

Final Technical Support Document

Michigan

Area Designations for the 2010 SO₂ Primary National Ambient Air Quality Standard

Summary

Pursuant to section 107(d) of the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA, or the Agency) must designate areas as either “unclassifiable,” “attainment,” or “nonattainment” for the 2010 1-hour sulfur dioxide (SO₂) primary national ambient air quality standard (NAAQS). Section 107(d) of the CAA defines a nonattainment area as one that does not meet the NAAQS or that contributes to a NAAQS violation in a nearby area, an attainment area as any area other than a nonattainment area that meets the NAAQS, and an unclassifiable area as any area that cannot be classified on the basis of available information as meeting or not meeting the NAAQS.

July 2, 2016, is the deadline established by the U.S. District Court for the Northern District of California for the EPA to designate certain areas. This deadline is the first of three deadlines established by the court for the EPA to complete area designations for the 2010 SO₂ NAAQS. This deadline applies to certain areas in Michigan because eight emission sources meet the conditions of the court’s order.

Michigan submitted updated recommendations on September 18, 2015. Table 1 below lists Michigan’s recommendations and identifies the counties in Michigan that the EPA is designating in order to meet the July 2, 2016, court-ordered deadline. These final designations are based on an assessment and characterization of air quality through ambient air quality data, air dispersion modeling, other evidence and supporting information, or a combination of the above.

Table 1 – Michigan’s Recommended and the EPA’s Final Designations

Area	State’s Recommended Area Definition	State’s Recommended Designation	EPA’s Final Area Definition	EPA’s Final Designation ¹
St. Clair, MI	Within St. Clair Co.: Area defined by the St. Clair River on the east, State Highway M-29 to Church Road to Arnold Road to County Line Road on the south, County Line Road and the Macomb/ St. Clair County boundary to Stoddard Road to Wales Ridge Road on	Nonattainment	Within St. Clair Co.: Area defined by the St. Clair River for the eastern boundary, an extension from the St. Clair River straight west to the intersection of State Highway M-29 and St. Clair River Drive, continuing west on State Highway M-29 to Church Road to Arnold Road to	Nonattainment

¹On February 16, 2016, the EPA notified Michigan of our intended to designations. The EPA’s final designations only differ from the intended designations for the Bay County and Monroe County, MI areas. For both of these areas, the intended boundary matches the final boundary, but the recommended designation is being amended from unclassifiable to unclassifiable/attainment.

	the west, and Alpine Road to Fitz Road to Smith Creek Road to Range Road to Huron Avenue to the St. Clair River on the north.		County Line Road for the southern boundary, County Line Road and the Macomb/ St. Clair County boundary to Stoddard Road to Wales Ridge Road for the western boundary, and Alpine Road to Fitz Road to Smith Creek Road to Range Road to Huron Avenue, extending straight east from the intersection of Huron Road and River Road to the St. Clair River for the northern boundary. (St. Clair, MI)	
Bay County, MI	Bay County	Attainment	Same as State's Recommendation (Bay County, MI)	Unclassifiable/ Attainment
Lansing, MI	Eaton and Ingham Counties	Attainment	Same as State's Recommendation (Lansing, MI)	Unclassifiable/ Attainment
Marquette County, MI	Marquette County	Attainment	Same as State's Recommendation (Marquette County, MI)	Unclassifiable/ Attainment
Monroe County, MI	Monroe County	Attainment	Same as State's Recommendation (Monroe County, MI)	Unclassifiable/ Attainment
Ottawa County, MI	Ottawa County	Attainment	Same as State's Recommendation (Ottawa County, MI)	Unclassifiable/ Attainment

Background

On June 3, 2010, the EPA revised the primary (health based) SO₂ NAAQS by establishing a new 1-hour standard at a level of 75 parts per billion (ppb) which is met at an ambient air quality monitoring site when the 3-year average of the 99th percentile of 1-hour daily maximum concentrations does not exceed 75 ppb. This NAAQS was published in the *Federal Register* on June 22, 2010 (75 FR 35520), and is codified at 40 CFR 50.17. The EPA determined this is the level necessary to protect public health with an adequate margin of safety, especially for children, the elderly, and those with asthma. These groups are particularly susceptible to the health effects associated with breathing SO₂. The two prior primary standards of 140 ppb evaluated over 24 hours, and 30 ppb evaluated over an entire year, codified at 40 CFR 50.4,

remain applicable.² However, the EPA is not currently designating areas on the basis of either of these two primary standards. Similarly, the secondary standard for SO₂, set at 500 ppb evaluated over 3 hours, codified at 40 CFR 50.5, has not been revised, and the EPA is also not currently designating areas on the basis of the secondary standard.

