

**LAKE MICHIGAN AIR DIRECTORS
CONSORTIUM**

2350 East Devon Avenue, Suite 242
Des Plaines, IL 60018
Phone: 708-296-2181
Fax: 708-296-2958



July 13, 1994

Valdas V. Adamkus
Regional Administrator
United States Environmental Protection Agency
Metcalf Federal Building
77 West Jackson Boulevard
Chicago, Illinois 60604

Dear Mr. Adamkus:

Pursuant to section 182(f) of the Clean Air Act Amendments of 1990, we hereby petition for an exemption from the Reasonably Available Control Technology (RACT) and New Source Review (NSR) requirements for major stationary sources of oxides of nitrogen (NOx). In the Lake Michigan region, these requirements and, consequently, this petition for an exemption from these requirements apply to major stationary sources of NOx located in areas currently classified as:

- * moderate and above nonattainment for ozone (NOx RACT requirement)
- * marginal and above nonattainment for ozone (NOx NSR requirement).

The enclosed figure and table identify the classified ozone nonattainment areas in the Lake Michigan modeling domain.

Specifically, this petition seeks to exempt major stationary sources of NOx (as defined in section 302 and subsections 182(c), (d), and (e) of the Act) from the RACT requirements of section 182(b)(2) and the NSR requirements of section 182(a)(2)(C) and other provisions in section 182¹. (Please note that the decision to seek the exemption from the NSR requirements was influenced in part by calculations which show a net decrease in regional NOx emissions due to other NOx control programs, pursuant to Title II and Title IV of the Act. These calculations show that even if a large number of major new NOx sources were constructed in the nonattainment areas, there would still be a net decrease in regional NOx emissions.) It is our understanding that the NOx requirements of section 182(f) do not apply in the nonattainment areas classified as transitional or incomplete data in the Lake Michigan region. Consequently, this petition does not apply to NSR requirements in the transitional or incomplete data nonattainment areas in the Lake Michigan region.

¹ The Prevention of Significant Deterioration (PSD) requirements would still apply to any new major source or modification for NOx given that the counties in the Lake Michigan area are classified as attainment for nitrogen dioxide.

Pursuant to 40 CFR Part 93, Subpart A (and 40 CFR Part 51, Subpart T) and 40 CFR Part 93, Subpart B (and 40 CFR Part 51, Subpart W), this petition also seeks an exemption from the transportation and general conformity requirements for NOx in all nonattainment areas for ozone in eastern Wisconsin, northern Illinois, northern Indiana, and western Michigan within the Lake Michigan region (see enclosed figure and table). We believe that the technical demonstration provided in support of this petition justifies inclusion of this larger geographic area. The need for consistency in conformity determinations across broad geographic areas (because transportation projects may extend beyond a handful of nonattainment counties) necessitates the application of this exemption to all nonattainment areas in the region.

Pursuant to section 182(f)(1)(A), this petition demonstrates that "...additional reductions of oxides of nitrogen would not contribute to attainment of the national ambient air quality standard for ozone in the area...". The "not contribute to attainment" test was prepared in conformance with USEPA guidance (i.e., "Guideline for Determining the Applicability of Nitrogen Oxides Requirements Under Section 182(f)", December 1993). In accordance with this test, the enclosed technical analysis shows that the domain-wide peak ozone concentration under the volatile organic compound (VOC) reduction case is less than the domain-wide peak ozone concentration under the other reduction cases.

Our finding that NOx reductions actually produce disbenefits in the Lake Michigan region is not inconsistent with the recent National Academy of Sciences (NAS) and USEPA reports concerning ozone formation (i.e., "Rethinking the Ozone Problem in Urban and Regional Air Pollution", 1991; and "The Role of Ozone Precursors in Tropospheric Ozone Formation and Control", July 1993). In particular, the NAS report recognizes that

...NOx reductions can have either a beneficial or detrimental effect on ozone concentration, depending on the locations and emission rates of VOC and NOx sources in a region. The effect of NOx reductions depends on the local VOC/NOx ratio and a variety of other factors.

The USEPA report states that

Application of gridded photochemical models on a case by case basis is required to determine the efficacy of NOx controls, because the ozone response to precursor reductions is area specific.

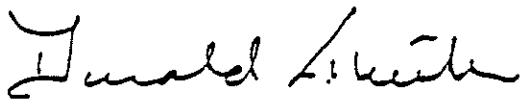
Our technical demonstration, with a validated photochemical grid model, that across-the-board NOx reductions in the Lake Michigan region will increase domain-wide peak ozone concentrations, as well as the number of hours and grid cells greater than 120 ppb, is in line with the findings and recommendations of these recent reports.

Please note that despite the petition and current finding that regional NOx reductions would not contribute to attainment, it is possible that future modeling analyses may demonstrate that selective reductions of NOx emissions would be beneficial or that site-specific NOx emission increases would be detrimental. For example, some NOx reductions in certain source regions may be beneficial in reducing ozone concentrations

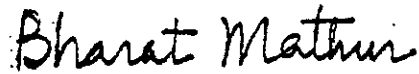
in nonattainment areas. Consequently, the final regional attainment plan may include some NOx controls, as well as VOC controls. It may also contain some selective NSR requirements for NOx.

Thank you for your consideration of this petition. If you have any questions or comments, then please contact Michael Koerber, Lake Michigan Air Directors Consortium at (708) 296-2181.

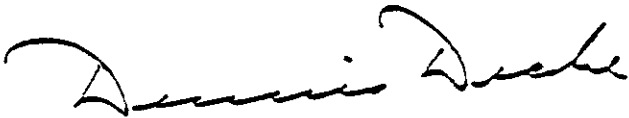
Sincerely,



Donald Theiler, Director
Bureau of Air Management
Wisconsin DNR



Bharat Mathur, Chief
Bureau of Air
Illinois EPA



Dennis Drake, Acting Director
Air Quality Division
Michigan DNR



Timothy Method, Director
Office of Air Management
Indiana DEM

Enclosures

NONATTAINMENT COUNTIES IN THE LAKE MICHIGAN MODELING DOMAIN

Illinois

Severe: Cook County
DuPage County
Grundy County (Aux Sable and Gooselake Townships)
Kane County
Kendall County (Oswego Township)
Lake County
McHenry County
Will County

Indiana

Severe: Lake County
Porter County

Marginal: Elkhart County
St. Joseph County

Michigan

Moderate: Kent County
Muskegon County
Ottawa County

NA/Trans.: Clinton County
Eaton County
Ingham County
Genesee County

NA/Inc. Data: Allegan County
Barry County
Calhoun County
Berrien County
Branch County
Cass County
Grafton County
Hillsdale County
Ionia County
Jackson County
Kalamazoo County
Lenawee County
Montcalm County
Midland County
Saginaw County
Bay County
Shiawasse County
St. Joseph County
Van Buren County

Wisconsin

Severe: Kenosha County
Milwaukee County
Ozaukee County
Racine County
Washington County
Waukesha County

Moderate: Manitowoc County
Sheboygan County
Kewaunee County

Marginal: Walworth County

Marginal: Door County
(Rural Transport)

Nonattainment In the LMOP Region

