

**MAINTENANCE PLAN FOR
PARTICULATE MATTER LESS THAN
10 MICRONS (PM₁₀) FOR THE
LAKE CALUMET
MODERATE NONATTAINMENT AREA
IN COOK COUNTY ILLINOIS**

September 1, 2005

Illinois Environmental Protection Agency
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Attachment 6

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EXECUTIVE SUMMARY

This document describes Illinois' Maintenance Plan for the Lake Calumet PM₁₀ (particulate matter less than 10 microns aerodynamic diameter) nonattainment area. The Lake Calumet nonattainment area is located in southern Cook County. A Maintenance Plan is required before the area can be redesignated from nonattainment to attainment of the National Ambient Air Quality Standards (NAAQS) for PM₁₀. This document also provides the technical information required to support a redesignation request. Illinois is submitting such a request to the U. S. Environmental Protection Agency (U.S. EPA) in conjunction with this Maintenance Plan.

The particulate matter standards are commonly referred to as the PM₁₀ air quality standards since the NAAQS targets suspended particulate matter that is ten microns or less in aerodynamic diameter. U.S. EPA established the PM₁₀ NAAQS in 1987. There are two forms of the PM₁₀ standards: a 24-hour average concentration and an annual average concentration. Ambient air quality monitoring data for the most recent three-year period, 2001 – 2003, demonstrates that air quality in the Lake Calumet area is attaining both the 24-hour and annual forms of the PM₁₀ NAAQS. The area has, in fact, been meeting the PM₁₀ air quality standards since 1993. PM₁₀ air quality has improved in the Lake Calumet area as a result of implementation of State and Federal control measures since the Clean Air Act Amendments of 1990. These air quality improvements are due to permanent and enforceable emission control measures.

This Maintenance Plan provides for continued attainment of the PM₁₀ NAAQS in the Lake Calumet nonattainment area for a period of at least ten years after U.S. EPA has redesignated the area to attainment. The Plan also provides assurances that, even if there is a subsequent violation of the NAAQS, measures listed in the Maintenance Plan will prevent any future occurrences through contingency measures that will be triggered upon such an occurrence.

In 1997, U.S. EPA established the fine particulate matter NAAQS, commonly known as the PM_{2.5} (particulate matter less than 2.5 microns in aerodynamic diameter) standards. On January 5, 2005, U.S. EPA listed the Chicago metropolitan area, which includes the Lake Calumet area, as a nonattainment area for PM_{2.5}. Redesignation of the Lake Calumet area to attainment for PM₁₀ has

no effect on the nonattainment status of the Lake Calumet area with respect to PM_{2.5}. Illinois is required to develop and implement a plan to address PM_{2.5} in response to U.S.EPA's action that will further improve air quality for particulate matter in the metropolitan area. The future emission reductions needed to attain the PM_{2.5} NAAQS will also help to ensure continued attainment of the PM₁₀ NAAQS in the Lake Calumet area.

1.0 INTRODUCTION

This document describes Illinois' Maintenance Plan for the Lake Calumet PM₁₀ nonattainment area. The United States Environmental Protection Agency (U.S. EPA) established the National Ambient Air Quality Standards (NAAQS) for particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) in 1987. The Lake Calumet area was subsequently designated as a nonattainment area in 1990 based on measured violations of these air quality standards. As a result of implemented emission control measures, the Lake Calumet area has been meeting the PM₁₀ air quality standards since 1993. The most recent 3-year period for which complete, quality assured ambient air quality monitoring data is available in the area (2001 – 2003) demonstrates attainment of the PM₁₀ standards, and thus qualifies the area for redesignation to attainment. A maintenance plan, which provides for continued attainment of the NAAQS, is required, however, before the area can be redesignated. After full consultation with the public, including a public hearing, the Illinois Environmental Protection Agency (IEPA) is submitting this Maintenance Plan to the U.S.EPA as a revision to Illinois' State Implementation Plan (SIP), and is submitting a request to redesignate the Lake Calumet area to attainment for the PM₁₀ NAAQS.

Section 107 of the Clean Air Act establishes specific requirements that must be met before an area can be redesignated, including:

- (a) A determination that the area has attained the PM₁₀ standard;
- (b) An approved State Implementation Plan (SIP) for the area under Section 110(k);
- (c) A determination that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and other federal requirements.
- (d) A fully approved maintenance plan under Section 175(A);
- (e) A determination that all Section 110 and Part D requirements have been met.

This document addresses each of these requirements. It also provides additional information to support continued compliance with the PM₁₀ standard.

1.1 Background

The Clean Air Act Amendments of 1990 (CAAA) required areas failing to meet the PM₁₀ standard to develop SIPs to expeditiously attain and maintain the standard. Based on monitored violations, the Lake Calumet area was designated as a moderate nonattainment area for the PM₁₀ standard on November 15, 1990. The Lake Calumet area is located in the southwestern portion of Cook County (see Figure 1).

In compliance with the CAAA, the IEPA developed and implemented a revised SIP designed to control emissions of PM₁₀. Public hearings for this plan were held on October 23 and 29, 1991 and adopted by the Illinois Pollution Control Board on April 9, 1992. These rules were submitted to U.S. EPA on May 15, 1992, were conditionally approved on November 18, 1994, and approved in final form on July 13, 1995. The rules include source-specific limits on PM₁₀ emissions, source-specific opacity limits, and limitations on sources of fugitive dust in the Lake Calumet area. Illinois' rules also require large PM₁₀ sources to have contingency plans to be triggered in the event of future violations of the PM₁₀ standards. The IEPA's submittal included an attainment demonstration that showed that the Lake Calumet nonattainment area would achieve both the 24-hour and annual PM₁₀ standards with full implementation of the requirements contained in the revised SIP.