General Approach and Schedule

Section 107(d) of the CAA requires that not later than 1 year after promulgation of a new or revised NAAQS, state governors must submit their recommendations for designations and boundaries to the EPA. Section 107(d) also requires the EPA to provide notification to states no less than 120 days prior to promulgating an initial area designation that is a modification of a state's recommendation. If a state does not submit designation recommendations, the EPA may promulgate the designations that it deems appropriate without prior notification to the state, although it is our intention to provide such notification when possible. If a state or tribe disagrees with the EPA's intended designations, it is given an opportunity within the 120-day period to demonstrate why any proposed modification is inappropriate. The EPA is required to complete designations within 2 years after promulgation of a new or revised NAAQS, unless the EPA determines that sufficient information is not available, in which case the deadline is extended to 3 years. The 3-year deadline for the revised SO₂ NAAQS was June 2, 2013.

On August 5, 2013, the EPA published a final rule establishing air quality designations for 29 areas in the United States for the 2010 SO₂ NAAQS, based on recorded air quality monitoring data from 2009 - 2011 showing violations of the NAAQS (78 FR 47191). In that rulemaking, the EPA committed to address, in separate future actions, the designations for all other areas for which the Agency was not yet prepared to issue designations. The EPA designated a portion of Wayne County, Michigan as nonattainment in this initial set of designations.

Following the initial August 5, 2013, designations, three lawsuits were filed against the EPA in different U.S. District Courts, alleging the Agency had failed to perform a nondiscretionary duty under the CAA by not designating all portions of the country by the June 2, 2013 deadline. In an effort intended to resolve the litigation in one of those cases, plaintiffs, Sierra Club and the Natural Resources Defense Council, and the EPA filed a proposed consent decree with the U.S. District Court for the Northern District of California. On March 2, 2015, the court entered the consent decree and issued an enforceable order for the EPA to complete the area designations according to the court-ordered schedule.

According to the court-ordered schedule, the EPA must complete the remaining designations by three specific deadlines. By no later than July 2, 2016 (16 months from the court's order), the EPA must designate two groups of areas: (1) areas that have newly monitored violations of the 2010 SO₂ NAAQS, and (2) areas that contain any stationary sources that had not been announced

² 40 CFR 50.4(e) provides that the two prior primary NAAQS will no longer apply to an area 1 year after its designation under the 2010 NAAQS, except that for areas designated nonattainment under the prior NAAQS as of August 22, 2010, and areas not meeting the requirements of a SIP Call under the prior NAAQS, the prior NAAQS will apply until that area submits and the EPA approves a SIP providing for attainment of the 2010 NAAQS. Michigan does not have any areas designated nonattainment under the older standards and does not have any areas not meeting the requirements of a SIP Call under the prior NAAQS.

as of March 2, 2015, for retirement and that, according to the EPA's Air Markets Database, emitted in 2012 either (i) more than 16,000 tons of SO₂, or (ii) more than 2,600 tons of SO₂ with an annual average emission rate of at least 0.45 pounds of SO₂ per one million British thermal units (lbs SO₂/mmBTU). Specifically, a stationary source with a coal-fired unit that, as of January 1, 2010, had a capacity of over 5 megawatts and otherwise meets the emissions criteria, is excluded from the July 2, 2016, deadline if it had announced through a company public announcement, public utilities commission filing, consent decree, public legal settlement, final state or federal permit filing, or other similar means of communication, by March 2, 2015, that it will cease burning coal at that unit.

The last two deadlines for completing remaining designations are December 31, 2017, and December 31, 2020. The EPA has separately promulgated requirements for state and other air agencies to provide additional monitoring or modeling information on a timetable consistent with these designation deadlines. We expect this information to become available in time to help inform these subsequent designations. These requirements were promulgated on August 21, 2015 (80 FR 51052), in a rule known as the SO₂ Data Requirements Rule (DRR), codified at 40 CFR part 51 subpart BB.

