STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

September 10, 2004

Mr. Bharat Mathur, Acting Regional Administrator
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard (R-19J)
Chicago, Illinois 60604-3507

Dear Mr. Mathur:

The Michigan Department of Environmental Quality (MDEQ) is submitting supplemental information to our July 15, 2004, request for reclassification of Southeast Michigan as a marginal 8-hour ozone nonattainment area. Attached is an additional submittal in response to questions raised by the U.S. Environmental Protection Agency (EPA). Our commitment to expedite activities that will put us on track for earlier implementation of control measures to attain the ozone standard is stated in further detail in this submittal.

The MDEQ and the Southeast Michigan Council of Governments (SEMCOG), the lead local planning agency, believe that attainment in the region can be achieved at an earlier date with reclassification, which would allow for selection of measures that will be most effective in reducing ozone levels. The attached submittal contains information on more recent ozone monitoring data that although not yet validated, shows that the 2004 design value for the area will again be in the marginal range, as it was in 2000, 2001, and 2002. Information on efforts to engage partners in the planning process has also been included. Additionally, more detailed information on our commitment for early submittal of our control strategy to reduce ozone precursor emissions is contained herein.

We would like to thank you and your staff for the careful consideration of the reclassification request and for working with us to identify issues where more information was needed. Please contact Mr. G. Vinson Hellwig, Chief, Air Quality Division, at 517-373-7069 for any further information or clarification.

Sincerely,

Steven E. Chester
Director
517-373-7917

Attachment
cc/att: Ms. Dana Debel, Governor's Office
Mr. Dan Beattie, Governor's Washington Office
Mr. Robert Davis, Governor's Southeast Michigan Office
Mr. Chuck Hersey, SEMCOG
Mr. Jim Sygo, Deputy Director, MDEQ
Ms. Carol Linteau, Legislative Liaison, MDEQ
Mr. G. Vinson Hellwig, MDEQ

Additional Submittal for Detroit-Ann Arbor Area
(Southeast Michigan) Ozone Reclassification Request
September 10, 2004

Most Recent Ozone Data

The Michigan Department of Environmental Quality (MDEQ) and the Southeast Michigan Council of Governments (SEMCOG) have consistently asked that the U.S. Environmental Protection Agency (EPA) consider all relevant information as part of making a regulatory decision on the reclassification request for Southeast Michigan. Accordingly, the MDEQ and SEMCOG request that EPA also consider the most recent ozone monitoring data in evaluating the merits of the reclassification request and conditions for approval.

The EPA based 8-hour ozone designations on the design values calculated with 2001-2003 monitoring data. Due to an unusual ozone episode that occurred in late June 2003 in Southeast Michigan, the region's 8-hour ozone design value for this period is 97 ppb, an atypical value for Southeast Michigan based on historical data. While still subject to validation, the 2002–2004 8-hour ozone design value again represents a more typical 8-hour ozone value for the region dating back to 1991. (See Figure 1.) It also demonstrates the unusualness of the June 2003 ozone data, which skewed Southeast Michigan's ozone values and resulted in a moderate classification. Significantly, this most recent design value falls within the range of design values for a marginal classification as it did for the three-year periods ending in 2000, 2001, and 2002. This is further evidence that the appropriate classification for Southeast Michigan is marginal.

Consistent with the traditional practice of using the most recently available data in State Implementation Plan (SIP) development, we expect to factor the most recent monitoring data into our attainment planning. As demonstrated in the July 15, 2004, submittal to the EPA, the June 2003 episode had a significant impact on ozone levels in the region. Yet these high ozone levels had little to do with emissions from the region. The MDEQ and SEMCOG will collaborate with the EPA in our modeling process (details below) in order to assess the appropriateness of alternative control strategy configurations and select the measures that will produce the desired ozone benefits in the region.

Commitment to Control Measures

This section expands upon the commitments made in the original ozone reclassification submittal. These original commitments can be found under Attachment A.