1.2 Status of Air Quality

Section 3.0 of this report describes the status of air quality in the Lake Calumet area based on ambient air quality monitoring data collected in the area by the IEPA. PM₁₀ monitoring data collected by the IEPA in the Lake Calumet nonattainment area between 2001 and 2003 show that air quality has met the PM₁₀ standards in all respects. These data, accompanied by decreases in emission levels discussed in Section 4.0, justify redesignation to attainment for the subject area based on Section 107(d) (3) (E) of the CAA.

2.0 REQUIREMENTS FOR REDESIGNATION

Section 110 and Part D of the CAAA list a number of requirements that must be met by moderate nonattainment areas prior to consideration for redesignation to attainment. In addition, the U.S. EPA has published detailed guidance in the form of a memorandum entitled: "Procedures for Processing Requests to Redesignate Areas to Attainment" (September 4, 1992). This document is hereafter referred to as the "Redesignation Guidance." One of the requirements specified in the Redesignation Guidance is the development of a Maintenance Plan, which is intended to ensure continued attainment of the PM₁₀ NAAQS in future years. This Maintenance Plan is based on the Redesignation Guidance, supplemented with additional guidance received from U.S. EPA staff.

According to the Redesignation Guidance, a Maintenance Plan must contain the following elements:

A. PM₁₀ Monitoring

- A demonstration that the PM₁₀ standards, as required in 40 CFR 50.6 have been attained. PM₁₀ monitoring data must show that violations of the standards are no longer occurring.
- Ambient monitoring data that have been quality assured in accordance with 40 CFR 58.10, recorded in the Aerometric Information and Retrieval System (AIRS) data base, and available for public view.
- A showing that the average annual number of expected exceedances of the standards, according to 40 CFR 50.6, is less than or equal to 1.0, based on data from all monitoring sites in the nonattainment area. This showing relies on three (3) complete, consecutive calendar years of quality assured data.
- A commitment that, once redesignated, the State will continue to operate an appropriate monitoring network to verify the maintenance of the attainment status.

B. Emission Inventory/ Maintenance Demonstration

- A comprehensive emission inventory of major sources of PM₁₀ completed for the “attainment” year.
- A demonstration that improvement in air quality between the year violations occurred and attainment was achieved is based on permanent and enforceable emission reductions.
- A demonstration that expected emissions for the 10-year period following redesignation will not exceed the level of emissions in the “attainment” year.

C. Controls and Regulations

- A U.S. EPA-approved SIP control strategy for the control of PM₁₀.
- Control measures required in past SIP revisions have been fully implemented.
- Acceptable provisions for New Source Review and Prevention of Significant Deterioration.
- Assurances that existing controls will remain in effect after redesignation, unless the State demonstrates that the standard can be maintained without one or more controls.
- Assurances that transportation plans conform with and are consistent with the SIP.

D. Corrective Actions for Potential Future Violations of the Standard

- A commitment to submit a revised plan eight years after redesignation.
- A commitment to enact and implement additional contingency control measures in response to exceeding specified predetermined levels (triggers) or in the event that future violations of the ambient standards occur.
- A list of potential contingency measures that would be implemented in such an event.

Illinois' Maintenance Plan has been prepared in accordance with the requirements specified in U.S. EPA's guidance document and additional guidance received from U.S. EPA staff. The following sections of this document describe how U.S. EPA's requirements have been met.

3.0 PM₁₀ MONITORING

3.1 Monitoring Network

There are two monitors currently measuring PM₁₀ concentrations in the Lake Calumet nonattainment area. The Cook County Department of Environmental Control currently operates both of the monitors under agreement with the IEPA. The locations of the monitoring sites are shown in Figure 1. Also shown in the figure are the locations of monitoring sites where PM₁₀ data were collected in previous years but are no longer operating. Specifically, the monitors located at the Marsh School and at the Washington Elementary School were discontinued in 1999. Ambient PM₁₀ data collected at these sites are summarized in Appendix A.

3.2 Ambient Monitoring Data

U.S. EPA's published guidance document, "Procedures for Processing Requests to Redesignate Areas to Attainment" (September 4, 1992), details specific requirements regarding the collection and use of ambient air monitoring data needed to support a redesignation request. Before the Lake Calumet nonattainment area can be redesignated, Illinois must demonstrate that the PM₁₀ NAAQS has been attained. Monitoring data must show that violations of the NAAQS are no longer occurring within the nonattainment area. Ambient air quality data must show that the average annual number of expected exceedances of the NAAQS is less than or equal to 1.0, based on data from all monitoring sites in the area. This showing must rely on three complete, consecutive calendar years of quality assured data. Further, the air monitoring data must be quality assured, recorded in U.S. EPA's AIRS database, and made available to the public. Finally, Illinois must commit to continue to operate an appropriate monitoring network to verify maintenance of the attainment status, once the area has been redesignated.

There are two standards for PM₁₀, 24-hour and annual. The 24-hour standard is attained when the expected number of days per calendar year with maximum 24-hour average concentrations above 150 micrograms per cubic meter (ug/m³) is equal to or less than 1.0, when averaged over three (3) years. The annual standard is attained when the annual average PM₁₀ concentration (averaged over three (3) years) at all monitoring locations is less than 50 ug/m³.

Table 1 presents a summary of the ambient air quality monitoring data collected in the Lake Calumet area from 2001 through 2003. There are two monitoring stations operated by IEPA in the Lake Calumet area (see Figure 1): one site is located at the Carver High School, at 13100 S. Doty in Chicago, and the second site is located at the Washington High School, at 3535 E. 114th Street in Chicago. As shown in Table 1, there were no exceedances of the 24-hour PM₁₀ standard in the Lake Calumet nonattainment area during the 2001-2003 periods. The resulting number of “expected exceedances” of the 24-hour PM₁₀ standard is, therefore, zero. Air quality at both monitoring sites was well below the level of the annual standard of 50 ug/m³ as well.