Updated designations guidance was issued by the EPA through a March 20, 2015, memorandum from Stephen D. Page, Director, U.S. EPA, Office of Air Quality Planning and Standards, to Air Division Directors, U.S. EPA Regions 1-10. This memorandum supersedes earlier designation guidance for the 2010 SO₂ NAAQS, issued on March 24, 2011, and it identifies factors that the EPA intends to evaluate in determining whether areas are in violation of the 2010 SO₂ NAAQS. The guidance also contains the factors the EPA intends to evaluate in determining the boundaries for all remaining areas in the country, consistent with the court's order and schedule. These factors include: 1) Air quality characterization via ambient monitoring or dispersion modeling results; 2) Emissions-related data; 3) Meteorology; 4) Geography and topography; and 5) Jurisdictional boundaries. This guidance was supplemented by two non-binding technical assistance documents intended to assist states and other interested parties in their efforts to characterize air quality through air dispersion modeling or ambient air quality monitoring for sources that emit SO₂. Notably, the EPA's documents titled, "SO₂ NAAQS Designations Modeling Technical Assistance Document" (Modeling TAD) and "SO₂ NAAQS Designations Source-Oriented Monitoring Technical Assistance Document" (Monitoring TAD), were available to states and other interested parties. Both of these TADs were most recently updated in February 2016.

Based on complete, quality assured and certified ambient air quality data collected between 2013 and 2015, no violations of the 2010 SO₂ NAAQS have been recorded at ambient air quality monitors in any undesignated part of Michigan. However, there are eight sources in the State meeting the emissions criteria of the consent decree for which the EPA must complete designations by July 2, 2016. In this final technical support document, the EPA discusses its review and technical analysis of Michigan's updated recommendations for the areas that we must designate. The EPA also discusses any intended and final modifications from the State's recommendation based on all available data before us.

The following are definitions of important terms used in this document:

- 1) 2010 SO₂ NAAQS – the primary NAAQS for SO₂ promulgated in 2010. This NAAQS is 75 ppb, based on the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations. See 40 CFR 50.17.
- 2) Attaining monitor – an ambient air monitor meeting all methods, quality assurance, and siting criteria and requirements whose valid design value is equal to or less than 75 ppb, based on data analysis conducted in accordance with Appendix T of 40 CFR part 50.
- 3) Design Value – a statistic computed according to the data handling procedures of the NAAQS (in 40 CFR part 50 Appendix T) that, by comparison to the level of the NAAQS, indicates whether the area is violating the NAAQS.
- 4) Designated nonattainment area – an area which the EPA has determined has violated the 2010 SO₂ NAAQS or contributed to a violation in a nearby area. A nonattainment designation reflects considerations of the state’s recommendations and all of the information discussed in this document. The EPA’s decision is based on all available information including the most recent 3 years of air quality monitoring data, available modeling analyses, and any other relevant information.
- 5) Designated unclassifiable area – an area for which the EPA cannot determine based on all available information whether or not it meets the 2010 SO₂ NAAQS.
- 6) Designated unclassifiable/attainment area – an area which the EPA has determined to have sufficient evidence to find either is attaining or is likely to be attaining the NAAQS. The EPA’s decision is based on all available information including the most recent 3 years of air quality monitoring data, available modeling analyses, and any other relevant information.
- 7) Modeled violation – a violation based on air dispersion modeling.
- 8) Recommended attainment area – an area a state or tribe has recommended that the EPA designate as attainment.
- 9) Recommended nonattainment area – an area a state or tribe has recommended that the EPA designate as nonattainment.
- 10) Recommended unclassifiable area – an area a state or tribe has recommended that the EPA designate as unclassifiable.
- 11) Recommended unclassifiable/attainment area – an area a state or tribe has recommended that the EPA designate as unclassifiable/attainment.
- 12) Violating monitor – an ambient air monitor meeting all methods, quality assurance, and siting criteria and requirements whose valid design value exceeds 75 ppb, based on data analysis conducted in accordance with Appendix T of 40 CFR part 50.

Technical Analysis for St. Clair, Michigan

Introduction

The St. Clair, Michigan, area contains two stationary sources that according to the EPA's Air Markets Database emitted in 2012 either more than 16,000 tons of SO₂ or more than 2,600 tons of SO₂ and had an annual average emission rate of at least 0.45 lbs SO₂/mmBTU. Specifically, in 2012, the Belle River Power Plant electric generating facility emitted 24,869 tons of SO₂ and had an emissions rate of 0.621 lbs SO₂/mmBTU and the St. Clair Power Plant electric generating facility emitted 28,208 tons of SO₂ and had an emissions rate of 0.935 lbs SO₂/mmBTU. As of March 2, 2015, these stationary sources had not met the criteria for being "announced for retirement." Pursuant to the March 2, 2015 court-ordered schedule, the EPA must designate the area surrounding these facilities by July 2, 2016.

