Wayne County, Michigan
SO2 SIP
September 20, 2017

The Michigan Department of Environmental Quality (MDEQ) is working to develop an SO2 State Implementation Plan (SIP) for Wayne County which is fully protective of public health and the environment. As we discussed, among the factors that we are addressing are the need to fulfill our public health and environmental objectives in a manner that also supports the energy and economic interests of the citizens of this region. I believe that we have an approach that will achieve these objectives.

Background

A revised SO2 NAAQS was promulgated in 2010, and EPA designated Wayne County as a SO2 nonattainment area in October 2013. This triggered a legal requirement for MDEQ to submit a SIP by April 2015, which would demonstrate attainment by October 2018.

Initially, MDEQ commenced negotiations with the major SO2 sources (DTE Energy and U.S. Steel) and focused on the individual "hot spots" associated with those sources. MDEQ was able to negotiate permits with DTE, but USS did not agree to reductions. Accordingly, MDEQ submitted a SIP in June, 2016, which included DTE's agreed SO2 reductions, and Rule 430 which set forth emission reductions for USS and a requirement that USS submit its compliance plan by August 31, 2016. USS filed a lawsuit challenging Rule 430.

Settlement negotiations have resulted in agreed SO2 reductions from USS which MDEQ believe account for its individual nonattainment hot spots and its share of overall hot spot (not associated solely with any individual SO2 source) emissions. After incorporating the agreed USS reductions, modeling now indicates that an overall hot spot, in an area located north of Zug Island, is nominally 3.6 ppb above the SO2 NAAQS, without considering other relevant data. We expect a court ruling on the validity of Rule 430 soon.

MDEQ staff calculations indicate that a complete shutdown of the DTE Trenton Channel power plant would not achieve the necessary SO2 reductions, and that approximately a 50% reduction in allowable emissions from the River Rouge power plant would be required. It is also important to note that the Trenton Channel and River Rouge power plants are currently scheduled to be decommissioned in 2020-21 and 2022, respectively.

All of the attainment analysis discussed above is based upon EPA air dispersion models. This modeling is typically used, but it is not explicitly mandated by law or regulation. Also, importantly, an air monitor in this area has demonstrated SO2 attainment levels of actual air quality since beginning in 2014.

In summary, we have a situation where worst-case scenario modeling would require SO2 emission reduction measures with significant energy, economic and jobs ramifications, at power plants scheduled to be decommissioned in the next few years, in an area with actual measured air quality levels which have and are meeting the NAAQS.

SIP Proposal

We will propose a SIP which demonstrates robust and sustainable SO2 NAAQS compliance for the Wayne County area based upon standard air dispersion modeling supplemented by actual monitored levels of air quality which demonstrate compliance (weight of evidence).

A SIP submission in accordance with this approach will comply with the express terms of the Clean Air Act. EPA's "non-binding guidance" would, as a general rule, require an attainment demonstration based upon air dispersion modeling and assuming that all sources are simultaneously operating at maximum levels, but EPA has the statutory authority to approve an equivalent basis of attainment demonstration and has issued guidance supporting the use of "weight of evidence" to supplement modeling results.

Certainly, the most important consideration in this matter is to assure that we are fully protective of public health and the environment. I believe we have a strong case that actual monitor data demonstrates compliance with the SO2 NAAQS and that our SIP can be a compelling demonstration of that conclusion.

Clean Air Act Provisions

SIP Timing:

Sec. 110(a)(1) - SIP required within 3 years of nonattainment designation.

Sec. 110(b) - the Administrator may extend SIP deadline up to 18 months.

Sec. 110(k)(1)(B) – Administrator shall make a "completeness" determination with 6 months of SIP submittal.

Sec. 110(k)(2) – Administrator shall approve/disapprove SIP within 12 months of completeness determination.

SIP Content:

Sec. 110(a)(2)(K) – SIP shall provide for the performance of such air quality modeling as the Administrator shall prescribe.

Sec. 172(c)(8) – Upon application by any State, the Administrator may allow the use of equivalent modeling, emission inventory, and planning procedures unless determined to be less effective than the methods prescribed by the Administrator.

EPA SO2 SIP Guidance (issued April 23, 2014) (underscores added)

"The purpose of this memorandum is to provide non-binding guidance."

"While this document provides general guidance … the EPA notes that each NAA may pose unique case-specific questions."

"Air agencies use the SIP process to … select the emission reduction measures that the air agency judges to be the most appropriate to implement in order for the affected area to attain the 2010 SO2 NAAQS based on a variety of local factors."

"The attainment plan for the affected area should also demonstrate, through the use of air quality dispersion modeling, using allowable emissions and supplemental analyses, as appropriate, that the area will attain the standard by its attainment date."

Guidance Appendix A, Section 11

"States may wish to conduct further analyses that examine available monitoring data and other information as well as modeling results. In selected cases, such analyses may provide further insight on the control measures necessary to provide for attainment. States considering such analyses should consult with their EPA regional office during the planning and implementation of such analyses."