Table 1
PM₁₀ Monitoring Summary (2001-2003) - Lake Calumet *

Site	Year	1 st High	2 nd High	3 rd High	4 th High	Annual Avg
Carver High School 13100 S. Doty Chicago	2001	86	76	72	67	35
	2002	79	63	53	50	31
	2003	80	75	74	70	33
Washington High School 3535 E. 114 th St. Chicago.	2001	84	79	70	67	28
	2002	94	86	84	71	24
	2003	66	64	61	58	23

* PM₁₀ concentrations expressed as micrograms per cubic meter (ug/m³)

Appendix A provides a more detailed summary of the ambient air quality data collected in the Lake Calumet area from 1993 through 2003. The monitoring data in Table 1 and Appendix A demonstrate that the Lake Calumet area is attaining the PM₁₀ NAAQS, and has, in fact, been attaining the standards since 1993.

3.3 Quality Assurance

IEPA has quality assured all data shown in Appendix A in accordance with 40 CFR 58.10 and the Illinois Quality Assurance Manual. IEPA has recorded the data in U.S. EPA's AIRS database, which is available to the public.

3.4 Continued Monitoring

Illinois commits to continue monitoring PM₁₀ levels at the sites indicated in Table 1. If it becomes necessary to change a site, IEPA will discuss any proposed changes with U.S. EPA. IEPA will continue to quality assure the monitoring data to meet the requirements of 40 CFR 58. IEPA will enter all data into AIRS on a timely basis in accordance with federal guidelines.

4.0 EMISSION INVENTORY/ DEMONSTRATION OF MAINTENANCE

A redesignation request must contain a demonstration that the improvement in air quality between the year that violations occurred and the year that attainment was achieved is based on permanent and enforceable emission reductions. As described previously in Section 3.0, a three-year monitoring period (2001-2003) is used to evaluate whether attainment has been achieved. The last year (2003) of the three-year period used to demonstrate attainment is referred to in this document as the "attainment year." The redesignation request should also include a demonstration that expected emissions for the 10 year period following redesignation will be less than those that occurred in the attainment year to ensure that future emissions in the area are sufficient to maintain the PM₁₀ NAAQS.

4.1 Attainment Year Inventory

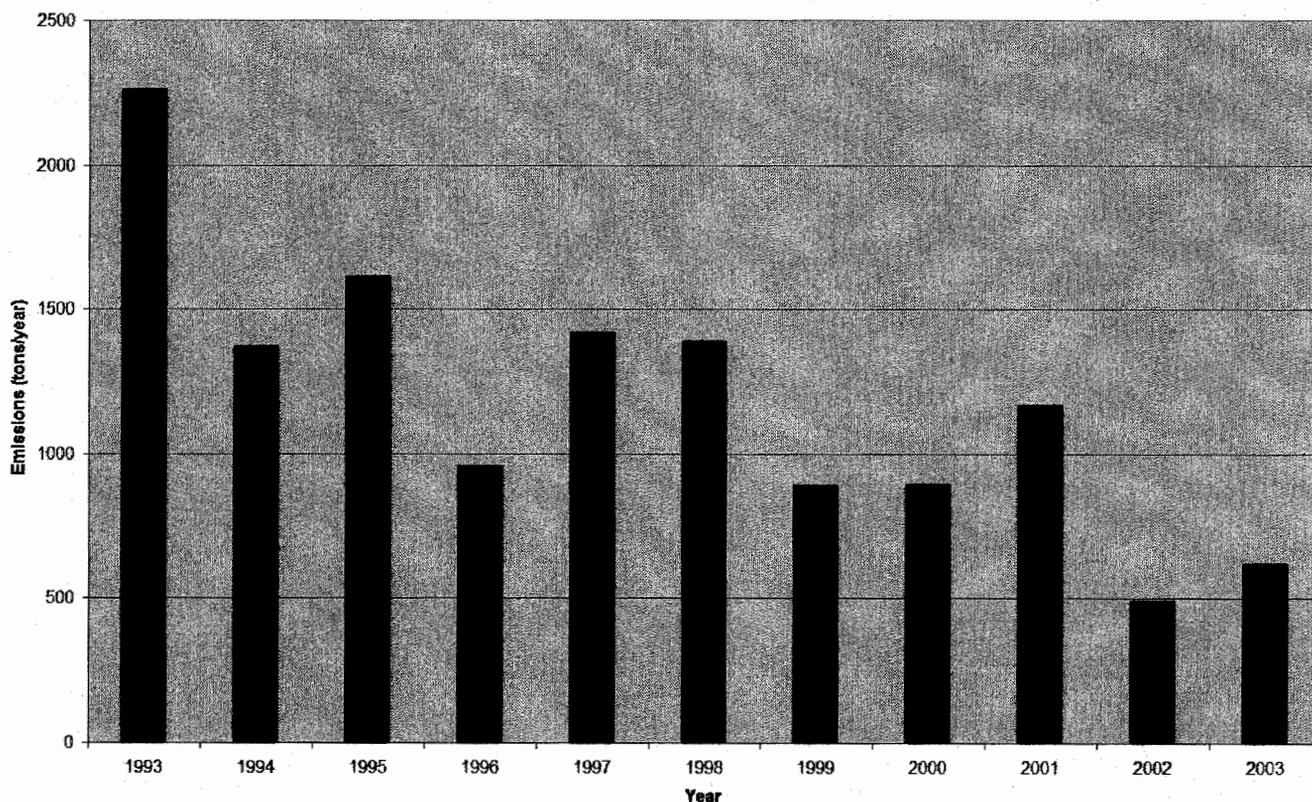
IEPA has prepared a PM₁₀ emissions inventory for industrial facilities located in the Lake Calumet area for the attainment year 2003. This inventory is based on annual emissions reports submitted to the IEPA by the facilities. Data for the year 2003 are the most recent emissions information currently available for this area. Appendix B provides a complete listing of reported PM₁₀ emissions data for 2003 for all industrial sources. U.S. EPA's "Redesignation Guidance" indicates that only major sources (i.e., sources greater than 100 ton per year) need to be included in the attainment inventory. In 2003, only two industrial facilities reported PM₁₀ emissions greater than 100 tons per year, ISG Riverdale, Inc., and Saint-Gobain Containers, Inc.