In its September 18, 2015 submission, MDEQ recommended that the area surrounding the Belle River and St. Clair electric generating facilities, specifically a defined portion of St. Clair County,³ be designated as nonattainment based on an assessment and characterization of air quality from the facilities and other nearby sources which may have a potential impact in the area of analysis where maximum concentrations of SO₂ are expected.

This assessment and characterization was performed using air dispersion modeling software, i.e., AERMOD, analyzing actual emissions from 2012 through 2014 for the two power plants. No other sources were included in the modeling. MDEQ followed the EPA's Modeling TAD for the purposes of modeling to characterize air quality for use in designations, and used the most recent 3 years of actual emissions data and concurrent meteorological data. Surface meteorology and surface characteristics from the Pontiac meteorological station (77 km away), and coincident upper air observations from White Lake Township, MI, 82 km to the west, were selected as most representative of meteorological conditions within the area. MDEQ chose a fixed background concentration based off of the Port Huron Monitor design value among selected hours, excluding times when the wind was blowing from the east, reflective of refineries in Canada that would be less likely to impact the power plants, and when the wind was from the south, which would be reflective of the power plants that are being modeled. The background concentration for this area was determined by the state to be 15 ppb and was incorporated into the final AERMOD results. The state's modeling indicates that the predicted 99th percentile 1-hour average concentration within the chosen modeling domain is 131.7 ppb occurring about 3 km southwest of the power plants, exceeding the standard of 75 ppb.

On February 16, 2016, the EPA notified Michigan that we intended to designate the St. Clair, Michigan area as nonattainment, based on our view that the area was violating the NAAQS. Additionally, we informed Michigan that our intended boundaries for the nonattainment area

³ The portion of St. Clair County recommended by Michigan is defined by the St. Clair River on the east, State Highway M-29 to Church Road to Arnold Road to County Line Road on the south, County Line Road and the Macomb/ St. Clair County boundary to Stoddard Road to Wales Ridge Road on the west, and Alpine Road to Fitz Road to Smith Creek Road to Range Road to Huron Avenue to the St. Clair River on the north.

consisted of the portion of St. Clair County defined by the St. Clair River for the eastern boundary, an extension from the St. Clair River straight west to the intersection of State Highway M-29 and St. Clair River Drive, continuing west on State Highway M-29 to Church Road to Arnold Road to County Line Road for the southern boundary, County Line Road and the Macomb/ St. Clair County boundary to Stoddard Road to Wales Ridge Road for the western boundary, and Alpine Road to Fitz Road to Smith Creek Road to Range Road to Huron Avenue, extending straight east from the intersection of Huron Road and River Road to the St. Clair River for the northern boundary. Our intended designation and associated boundaries were based on, among other things, the same area as Michigan evidently intended, but better define the area by including short connecting lines at the northeast and southeast corners of the area to assure that the boundaries are completely unambiguous. Detailed rationale, analyses, and other information supporting our intended designation for this area can be found in the preliminary technical support document for Michigan, and this document along with all others related to this rulemaking can be found in Docket ID EPA-HQ-OAR-2014-0464.

Assessment of New Information

In our February 16, 2016, notification to Michigan regarding our intended nonattainment designation for the St. Clair County, Michigan, area, the EPA requested that any additional information that the Agency should consider prior to finalizing the designation should be submitted by April 19, 2016. On March 1, 2016, the EPA also published a notice of availability and public comment period in the *Federal Register*, inviting the public to review and provide input on our intended designations by March 31, 2016 (81 FR 10563).

The EPA is explicitly incorporating and relying upon the analyses and information presented in the preliminary technical support document for the purposes of our final designation for this area, except to the extent that any new information submitted to the EPA or conclusions presented in this final technical support document and our response to comments document (RTC), available in the docket, supersede those found in the preliminary document.

