed rule was also published which established a 30-day public comment period, noting that, if adverse comments were received regarding the direct final rule, the USEPA would withdraw the direct final rule and publish an additional final rule to address the public comments. Adverse comments were received during the public comment period. This revised final rule summarizes the public comments and USEPA's responses and finalizes the approval of the 1990 base year ozone precursor emissions inventories for the Illinois ozone nonattainment areas.

EFFECTIVE DATE: This action will be effective April 13, 1995.

ADDRESSES: Copies of the SIP revision, public comments and USEPA's responses are available for inspection at the following address: (It is recommended that you telephone Edward Doty at (312) 886–6057 before visiting the Region 5 office.)

United States Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604.

FOR FURTHER INFORMATION CONTACT: Edward Doty, Regulation Development Section (AR–18J), Regulation Development Branch, Air and Radiation Division, United States Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, Telephone Number (312) 886–6057.

SUPPLEMENTARY INFORMATION:

I. Background Information

The 1990 base year emissions inventories discussed in this rule were submitted by the Illinois Environmental Protection Agency (IEPA) on November 12, 1993 in compliance with the requirements of section 182(a)(1) of the Clean Air Act (Act). The emission inventory submittal covers the emissions of Volatile Organic Compounds (VOC), Oxides of Nitrogen (NO_x), and Carbon Monoxide (CO) for the following ozone nonattainment areas: Chicago (Cook, DuPage, Kane, Lake, McHenry, and Will Counties, Aux Sable and Goose Lake Townships in Grundy County, and Oswego Township in Kendall County); Metro-East St. Louis (Madison, Monroe, and St. Clair Counties); and Jersey County. In addition to emissions from the nonattainment areas, the submittal also covers VOC, NO_x, and CO emissions from major stationary sources located within 25 miles of the ozone nonattainment areas. The focus of this rulemaking is the ozone precursor emissions in the ozone nonattainment areas.

On September 13, 1994 (59 FR 46920), USEPA published a direct final rule approving the emissions inventories as a revision of the Illinois ozone SIP. On the same day, USEPA published a proposed rule (59 FR 46948) noting that if adverse comments were received regarding the direct final rule, the USEPA would withdraw the direct final and publish another final rule addressing the public comments. Adverse comments were received regarding the direct final rule. This subsequent final rule addresses the adverse comments and announces USEPA's final action regarding Illinois' base year ozone precursor emission inventories.

II. Public Comments

The following discussion summarizes the comments received regarding the emissions inventories and the USEPA responses to those comments. All comments were included in a single set of comments submitted jointly by the American Lung Association of Metropolitan Chicago and the Citizens Commission for Clean Air in the Lake Michigan Basin.

Comment: The commenters note that air quality monitoring and modeling performed by the Lake Michigan Air Directors Consortium (LADCO) indicates that the Chicago area emissions inventory underestimates VOC emissions by as much as 1.5 times and overestimates NO_x emissions. VOC speciation profiles indicate that the inventory is underestimating mobile and/or area source emissions.

The commenters point out that the accuracy of the emissions inventory is critical since it is difficult to solve an ozone attainment problem when the source of the problem is not understood. Errors in the emissions inventory could lead to errors in the calculated emission reduction requirement (both in total and by source category) and the efficacy of the VOC versus NO_x controls, all of which are important issues in the Lake Michigan Basin.

The commenters note that monitoring data contradicting emission inventories is not unique to northeastern Illinois, suggesting that there may be a fundamental flaw in the process recommended by the USEPA for developing emission inventories. The commenters state that the USEPA should act to resolve these problems immediately. Furthermore, the inventories should be adjusted to be consistent with convincing monitoring data like those collected by LADCO.

Response: The USEPA is aware of the monitoring data collected during the Lake Michigan Ozone Study (LMOS) and their implications regarding the emissions inventory. The data imply that VOC emissions in the LMOS domain, and particularly in the Chicago and Milwaukee ozone nonattainment areas, are underestimated or that NO_x emissions are overestimated. It is noted, however, that these monitoring data are not sufficient in quantity and detail to allow detailed, source category-specific corrections to the emissions inventory. The data imply that the States and the USEPA should continue to pursue improved emission inventory techniques.