4.2 Permanent and Enforceable Emission Reductions

One of the requirements for an approval of the redesignation SIP is a demonstration that improvement in air quality between the year violations occurred and the year attainment was achieved was the result of permanent and enforceable emission reductions and not because of temporary adverse economic conditions or unusually favorable meteorology.

Permanent and enforceable reductions of PM₁₀ emissions in the Lake Calumet area have contributed greatly to attainment of the PM₁₀ standard. Figure 2 shows the total reported PM₁₀ emissions for sources in the Lake Calumet nonattainment area for the years 1993 through 2003.

Figure 2
PM₁₀ Emissions Trend in Lake Calumet (1993-2003)



As shown in the Figure, PM₁₀ emissions dropped dramatically in 1994 as a result of implementation of Illinois' attainment plan, which was developed in response to U.S. EPA's designation of the Lake Calumet area as a nonattainment area for PM₁₀ in 1990. In 1992, the Illinois Pollution Control Board adopted Illinois' attainment plan (35 IAC 212). The plan included emission limitations on sources of PM₁₀ located in the Lake Calumet area and other areas of Illinois that were designated nonattainment. These control measures have been fully implemented and have resulted in substantially reduced PM₁₀ emissions in the Lake Calumet area.

4.3 Future Year Emissions/Demonstration of Maintenance

A maintenance plan must contain a demonstration that future emissions expected for the ten-year period following redesignation are sufficient to maintain the PM₁₀ NAAQS. For the following reasons, the IEPA expects that PM₁₀ emission levels for the next ten-year period will continue to be maintained at or below the levels occurring in 2003, the attainment year.

First, Illinois' New Source Review Program (NSR) for nonattainment areas will continue to apply to the Lake Calumet area after the area has been redesignated to attainment for PM₁₀. The Lake Calumet area is included within the Chicago area nonattainment area for PM_{2.5}, a designation that became effective on April 5, 2005. As such, the requirements for permitting new or modified sources of particulate matter (major source emission thresholds, offset ratios, control requirements) will be essentially unchanged, with the exception that PM_{2.5} will likely be the indicator for particulate matter rather than PM₁₀, once U.S. EPA has promulgated its final implementation policy for PM_{2.5}. The NSR program will therefore prevent future PM_{2.5} emissions from increasing significantly beyond current levels. In addition, the Prevention of Significant Deterioration (PSD) requirements will apply to major new sources of PM₁₀ in the Lake Calumet area, which will further guarantee continued attainment of the PM₁₀ air quality standards.

Second, the PM₁₀ control requirements adopted by the IPCB in 1992 and approved by the U.S. EPA in 1995 will continue to apply to existing sources located within the nonattainment area. These measures include emission limits on traditional point (or stack) sources and limitations on fugitive dust sources, as well. This maintenance plan represents Illinois' commitment to maintain existing control measures.

Finally, PM₁₀ emissions from "background" sources, such as from on-road and off-road mobile sources, are expected to decrease in future years. U.S. EPA has promulgated certain control measures, including technology and fuel quality standards that apply to both on-road and off-road mobile sources that will greatly reduce particulate emissions from these sources. Figure 3 depicts expected PM₁₀ emission trends from off-road mobile sources in Cook County for the period from 2002 until 2014 based on U.S. EPA's Nonroad emissions model. Figure 4 depicts expected

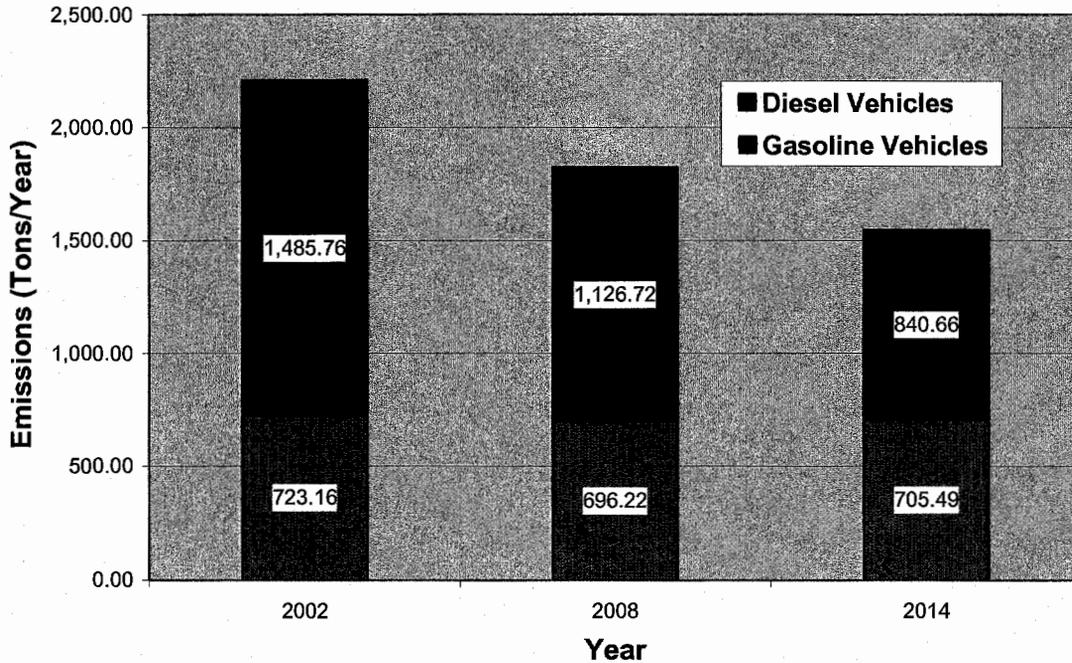
emission trends for PM₁₀ in the Lake Calumet area from on-road sources for the period 2002 to 2014, based on U.S. EPA's Mobile 6.2 emissions model. The projected emission trends for both off-road and on-road mobile sources indicate that PM₁₀ emissions from important background sources, such as mobile sources (including emissions from diesel trucks), will decrease significantly over the next ten-year period.