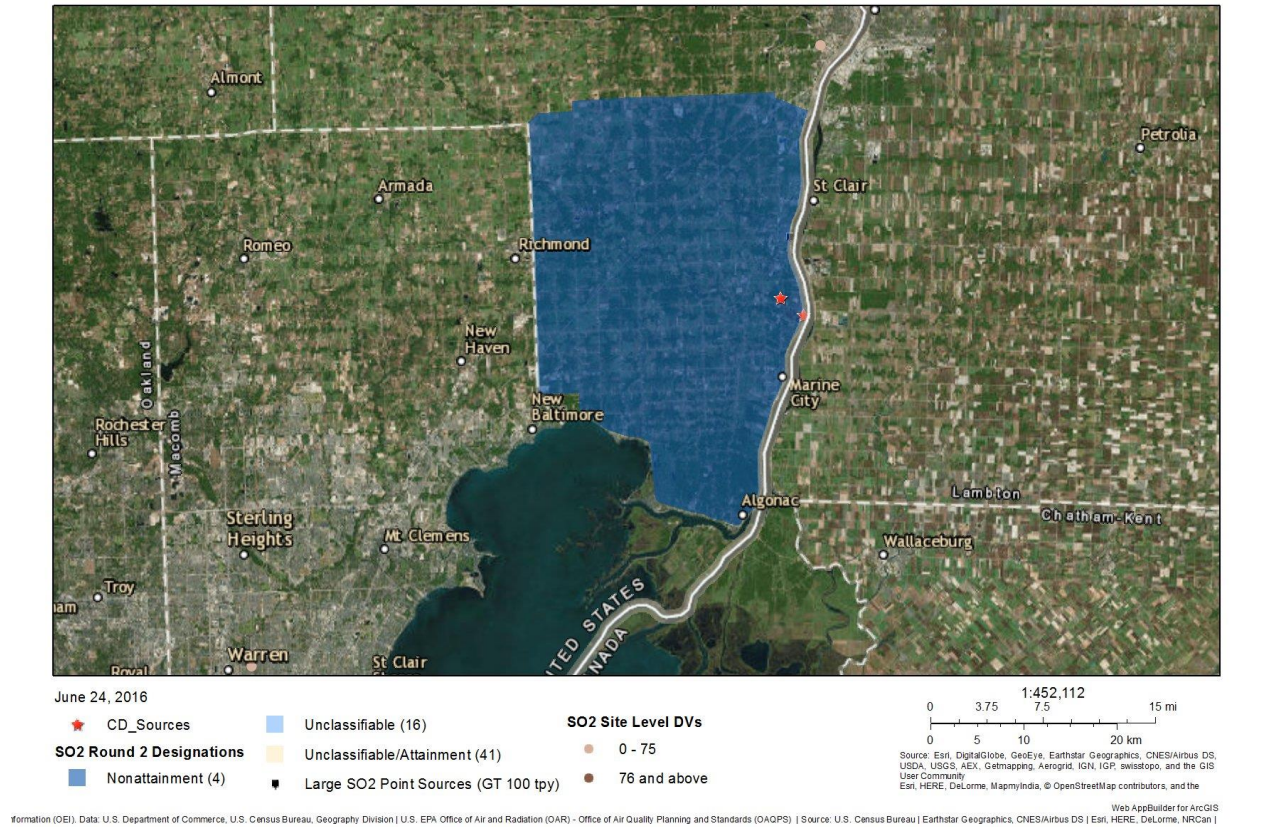
Subsequent to our February 16, 2016, notification, the EPA received comments from Sierra Club and DTE Energy. In sum, the Sierra Club supported the EPA's intended designation of the area around DTE's Belle River and St. Clair Power Plants, including portions of St. Clair County, as a nonattainment area for the 2010 1-hour SO₂ NAAQS. The commenter stated these are two of the largest SO₂ emitters in the nation, have no SO₂ controls, and such a designation is compelled by the modeling performed by MDEQ and Sierra Club. Commenter stated that MDEQ and Sierra Club's modeling evaluations adhere to the EPA's Modeling TAD and Appendix W and both predict levels that far exceed the SO₂ NAAQS. Commenter stated that the EPA's proposed nonattainment area boundaries are equally supported by all of the modeling in the record. DTE Energy agreed with the designation recommendation that only a portion of St. Clair County should be considered nonattainment and the EPA's change to clarify the southeastern and northeastern corners of the nonattainment area. The commenter disagreed with the use of the Pontiac meteorological station instead of the closer St. Clair Airport based on proximity to Lake St. Clair.

