

MDEQ Proposes Ozone Designations

In response to federal Clean Air Act (CAA) regulations, the Michigan Department of Environmental Quality (MDEQ) has prepared a list of each area of the state that is in attainment or nonattainment with the current CAA National Ambient Air Quality Standards (NAAQS) for ozone. A total of 15 counties were identified by MDEQ as not attaining the ozone air quality standards, a designation that could lead to more stringent emission regulations applying to sources in those counties.

Under the CAA, the United States Environmental Protection Agency (EPA) establishes NAAQS for six “criteria pollutants,” one of which is ozone. The NAAQS concentrations represent pollutant levels that EPA has determined can be allowed while protecting human health and the environment with a margin of safety. Each state is responsible for developing and implementing a state implementation plan (SIP) under the CAA to achieve and maintain compliance with the NAAQS set by EPA. At present, no area of Michigan is designated nonattainment for any NAAQS.

In 1997, EPA promulgated a new NAAQS for ozone that requires the 8-hour average ozone concentration to remain at or below 0.8 parts per million (ppm) in the ambient air. Compliance with the 8-hour ozone NAAQS is determined according to whether the fourth highest 8-hour average ozone concentration measured during a 3-year period is above or below 0.8 ppm.

Based on ambient air monitoring data, MDEQ has determined that the following counties did not meet the ozone NAAQS for the period 2000 - 2002: Wayne, Oakland, Macomb, St. Clair, Livingston, Washtenaw, Monroe, Lenawee, Cass, Berrien, Muskegon, Ottawa, Allegan, Mason

and Benzie. The nonattainment counties are concentrated in southeast Michigan and in western Michigan, along the shore of Lake Michigan.

EPA is expected to formally designate areas as attainment or nonattainment with the 8-hour ozone NAAQS in April 2004. A nonattainment designation by EPA would subject large new and modified sources of volatile organic compounds (VOC) and oxide of nitrogen (NOx) to stringent air emission control technology requirements known as Lowest Achievable Emission Rate (LAER) and a requirement to obtain "offsets" (VOC and/or NOx emission reductions) to compensate for the additional NOx and/or VOC emissions from the new or modified source. It may also become necessary for Michigan to adopt additional restrictions for existing stationary sources and mobile sources, such as automobiles, to demonstrate that the nonattainment areas will once again be able to attain the ozone NAAQS.

In a presentation to Michigan state legislators, G. Vinson Hellwig, the Chief of the MDEQ Air Quality Division, stated that much of the ozone in western Michigan is caused by emissions in Illinois, Indiana and Wisconsin. Pollutants from those states are carried by the prevailing winds to western Michigan, contributing to the air quality problems there. Hellwig stated that, although emission sources in western Michigan also contribute to the overall ozone concentration, it may not be possible to bring the west Michigan counties into attainment with the ozone NAAQS solely by controlling emission sources in western Michigan. In other words, the key to improving air quality in western Michigan may be reducing emissions from sources in Illinois, Indiana and Wisconsin.

In the 1990's, several northeastern states filed petitions with EPA under the CAA alleging that emission sources in Michigan and other states contributed to ozone air quality problems in the northeast. In response to those petitions, EPA promulgated regulations to

require NOx emission reductions from sources in Michigan and other midwest states. Michigan may be required to resort to a similar process to force emission reductions in Illinois, Indiana and Wisconsin to bring western Michigan into compliance with the 8-hour ozone NAAQS.

Although pollutants transported through the atmosphere from other states probably also contribute to ozone levels in southeast Michigan, according to Hellwig, Michigan-based emissions are probably the primary cause of ozone levels in the Detroit area. Thus, if areas in western and southeastern Michigan are ultimately designated by EPA as nonattainment for ozone, MDEQ will likely rely on a combination of emission reductions from Michigan-based sources and sources in other states when it develops a plan to bring those areas back into attainment.

Because EPA will not be designating areas as attainment or nonattainment with the 8-hour ozone NAAQS until 2004, it is likely that EPA will refer to ambient air monitoring data from 2001-2003 when making its designations, rather than the 2000-2002 data that was used by MDEQ in making its recommendations. Several ozone monitors in Michigan and other states recorded unusually high concentrations of ozone during late June 2003, meaning that more counties may be classified as nonattainment using 2001-2003 data. According to Hellwig, additional counties that are at risk of being designated nonattainment by EPA based on 2001-2003 data include: Eaton, Clinton, Ingham, Newaygo, Kent, Ionia, Barry, Van Buren, Genesee and Lapeer.

EPA will first publish a notice of its proposed designations and accept public comments on them before making a final decision expected in April 2004.

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