In summary, the IEPA expects that PM₁₀ emissions levels for the next ten-year period will remain at or below the levels needed to maintain the PM₁₀ air quality standards in the Lake Calumet area. The continued applicability of IEPA's PM₁₀ SIP for existing sources, implementation of NSR and PSD for new sources, and implementation of federal control measures on mobile sources will ensure that current emission levels will be maintained or reduced. Based on expected PM₁₀ emission trends, it is likely that future air quality will continue to meet the PM₁₀ NAAQS throughout the ten-year maintenance period.

4.4 Provisions for Future Updates

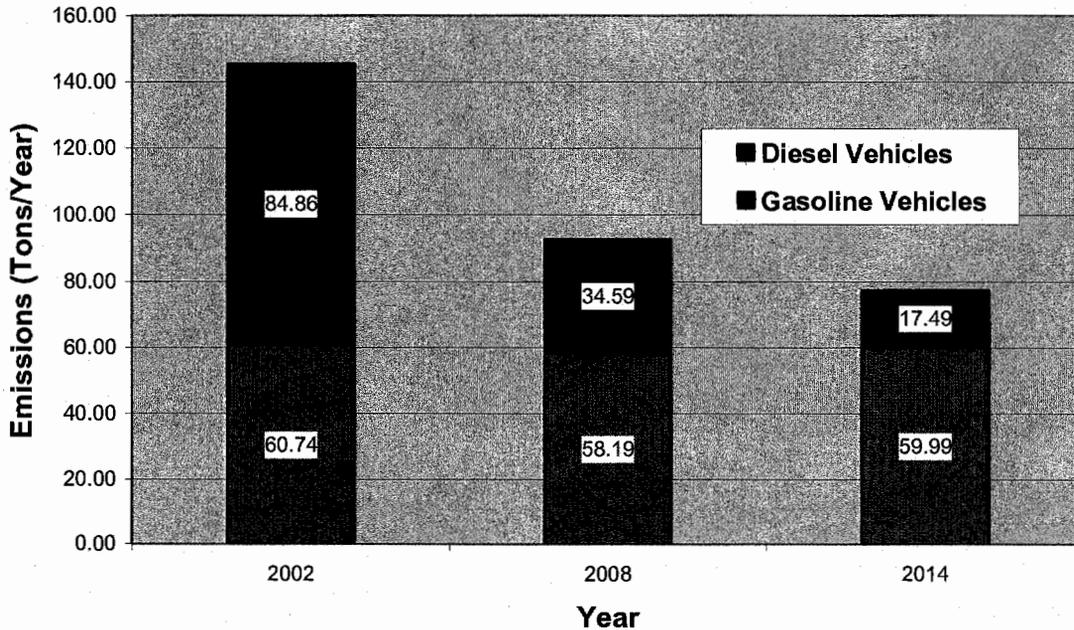
As required by Section 175A(b) of the CAA, Illinois commits to submit to the U.S. EPA an additional revision to the PM₁₀ SIP eight years after redesignation. The revision will contain Illinois' plan for maintaining the PM₁₀ standard for 10 years beyond the first 10-year period after redesignation.

Figure 3
Projected PM10 Emission Trends (2002 - 2014) from
Off-Road Sources in Cook County *



* Based on U.S. EPA NONROAD2004 Model. Categories include: Agriculture, Airport Services, Commercial, Construction, Industrial, Lawn and Garden and Logging Equipment, Recreational Marine and Recreational Vehicle.

Figure 4
Projected PM10 Emission Trends (2002 - 2014) from
On-Road Mobile Sources in the Lake Calumet
Non-Attainment Area *



* Based on U.S. EPA Mobile 6.2 Emissions Model. Particulate Matter emissions include: Tailpipe Exhaust, including Particulate Sulfate, Brake and Tire Wear.

5.0 CONTROL MEASURES AND REGULATIONS

This section provides specific information on the control measures implemented in the Lake Calumet nonattainment area. The control measures required in Illinois' PM₁₀ attainment plan have been fully implemented, and other, more recent control programs will continue to provide emission reductions in future years. IEPA commits to keep these measures in effect after redesignation, or to provide equivalent emissions reductions using alternate measures. Illinois' SIP contains acceptable provisions to provide for preconstruction review of new emission sources. Because of U.S. EPA's recent designation of the Chicago metropolitan area, which includes the Lake Calumet area, as a nonattainment area for the PM_{2.5} NAAQS, Illinois' New Source Review nonattainment area permitting program for new and modified sources of particulate matter emissions will continue to apply to the area.

5.1 Additional Provisions for Particulate Matter Nonattainment Areas

Illinois adopted measures as required by the Clean Air Act, Part D, Subpart 4, "Additional Provisions for Particulate Matter Nonattainment Areas" (42 USC 7513). Requirements applying to PM₁₀ emission sources located in PM₁₀ nonattainment areas in Illinois are found in 35 Ill. Adm. Code Part 212 (Visible and Particulate Matter Emissions). U.S. EPA fully approved these revisions for PM₁₀ as part Illinois' State Implementation Plan on July 13, 1995.

5.2 Implementation of Past SIP Revisions

Illinois' rules controlling PM₁₀ emissions contained in 35 Ill. Adm. Code Part 212 (Visible and Particulate Matter Emissions) have been fully implemented. Illinois has the legal authority to implement and enforce all measures adopted as part of the PM₁₀ attainment plan. The IEPA conducts periodic inspections of all major sources, as well as many of the minor sources, in the Lake Calumet area. If inspections indicate a need for enforcement, or for more stringent emission limits, the IEPA is obligated to refer such matters to the Illinois Office of the Attorney General or the Illinois Pollution Control Board. Illinois commits to continue enforcement of all rules relating to emissions of PM₁₀ in the Lake Calumet area.