It is further noted that the LMOS States (Illinois, Indiana, Michigan, and Wisconsin) have pursued improvements in the emissions inventories subsequent to the submittal of the 1990 base year emissions inventories. These emissions inventory improvements have led to significantly improved agreement with the monitoring data collected during the LMOS. The emissions data to be used in the Lake Michigan Ozone Control Program (LMOP) (the modeling analysis conducted to select emission control measures, to assess the merits of VOC versus NO_x controls, and to demonstrate attainment of the ozone standard in the LMOS/LMOP modeling domain) agree favorably with the monitoring data. Some changes in the base year emissions inventories are expected to result from this process. These changes will be assessed by the USEPA when the demonstrations of attainment are submitted. If significant changes in the base year emissions inventories are implied by the modeling input data, the USEPA may consider requesting the States to revise the base year emission inventories approved previously by the USEPA. Alternatively, with concurrence from the State, the USEPA may

rulemake to revise the approved base year emissions inventories at the same time that the USEPA acts on the demonstration of attainment.

Because the State followed USEPA guidelines in preparing the emission inventories covered in this rulemaking, the USEPA does not believe it is appropriate to disapprove the base year emissions inventories at this time. Such a disapproval would not be adequately supported by the monitoring data collected during the LMOS.

Comment: LADCO monitoring and speciation data indicate that mobile source emissions are underestimated in the Chicago area emissions inventory. A contributing factor may be inaccurate speed data. In comments addressing the conformity findings for the 1993–1997 and 1994–1998 Transportation Improvement Programs and Transportation System Development Plans, a number of organizations identified problems with the Chicago Area Transit Study (CATS) transportation model that could lead to inaccurate speed estimates. The problems identified were:

1. The speeds used to estimate mobile source emissions are not based on actual measurements but instead are a function of applicable speed limits, numbers of traffic lights, type of road, etc. With little or no empirical data to support the speed estimates, they are highly suspect.
2. In order to generate accurate speeds, the model should post-process link speeds.
3. The model should account for intersection delays.

These problems are likely to lead to underestimation of emissions.

Other model deficiencies may have skewed speeds in a manner that resulted in overestimation of emissions or had no effect on emissions. For example, the model should feed trip times back to the mode choice and trip distribution portions of the model to account for persons who choose a different mode or avoid congested areas. The model should also have separate peak and non-peak components that account for drivers taking trips during less congested hours of the day, instead of the fixed time-of-day factors that the model currently uses.

The above problems should be remedied before USEPA gives final approval to the emissions inventory.

Response: It is true that the link speeds given in the transportation model output are not actual measured speeds, but rather ''impedances'' with the dimensions of speed that are used to make the model's estimated traffic levels balance. Both the IEPA and CATS subjected the CATS network speed (impedance) data, used in the development of the 1990 base year mobile source emission estimates, to considerable scrutiny before they were used in the estimation of emissions. It was determined that the model speed data were representative and could be properly used ''as is.''

As described in the emissions inventory documentation, the IEPA checked the model link speeds by road type and found them to be reasonable and representative. In particular, model speeds were checked by road type under free and congested conditions. Model speeds were, in general, less under congested conditions than under free flow conditions; and average speeds for different road types differed as expected. Local streets had the lowest average speeds, typically in the 20 to 35 mile per hour range, while rural interstates had the highest average speeds, up to 65 miles per hour. Speeds on very congested streets were below 10 miles per hour, as would be expected during ''rush hour'' periods. Model speeds for most roads, except interstates and freeways, were in the 25 to 45 mile per hour range. The model speeds for each roadway type agree broadly with speeds observed on roads of that type both in Chicago and elsewhere. It should be noted that the transportation model used by CATS takes intersection delays into account.

With regard to the comments concerning the overestimation of emissions, CATS has recently introduced a modeling method of feeding trip times back into the mode choice and trip distribution parts of the transportation model. In addition, CATS has introduced the use of peak and off-peak modeling components. These new model features have had a negligible effect on the model output.

Comment: Accurate emissions are missing for the following source categories:

1. Publicly Owned Treatment Works (POTWs);
2. Hazardous Waste Landfills;
3. Municipal Landfills;
4. Leaking Underground Storage Tanks (LUSTs);
5. Lawn Care Pesticide Applications;
6. Agricultural Burning;
7. Catastrophic/Accidental Releases;
8. Waste Disposal Incinerators; and
9. Small (10 to 25 tons per year) VOC-emitting Facilities.