A. Content of June 2005 submittal.

The MDEQ and SEMCOG reiterate the commitment to identify a control measure(s) by June 2005. The June 2005 submittal to the EPA will contain our analysis of various emission control measures and their anticipated ozone benefits. Table 1 shows a more detailed schedule that lists major tasks and groups that will be involved in the work leading to the June 2005 submittal. These include modeling,

the Southeast Michigan Task Force on Air Quality, the Fuels Group, and the submittal. These four items are discussed in more detail below.

1. Modeling.

   As indicated in the initial submittal, previous modeling by the EPA predicts that emission reductions from national measures will lead to continuing ozone reductions, resulting in attainment in Southeast Michigan by 2010. In order to achieve attainment sooner, we are committing to do local measures earlier based on the commitments contained in the reclassification request.

   To do so, both emissions models and photochemical models will be applied to assess and evaluate control strategies. First, potential control measures from all sources, both stationary and mobile, will be evaluated to determine their emission reduction potential. The MDEQ will analyze various stationary source controls, and SEMCOG will use the Mobile 6.2 model, results from the fuels study, and its local travel data to analyze various on-road mobile source controls. The work of the Fuels Group, described below, will also be used to determine the emission reduction potential of various gasoline and diesel fuels. Results of this analysis will be used to guide application of the photochemical model to determine additional local controls necessary to attain the 8-hour ozone standard.

   The Southeast Michigan Ozone Study (SEMOS) group, composed of technical experts and staff of the MDEQ, SEMCOG, and EPA, will discuss and assist in developing the proper inputs and assumptions that will be used for the modeling.

2. Southeast Michigan Task Force on Air Quality.

   In anticipation of the need to provide early opportunity for input and involvement in ozone attainment planning, the MDEQ and SEMCOG formed a representative Task Force on air quality in the fall of 2003. The charge of the Task Force is:

   a. To assist in developing and evaluating options for the Southeast Michigan SIPs for air quality;
   b. To facilitate information sharing and networking with stakeholders in Southeast Michigan; and
   c. To provide a forum for input into air quality plan development early in the process.

   Task Force members include local elected officials, representatives from county and state government, community and economic development planners, environmental organizations, community groups, and private industry. (See Attachment B for a list of Task Force members.) The group has already met on several occasions and discussed rule-makings associated with the implementation of both the 8-hour ozone and particulate matter less than 2.5

microns in diameter standards, and preliminary analyses of control measures. (See Attachment C for 2004 agendas.) The MDEQ and SEMCOG intend to continually engage the task force to discuss results of control measure analyses and to seek their input on proposed recommendations for action.

3. Fuels Group.

Recognizing the shrinking contribution of the point source inventory due to previous controls and the potential benefits of different fuel configurations, the MDEQ and SEMCOG also formed a Fuels Group in the fall of 2003. The members of the Fuels Group, which is a subgroup to Southeast Michigan's Task Force on Air Quality, consist of representatives from the petroleum and auto industries, the MDEQ, SEMCOG, the Michigan Department of Agriculture, and the EPA. (See Attachment D in appendix for list of members.) The purpose of the subgroup is to provide guidance on fuels-related information for the development of emission inventories and the evaluation of fuels control measures. The subgroup developed matrices of criteria for evaluating various fuels. (See Attachment E.) The gasoline fuels that are in the matrix include federal reformulated gasoline (RFG) and California RFG, along with lower sulfur gasoline, low Reid vapor pressure fuel, and ethanol fuels. The diesel fuel alternatives include California diesel fuel, cetane, and biodiesel. Also included in the evaluation are diesel retrofits, though these are not fuels. The criteria by which each fuel will be evaluated are:

- Emission reduction potential;
- Refinery constraints;
- Distribution issues;
- Cost; and
- EPA's fuel preemption limitations.

In the spring of 2004, SEMCOG hired a consultant to evaluate the emission reduction potential of various gasoline and diesel fuels. The consultant's evaluation will be completed in early to mid-October, and will play a major role in assessing control strategy alternatives because many of these fuels will not only provide benefits to on-road vehicles, but also to many other components of the area source category.