5.3 New Source Review Provisions

Illinois' SIP contains acceptable provisions to provide for preconstruction review of new emission sources. Because of U.S. EPA's recent designation of the Chicago metropolitan area, which includes the Lake Calumet area, as a nonattainment area for the PM_{2.5} NAAQS, Illinois' New Source Review nonattainment area permitting program for new and modified sources of particulate matter emissions will continue to apply to the area. The requirements for permitting new or modified sources of particulate matter (major source emission thresholds, offset ratios, control requirements) will, therefore, be essentially unchanged, with the exception that PM_{2.5} will likely be the indicator for particulate matter rather than PM₁₀, once U.S. EPA has issued its final implementation guidance for PM_{2.5}. The NSR program will therefore prevent future PM_{2.5} emissions from increasing significantly beyond current levels. In addition, the Prevention of Significant Deterioration (PSD) requirements will apply to major new sources of PM₁₀ in the Lake Calumet area, which will further guarantee continued attainment of the PM₁₀ air quality standards.

5.4 Controls to Remain in Effect

Illinois intends to maintain after redesignation the implemented control measures included in the PM₁₀ attainment plan. Illinois is required to submit to U.S. EPA for approval as a SIP revision any changes to its rules, or emission limits applicable to PM₁₀ sources in 35 Ill. Adm. Code Part 212 (Visible and Particulate Matter Emissions). Such revisions will include, where appropriate, a demonstration that such changes will not interfere with maintenance of the NAAQS. After redesignation, Illinois intends to continue enforcing all rules that relate to the emission of PM₁₀ in the Lake Calumet area.

5.5 Conformity

Illinois adopted a general conformity rule (35 IAC 255) based on the federal guidance on March 6, 1997. In 1998, Illinois submitted a transportation conformity Memorandum of Agreement (MOA) to U.S. EPA for approval and it is under review. The federal regulations for conformity apply until

the State's conformity SIPs are approved by U.S. EPA. Requiring that the SIP be fully approved before this area can be redesignated is unnecessary to protect air quality. Such action would not further guarantee that the PM₁₀ air quality standards would be maintained beyond the measures that the State has already taken. The State commits to following U.S. EPA's conformity regulations until its MOA is approved.

6.0 CORRECTIVE ACTIONS

6.1 Commitment to Revise Plan

As noted in Section 4.4 above, Illinois hereby commits to review its Maintenance Plan eight years after redesignation, as required by Section 175(A) of the CAAA.

6.2 Contingency Measures

Contingency control measures, which are a required element of the Maintenance Plan, are to be implemented in response to exceeding specified levels (triggers), or in the event that future violations of the ambient standards occur. Illinois' PM₁₀ attainment plan, as contained in 35 Ill. Adm. Code Part 212 – Subpart U (Additional Control Measures), includes provisions for the identification and implementation of contingency measures. U.S. EPA approved these measures on July 13, 1995.

Illinois' contingency plan, as contained in Subpart U, requires PM₁₀ sources to submit a contingency measure plan to the IEPA. The submitted plans contain two levels of control measures:

- Level I measures are measures that will reduce total actual annual source-wide fugitive emissions of PM₁₀ by at least 15%;
- Level II measures are measures that will reduce total actual annual source-wide fugitive emissions of PM₁₀ by at least 25%.

The IEPA will request that sources found to be culpable implement the measures contained in their contingency measure plans. Level I or Level II measures will be implemented depending on the magnitude of the monitored violation or exceedance. The steps IEPA will take to determine culpability for an exceedance are:

- Determine whether the exceedance should be classified as an exceptional event pursuant to "Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events;"
- Evaluate monitoring samples to find evidence of the type of source or sources contributing to the exceedance;
- Evaluate meteorological data and/or conduct modeling studies to determine culpability;
- Review operating records of sources identified in above steps to identify equipment malfunctions or permit or rule violations.

Although the point sources listed in the inventory will be the major focus of review, the study will not be limited to these, but will encompass any other potential sources of PM₁₀. Contingency measures will be selected based upon cost-effectiveness, emission reduction potential, economic and social considerations or other factors that IEPA deems appropriate.

7.0 PUBLIC PARTICIPATION

In accordance with Section 110 (a) (2) of the CAA, public participation in the SIP is provided for as follows:

Notice of availability of the PM₁₀ redesignation documents and the time and date of the public hearing was published in the Daily Southtown on June 27, 2005.

The Public hearing was held as follows:

July 27, 2005 (10:00 AM)

at the

Pullman Branch of the Chicago Public Library

11001 South Indiana Avenue

Chicago, IL

Copies of the proof of publication, a transcript of the hearing, a summary of the comments received, and IEPA's responses thereto will be included as part of the final submittal to U.S. EPA.

8.0 CONCLUSIONS

The Lake Calumet area in Cook County, Illinois has attained the federal ambient PM₁₀ standard and has complied with the applicable provisions of the 1990 Amendments to the Clean Air Act required of moderate ozone nonattainment areas. Illinois has submitted, and U.S. EPA has approved, an attainment demonstration that was based on air quality modeling and contains enforceable control measures. Illinois has performed an analysis that demonstrates that the Lake Calumet NAA has attained the PM₁₀ NAAQS and believes the air quality improvements achieved in the area are due to permanent and enforceable control measures. Supporting documentation is contained herein.

Illinois has prepared a Maintenance Plan that meets the requirement of the Clean Air Act. This Maintenance Plan provides for the continued attainment of the PM₁₀ NAAQS for a period of at least ten years after U.S. EPA has formally redesignated the area to attainment. This Maintenance Plan provides adequate contingency measures for potential, additional emission reductions in the event that future violations of the PM₁₀ NAAQS are observed in the area. Illinois has prepared an emissions inventory of PM₁₀ sources for the "attainment" year 2003, and has demonstrated that emissions expected in the 10 years following redesignation will remain at or below the levels that were reported in the attainment year. Illinois commits to continue to operate an appropriate monitoring network to verify maintenance of the attainment status once the area has been redesignated. IEPA has the legal authority to implement and enforce all control measures.