Response: Each of the source categories are individually responded to below:

Publicly-Owned Treatment Works

The Publicly-Owned Treatment Works (POTW) category was treated by the IEPA as a point source category and not as an area source category in the Chicago ozone nonattainment area. A total of 62 POTW facilities were addressed in the Chicago nonattainment point source inventory.

The IEPA estimates were primarily based on data obtained from the IEPA's Division of Water Pollution Control, which issues permits to all POTW facilities. The permit files contain facility-specific data including, but not limited to, a facility's monthly average flowrates and the location of the facility. Other information not obtained from the permit files, such as industrial wastewater contribution, were either directly solicited from the facilities themselves or were given a default value consistent with the recommendations of the USEPA based on the guidelines contained in Procedures for the Preparation of Emission Inventories for Precursors of Ozone, Volume I (EPA–450/4–88–021). The emissions inventory documentation submitted by the IEPA contained a detailed discussion of IEPA's emission estimation methodology for this source category.

Hazardous Waste Landfills and Municipal Landfills

The Chicago ozone nonattainment area emissions inventory includes emissions for landfills within the point source emissions inventory rather than as an area source category. The IEPA used information from the IEPA Division of Land Pollution Control to determine the size, type, age, and location of landfills in the Chicago nonattainment area. In cases where some of the information was missing, estimates were based on the best available information. The emissions inventory contains emissions estimates for 229 landfills with a total of 4.59 tons per day of VOC emissions.

Calculation of landfill emissions was based on the 1988 document, *Air Emissions from Municipal Solid Waste Landfills—Background Information for Proposed Standards and Guidelines.* An emission factor of 35.36 tons VOC per year per million tons of refuse was used in the emission estimations. This was based on a recommended emission factor of 13.6 tons VOC per year per million tons of refuse multiplied by 2.6 to account for the fact that the Chicago area receives more than 23 inches of precipitation per year.

Catastrophic/Accidental Releases and Leaking Underground Storage Tanks

Catastrophic/accidental releases were not included in the Chicago nonattainment area inventory due to the

lack of USEPA emission inventory guidance for this source category and the lack of available data. In addition, note that the USEPA guidance requires that the emissions be estimated for a typical ozone season weekday. Since such releases are random and the extent of emissions can not be calculated, the IEPA, with concurrence from the USEPA, did not include emissions from this category in the emissions inventory.

There is a similar lack of information regarding VOC emissions from Leaking Underground Storage Tanks (LUSTs). Although information on the location of LUST cleanups is available, quantifying the VOC emissions resulting from the leaks and from the cleanup operations is complicated by the lack of information on the amount of gasoline or other volatile materials released, the amount of material that has reached the water table, and the amount of material that has been trapped in the soil. The USEPA concurs with the omission of these emissions given the lack of data.

Lawn Care Pesticide Applications

The IEPA did not calculate these emissions due to a lack of available USEPA guidance for this source and to a lack of available data. In addition, the IEPA believes that such emissions are already accounted for under the household pesticide subcategory of the commercial/consumer solvents category. The USEPA concurs with the omission of these emissions given the lack of data and guidance.

Agricultural Burning

Agricultural burning was not considered to be significant summertime source of VOC emissions in the Chicago ozone nonattainment area since such burning occurs primarily outside of the summer months. The Chicago nonattainment area does contain VOC emissions resulting from forest fires as well as from burning of landscape waste under the open burning category.

Waste Disposal Incinerators

The Chicago nonattainment area emissions inventory includes VOC emissions from waste disposal incinerators. The summary of these emissions can be found in Table 2–2 of the Chicago area emissions inventory submittal under the category, Municipal Waste: Combustion. This category summarizes the point source inventory for Commercial/Institutional, Governmental, and Industrial Waste Incineration. There are a total of 121 source facilities in this category, emitting a total of 1.62 tons VOM per day.