4. Submittal.

In June 2005, the Director of the MDEQ, the Governor's delegate for SIP submittals, will provide the following to the EPA:

- Results of analyses of various control measures, including emission reduction estimates and photochemical modeling results for 2007 and beyond;
- Identification of control measure(s) to be implemented for reducing ozone concentrations; and

- The schedule for phasing-in implementation of controls, which will begin in 2006.

B. Process for Early Implementation of Control Measures.

The MDEQ and SEMCOG are committed to protecting public health by once again reaching attainment with all of the national ambient air quality standards as quickly as possible. That is why, in designing this ozone classification adjustment from Moderate to Marginal, the MDEQ and SEMCOG committed to a schedule that expedites review and selection of control measures sooner than required under any other classification scenario, whether moderate, marginal, or basic. The MDEQ is committing to an aggressive schedule for both analyzing and selecting control measures, and seeking the legal authority to enable the chosen measures.

The following is a list of measures under consideration:

- Vehicle inspection and maintenance;
- Lower emitting fuels (see Attachment E for specific fuels under consideration);
- Degreasing (for volatile organic compound (VOC) reductions);
- Architectural and industrial maintenance coatings (for VOC reductions);
- Consumer/commercial products (for VOC reductions);
- Transportation control measures;
- Tighter VOC Reasonably Achievable Control Technology rules; and
- Gas can replacement.

This will provide reductions of ozone precursors in a time frame that will allow for early attainment. Timing of implementation, extent of reductions, applicability to other areas in Michigan, and cost-effectiveness will be priority criteria in assessing measures for ozone attainment in Southeast Michigan. The exact time frame for implementation of all measures will partly depend on the complexity of achieving the reductions. The phase-in of some emission reductions will begin in 2006. To expedite early implementation, we will pursue the necessary legal authority considering the mechanism that results in the shortest time frame for adoption (i.e., rules or legislation).

Another distinct benefit of reclassification is that the earlier planning and schedule positions the MDEQ to expeditiously implement additional controls that might later be determined to be necessary for attainment or maintenance. Simply put, the need for these controls would be known in advance of areas that do not submit SIPs until 2007 premised on attainment by 2010. And, the necessity for these controls would be known earlier because actual monitoring data (not modeling) would be available to gauge the actual impact of controls. Finally, control measure options will have already been evaluated enabling MDEQ to expeditiously implement the next preferable control measure.

Furthermore, investing in early public involvement in agency activities through the Task Force and Fuels Group will facilitate the identification of solutions with reduced controversy. This will remove barriers to early reductions and enable and support the commitment to a June 2005 submittal.

Targeted Emission Reduction Level

The MDEQ and SEMCOG have already been implementing a process for evaluating the merits of a wide range of control options. Early initiation of this planning process has provided us with some preliminary information we have used to approximate the degree of emission reductions that will be used to guide selection of a control strategy. The following findings will guide our decision on the strategy that will be selected and presented to EPA by June 2005.

- Major reductions in emissions of both VOC and nitrogen oxides (NOx) are expected and are similar to what moderate areas are required to achieve. NOx emissions are expected to decline by 288 tons/summer day (between 2000 and 2007) as a result of implementing the NOx SIP Call. Furthermore, on-road mobile source NOx emissions will decline by an additional 156 tons/summer day (after accounting for growth in vehicle miles traveled). And, mobile source VOC emissions will decline by 71 tons/summer day (between 2002 and 2007).

- Southeast Michigan controls will focus on VOC emissions because the region is VOC limited.

- Transportation control measures would only produce minor changes in emissions from the on-road mobile source category, i.e. less than 1 ton/summer day in the year 2010.

- Inspection and Maintenance (I/M) programs will produce greater reductions than transportation controls. For example, an on-board diagnostics program applied in the three-county area (where previously implemented—Oakland, Macomb, and Wayne Counties) would yield a reduction of approximately 6 tons/summer day.

- Fuel alternatives will produce greater reductions than transportation controls. Preliminary estimates show that they will likely approximate or exceed reductions from a compliant I/M program.

- The selected control strategy will exceed the reductions that would be achieved from transportation controls or additional stationary source controls and will be similar to the magnitude of reduction that would be achieved from a fuel or compliant I/M program.