This Maintenance Plan has been prepared in accordance with the requirements specified in U.S. EPA's guidance document, and additional guidance received from U.S. EPA staff.

APPENDIX A
SUMMARY OF PM₁₀ AMBIENT AIR MONITORING DATA
IN LAKE CALUMET (1993-2003)

Year	Monitoring Site(s)	Sampling Frequency	Number Of Samples	1st	Highest 2nd	3rd	4th	Arithmetic Mean
1993	Chicago Carver High School 13100 South Doty	6-day	59	73	62	61	55	31
	Chicago Marsh School 9810 South Exchange	6-day	59	83	77	61	60	+
	Chicago Washington High School 3535 East 114th Street	1-day	325	101	90	77	76	34
1994	Chicago Carver High School 13100 South Doty	6-day	59	79	63	53	50	31
	Chicago Washington High School 3535 East 114th Street	1-day	345	94	86	84	71	24
1995	Chicago Carver High School 13100 South Doty	6-day	60	83	70	68	67	36
	Chicago Marsh School 9810 South Exchange	6-day	59	98	75	75	70	35
	Chicago Washington High School 3535 East 114th Street	1-day	332	117	108	84	84	35
1996	Chicago Carver High School 13100 South Doty	6-day	59	75	69	65	57	31
	Chicago Marsh School 9810 South Exchange	6-day	60	98	59	57	53	32
	Chicago Washington High School 3535 East 114th Street	1-day	328	97	86	83	82	31

	Chicago Washington Elementary School 3611 East 114th Street	1-day	348	128	102	86	77	30
1997	Chicago Carver High School 13100 South Doty	6-day	61	79	56	55	51	31
	Chicago Marsh School 9810 South Exchange	6-day	59	67	64	58	56	28
	Chicago Washington High School 3535 East 114th Street	6-day	43	96	63	53	46	+
	Chicago Washington Elementary School 3611 East 114th Street	1-day	364	107	99	78	71	28
1998	Chicago Carver High School 13100 South Doty	6-day	58	72	71	61	59	36
	Chicago Marsh School 9810 South Exchange	6-day	57	87	78	71	67	35
	Chicago Washington High School 3535 East 114th Street	6-day	60	71	62	56	55	33
	Chicago Washington Elementary School 3611 East 114th Street	1-day	362	71	64	62	61	27
1999	Chicago Carver High School 13100 South Doty	6-day	59	81	75	56	56	32
	Chicago Washington Elementary School 3611 East 114th Street	1-day	351	66	65	64	64	27
2000	Chicago Carver High School 13100 South Doty	6-day	55	92	75	66	51	+
	Chicago Washington Elementary School 3611 East 114th Street	1-day	366	129	91	73	70	27
2001	Chicago Carver	6-day	60	86	76	72	67	35

	High School							
	13100 South Doty							
	Chicago Washington	1-day	353	84	79	70	67	28
	High School							
	3535 East 114th Street							
2002	Chicago Carver	6-day	59	79	63	53	50	31
	High School							
	13100 South Doty							
	Chicago Washington	1-day	345	94	86	84	71	24
	High School							
	3535 East 114th Street							
2003	Chicago Carver	6-day	60	80	75	74	70	33
	High School							
	13100 South Doty							
	Chicago Washington	1-day	344	66	64	61	58	23
	High School							
	3535 East 114th Street							

**APPENDIX B
REPORTED PM₁₀ EMISSIONS FOR 2003
IN THE LAKE CALUMET AREA**

Name	ID Number	PM10 Reported (tons/yr)	*PM10 Estimated (tons/yr)
3426 E 89th St LLC	031600GNK	0	0.01
Acme Packaging Corp	031258ABG	11.95	82.68
Acme Steel Co	031258AAI	0	0.08
Agri-Fine Corp	031600FDK	0	0.08
Akers Packaging Service Inc	031600CKT	0.66	0.66
Allwaste Container Services	031600FLI	0.08	0
American Ingredients Co	031069AAH	7.66	0
Arrow Terminal	031600FDC	0.12	0.04
Ashland Specialty Chemical Co	031039AAA	0.55	1.04
Atherton Foundry Products Inc	031258AAA	0.02	0.14
Avon Energy Partners LLC	031600GBM	4.99	2.27
Beelman River Terminals Inc	031600FWD	0.19	0.54
Berger-Vandenberg School	031069ABE	0	0.1
Bonell Manufacturing Co	031258AAC	0.02	0
Brandenburg Industrial Service Co	031600GKM	0.6	0.6
Calumet Armature & Electric LLC	031258AAZ	0	0.11
Calumet Brass Foundry Inc	031069AAE	0.56	0.16
Calumet Energy Team Project	031600GHA	0.28	0
Calumet Lubricants Co LP	031036AAA	0.06	1.54
Calumet Peaking Facility	031600GKE	0.41	0
Cargill Inc.	031600FWM	2.06	0
Cargill Inc.	031600GBW	7.54	0
Carneuse Lime Inc	031600ADY	43.89	108.73
Cemex	031600BUN	13.84	6.67