Small (10 to 25 Tons Per Year) VOC-Emitting Facilities

The Chicago nonattainment area point source emissions inventory includes emissions from small facilities emitting less than 25 tons VOC per year. All permitted emission sources were included in the point source emissions inventory regardless of their size. The emissions inventory includes source facilities with emissions as low as 0.01 tons per day or 0.1 pounds per hour. Although these facilities were not individually documented in the major source summary documentation of the emissions inventory submittal, their emissions were totalled in the appropriate activity-related source categories.

Comment: An area of concern is the lack of rule effectiveness factors for many source categories in the emission inventories. For sources that do have rule effectiveness estimates, there is little information explaining how the estimates were selected.

Response: As noted in the emission inventory documentation, the State assumed a default rule effectiveness of 80 percent for most source categories, as recommended in USEPA guidelines. A rule effectiveness of 100 percent was used for sources that estimated emissions using direct measurement methodologies, such as mass balance. These procedures comply with Illinois' Inventory Preparation Plan, previously approved by the USEPA.

The State, as part of the LMOS, determined facility-specific rule effectiveness levels for major facilities with emission control efficiencies in excess of 95 percent. All non-studied facilities with emission control efficiencies in excess of 95 percent were assumed to have rule effectiveness levels equal to the median rule effectiveness determined in the facility-specific study, approximately 92 percent. The study parameters and results were included in documentation referenced in the emissions inventory submittal. The USEPA has reviewed this documentation, and has determined it to be acceptable. Therefore, the State has taken an acceptable approach to applying rule effectiveness and has adequately documented this approach and the resulting rule effectiveness estimates.

Comment: The use of questionable population-based emissions factors appears to have contributed to low emission estimates for some area sources. For example, estimates of graphic arts, auto body refinishing, and non-road construction equipment VOC emissions are significantly lower per capita than for other urban areas. Given that additional controls on area sources are likely to be included in Illinois' attainment plan, accuracy of the area source emissions is especially important.

Response: With regard to the graphic arts category, USEPA guidelines, as used by the IEPA, recommended the use of population-based per capita emission factors to estimate county total graphic arts emissions. However, since the Illinois point source emissions inventory contains emissions from graphic arts facilities, the IEPA followed USEPA guidelines and subtracted point source emissions for this source category from the calculated area source emissions total. This subtraction is performed to avoid double counting of emissions. If one compares the total of point and area source emissions for this source category on a per capita basis with similar emission rates for other major areas, one would find better agreement. The low area source per capita emission rate is an artifact of the thoroughness of Illinois' point source emissions inventory.

Regarding the automobile refinishing area source category, emissions were not estimated using only a population-based emission factor. The Chicago automobile refinishing area source emission estimates were determined by apportioning national automobile refinishing activity data, such as the amount of coating usage, to the Chicago area on the basis of population. This method was chosen, with the approval and support (through the use of a USEPA contract) of the USEPA, to better quantify the emissions from different operations involved in automobile refinishing and for better estimation of emission reductions resulting from required controls. The method employed would lead to per capita emission rates differing from those in urban areas where a strict per capita emission rate were used. The directionality of the differences does not imply that the technique used by the IEPA is in error.

Regarding emissions from non-road construction equipment, it must be noted that IEPA simply used emission estimates provided by USEPA's Office of Mobile Sources. In 1991, the USEPA issued an emissions inventory for each of the ozone and carbon monoxide nonattainment areas. The IEPA used the emissions inventory provided by the USEPA for the Chicago ozone nonattainment area. Given the detail of the data used and the extent of the quality assurance of this emissions inventory, the IEPA believes, and the USEPA agrees, that no better estimate of

non-road construction equipment emissions is available at this time and that the current emissions estimate is appropriate. It is additionally noted that the emissions inventory submitted by the IEPA incorporated by reference the documentation of the non-road construction equipment emissions estimates supplied by the USEPA.

Comment: The commenters note that the emissions for railroads and airport lack documentation. In addition, the commenters note that, given that a high speed rail and a third airport are both under consideration for the Chicago area, this lack of documentation is especially troublesome.

Response: Discussion of the estimation procedures used for railroad and airport emissions is contained on pages 196 through 221 of the Chicago emissions inventory documentation submitted to the USEPA. The discussion of railroad emissions includes an estimate of statewide railroad fuel usage, which was apportioned to the nonattainment area counties based on the county to State ratios of railroad track mileage. The county fuel usage figures were then multiplied by a per unit fuel usage emission rate factor. This approach is acceptable to the USEPA.