***PM10 ESTIMATED = Emissions operating at average conditions**

Name	ID Number	PM10 Reported (tons/yr)	*PM10 Estimated (tons/yr)
Chicago & Illinois River Marketing LLC	031600AMD	5.97	11.35
Chicago & Illinois River Marketing LLC	031600GFI	0.56	2.4
Chicago Coke Co, Inc	031600AMC	0	0.11
Chicago Manufacturing Campus LLC	031600GLS	0.13	0
Chicago Mfg Campus	031600GMA	0	0.02
Chicago Paving And Construction Co	031600CGT	0	0.85
Chicago State University	031600DLX	0.28	0.93
Chicago Transit Authority	031600GKU	0.33	0.22
CHR Hansen Inc	031600GHV	0.21	0.9
CID Transfer Station	031600FHJ	12.28	12.92
Clean Harbors Services Inc	031600BTE	1.02	0.87
Container Recycling Alliance	031600GFX	0	0.01
Copperweld Corp	031600CFW	0.99	0.24
CSX Transportation Inc	031258AAO	0.02	0.08
Cygnus Corp	031600FZX	0.04	0
Dynagel Inc	031039AAN	0.93	0.13
Easco Aluminum Inc	031069AAO	0	20.91
Essroc Cement Corp	031258AAK	0	0.48
Ford Motor Co	031600AAR	0.83	21.87
Frank Miller and Sons Inc	031258AAE	0	0.68
Georgia-Pacific Corp	031600BQB	1.08	5.95
Gonnella South	031600CIH	0.06	0
Gurtler Industries, Inc	031297ACE	0.1	0.1
Heckett Multiserv Plant 27, a Harsco Co	031258AAS	0.13	7.8
Hickman, Williams & Co of Kentucky	031600ASL	2.07	0.67
Holcim (US) Inc	031600DPK	0.05	20.07

***PM10_ESTIMATED = Emissions operating at average conditions**

Name	ID Number	PM10 Reported (tons/yr)	*PM10 Estimated (tons/yr)
Holcim (US) Inc.	031600FLD	40.8	6.28
Holland Manufacturing Corp	031069ABT	2	2.07
Horsehead Corp	031600AFV	15.12	2.66
Illinois Mining Corp Inc.	031600GFY	0	0.14
Illinois Tollway	031822AAB	0	0.13
Imperial Zinc Corp	031600AOL	1.3	10.26
Indiana Harbor Belt Railroad	031258ABJ	0	0.01
Industrial Water Services Inc.	031600FEP	0	0.07
Ingersoll Products	031600ASM	0	1.57
Innophos Inc.	031600AQW	7.03	9.85
Innovative Technology & Materials Inc.	031600GGX	0	3.26
ISG Riverdale Inc.	031258ABR	246.77	275.59
Jays Foods Inc.	031600AVM	14.7	4.17
Jefferson Smurfit Corp	031069AAF	0	0.39
Kappa Products Corp	031600DDT	0.09	0.12
KCBX Terminals Co	031600AHI	36.28	84.38
Keebler Co - Illinois Baking Div	031600EPI	0.66	0.23
K-Five Construction Co	031600FEQ	0	0.49
Kinder Morgan Liquids Terminals LLC	031600BIY	0.13	0.3
Lafarge Midwest Inc.	031600FHQ	3.43	4.23
Land and Lakes Co	031069ABW	2.61	4.19
Land and Lakes Co	031600GAH	0	2.45
MCI	031258ABP	0.04	1.56
MeadWestvaco Packaging Systems, LLC	031600CKM	0.15	0.06
Metal Management Midwest Inc.	031600BSU	0.35	2.83
Metal Management Midwest Inc.	031600FRF	0.26	1.71
Metal Management Midwest Inc.	031600GAV	0.13	0.16

****PM10_ESTIMATED = Emissions operating at average conditions***

Name	ID Number	PM10 Reported (tons/yr)	*PM10 Estimated (tons/yr)
Metropolitan Water Reclamation	031600DQO	1.16	0.17
Metropolitan Water Reclamation Dist	031600DQM	0.01	0.17
Midwest Generation LLC	031600AMJ	0.33	0
Mt. Carmel Sand & Gravel	031600GDZ	6.13	2.05
MultiServ	031600BUW	0	51.16
MWRDGC-125th St. Pumping Station	031600DQN	0.01	0.09
Naylor Pipe Co	031600AUT	0.37	0.65
North American Salt Co	031600BUG	0	0.01
Ozinga Chicago RMC Inc.	031600FGT	2.82	17.32
Peoples Gas Light & Coke Co	031600BRA	0.01	0.06
Plastech Engineered Products	031600GOS	0	9.25
Plastics Color Corp of Illinois	031039AHK	0.18	2.96
PVS Chemicals Inc (Illinois)	031600ALC	0.21	15.2
Resource Technology Corp	031600GAJ	0	28.57
Riverdale Industries Inc.	031258AAG	1.13	1.13
Riverdale Plating and Heat Treating Co	031258AAW	0.37	0.06
Roman Adhesives Inc	031039AHT	0	0.51
Roseland Pumping Station	031600CFH	0.1	0.06
Ryerson Coil Pickling	031600FJC	1.73	0.01
Safety-Kleen Systems Inc.	031069AAJ	0	0.77
Saint-Gobain Containers Inc.	031069AAI	143.71	160.54
Salem Baptist Church	031600FNF	0.61	0.61
SH Bell Co	031600BWX	12.18	19.09
Sherwin Williams Co	031600AHO	2.98	0.01
Sherwin Williams Co	031600GBL	0.09	0.41
Solo Cup Co	031600DQY	0.16	1.14
Spraylat Corp	031600EXC	0.13	0.76

***PM10_ESTIMATED = Emissions operating at average conditions**

Name	ID Number	PM10 Reported (tons/yr)	*PM10 Estimated (tons/yr)
Support Services	031600BRX	0.23	0.07
Town & Country Landscape Supply Co	031600GAN	11.34	0
UGN Inc.	031600FJM	1.43	0.22
Union Pacific Railroad Co	031069ACB	0	0.02
US Steel - South Works	031600ALZ	0	0.01
Verson Allsteel Press Co	031600CJJ	0	0.18
Wentworth Tire Service	031600FJA	0.83	0.83
Westway Terminal Co Inc.	031135AAV	0	0.03
Zapco Energy Tactics Corp	031069ABX	10.3	0

****PM10_ESTIMATED = Emissions operating at average conditions***