The method used for airport emissions evaluated commercial aircraft activity at O'Hare and Midway Airports on an aircraft engine-specific basis incorporating modal emission rates. The modal emission rate for each engine is a function of the amount of fuel burned for each of the four modes power settings. The four modes are taxi/idle, takeoff, climbout, and approach. Emissions were estimated for approximately 60 different commercial engine types. Emissions from the remaining aircraft categories, military and general aviation, were estimated based on the number of landing and take-off (LTO) cycles of each aircraft type. These LTO cycles were also the basis of the emissions estimates performed for all of the other airports in the Chicago ozone nonattainment area. These estimation procedures were documented in IEPA's emissions inventory submittal and were found to be acceptable by the USEPA.

III. Final Rulemaking Action

The State of Illinois has met the requirements [section 182(a)(1)] of the Act for the submittal of base year ozone precursor emissions inventories. The USEPA approves the State's 1990 base year ozone precursor emission inventories for the Chicago, Metro-East St. Louis, and Jersey County ozone nonattainment areas.

This action has been classified as a Table 2 action by the Regional Administrator under the procedures published in the **Federal Register** on January 19, 1989 (54 FR 2214–2225), as revised by an October 4, 1993, memorandum from Michael H. Shapiro, Acting Assistant Administrator for Air and Radiation. The Office of Management and Budget (OMB) has exempted this regulatory action from Executive Order 12866 review.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future request for revision to any SIP. Each request for revision to any SIP shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

Under the Regulatory Flexibility Act, 5 U.S.C. 600 et seq., USEPA must prepare a regulatory flexibility analysis assessing the impact of any proposed or final rule on small entities. 5 U.S.C. 603 and 604. Alternatively, USEPA may certify that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and government entities with jurisdiction over populations of less than 50,000.

The SIP approvals under section 110 and subchapter I, part D, of the Act do not create any new requirements, but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not impose any new requirements, I certify that it does not have a significant impact on small entities. Moreover, due to the nature of the Federal-State relationship under the Act, preparation of a regulatory flexibility analysis would constitute Federal inquiry into the economic reasonableness of State action. The Act forbids the USEPA to base its actions concerning SIPs on such grounds. *Union Electric Co.* v. *U.S. E.P.A.*, 427 U.S. 246, 256–66 (1976).

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by May 15, 1995. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This section may not be callenged later in proceedings to enforce its requirements (see section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Hydrocarbons, Nitrogen dioxide, Ozone, Volatile organic compounds.

Dated: February 23, 1995.

Robert Springer,

Acting Regional Administrator.

Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52—[AMENDED]

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart O—Illinois

2. Section 52.726 is amended by adding paragraph (i) to read as follows:

§ 52.726 Control strategy: Ozone.

* * * * *

(i) The base year (1990) ozone emission inventory requirement of section 182(a)(1) of the Clean Air Act, as amended in 1990, has been satisfied for the following Illinois ozone nonattainment areas: the Chicago nonattainment area—Cook, DuPage, Kane, Lake, Will and McHenry Counties, Aux Sable and Gooselake Townships in Grundy County, and Oswego Township in Kendall County; the Metro-East St. Louis nonattainment area—Madison, Monroe, and St. Clair Counties; and Jersey County.

[FR Doc. 95–6161 Filed 3–13–95; 8:45 am]

BILLING CODE 6560–50–P

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40 CFR Parts 52 and 81

[IL80–3–6838; FRL–5170–4]

Approval and Promulgation of Implementation Plans and Designations of Areas for Air Quality Planning Purposes; Illinois

AGENCY: Environmental Protection Agency (USEPA).

ACTION: Final rule.

SUMMARY: On November 25, 1994, USEPA proposed to approve a State Implementation Plan (SIP) request to redesignate the Jersey County, Illinois marginal ozone nonattainment area to attainment of the public health based ozone air quality standard. The USEPA also proposed approval of the accompanying maintenance plan as a SIP revision. The redesignation request and maintenance plan were submitted by the Illinois Environmental Protection Agency (IEPA) on November 12, 1993.