The EPA appreciates the support on the recommendation. For the recommendation of meteorological stations, as mentioned by the commenter, meteorological data was selected from the Pontiac Station because the Pontiac Station had a more complete data set than the St. Clair Airport. Specifically, the Pontiac Station had one minute Automated Surface Observing System (ASOS) data available, and the St. Clair Airport did not. Therefore, the Pontiac Station offered a more appropriate data set within the guidelines of Appendix W and the Modeling TAD.

Conclusion

Therefore, based on the information available to the EPA at this time, including the analyses performed for the purposes of the preliminary technical support document and in the absence of any new information that would otherwise lead to a different conclusion regarding air quality in the area or any new information that would otherwise lead to a different conclusion regarding the area boundaries, the EPA determines that the St. Clair, Michigan, area is not meeting the NAAQS, and therefore is designating the area as nonattainment for the 2010 primary SO₂ NAAQS. The boundaries for this nonattainment area are defined by the St. Clair River for the eastern boundary, an extension from the St. Clair River straight west to the intersection of State Highway M-29 and St. Clair River Drive, continuing west on State Highway M-29 to Church Road to Arnold Road to County Line Road for the southern boundary, County Line Road and the Macomb/St. Clair County boundary to Stoddard Road to Wales Ridge Road for the western boundary, and Alpine Road to Fitz Road to Smith Creek Road to Range Road to Huron Avenue, extending straight east from the intersection of Huron Road and River Road to the St. Clair River for the northern boundary, and are shown in the figure below. Nearby emitters of SO₂ are also included in the figure.

Figure 1: The EPA's final nonattainment area: St. Clair, Michigan
 St. Clair County, Michigan Area



At this time, our final designations for the state only apply to this area and the others contained in this final technical support document. Consistent with the court-ordered schedule, the EPA will evaluate and designate all remaining undesignated areas in Michigan by either December 31, 2017, or December 31, 2020.

Technical Analysis for Bay County, Michigan

Introduction

The Bay County, Michigan, area contains a stationary source that, according to the EPA's Air Markets Database, emitted in 2012 either more than 16,000 tons of SO₂ or more than 2,600 tons of SO₂ and had an annual average emission rate of at least 0.45 lbs SO₂/mmBTU. Specifically, in 2012, the D.E. Karn Generating Complex (D.E. Karn) emitted 6,850 tons of SO₂ and had an emissions rate of 0.546 lbs SO₂/mmBTU. As of March 2, 2015, this stationary sources had not met the specific requirements for being "announced for retirement." Pursuant to the March 2, 2015, court-ordered schedule, the EPA must designate the area surrounding this facility by July 2, 2016.

In its September 18, 2015 submission, MDEQ recommended that the area D.E. Karn, specifically the entirety of Bay County, be designated as attainment based on an assessment and characterization of air quality from the facility and other nearby sources which may have a potential impact in the area of analysis where maximum concentrations of SO₂ are expected.

This assessment and characterization was performed using air dispersion modeling software, i.e., AERMOD. D.E. Karn's main units were analyzed using allowable emissions reflective of recent controls. D.E. Karn's two sporadically used peak units were analyzed using actual emissions for 2012 through 2014. The state also assumed an allowable emission of zero tpy for the nearby JC Weadock Generating Complex (JCW) which was required by a consent decree to shut down by April 15, 2016. No other sources were included in the modeling. MDEQ followed the EPA's Modeling TAD for the purposes of modeling to characterize air quality for use in designations, and used allowable emissions or the most recent 3 years of actual emissions data and concurrent meteorological data. Surface meteorology and surface characteristics from the Saginaw MBS Airport station, 23 km to the southwest, and coincident upper air observations from White Lake station, 109 km to the south, were selected as most representative of meteorological conditions within the area. MDEQ chose a fixed background concentration based on the Lansing monitor design value. The background concentration for this area was determined by the state to be 17.9 ppb and was incorporated into the final AERMOD results. The state's modeling indicates that the predicted 99th percentile 1-hour average concentration within the chosen modeling domain is 46.8 ppb occurring about 5 km southwest of the power plant, well below the standard of 75 ppb. The EPA determined that there are no other significant sources of SO₂ in or near the county's borders not included in the modeling domain and that the modeling was done in accordance with Appendix W and the Modeling TAD. Although the EPA agreed that the modeling analysis assuming the shutdown of JCW showed attainment of the standard, the EPA did not have any information on JCW's current impact on the area, so was therefore not able to determine the collective impact of D.E. Karn and JCW.

On February 16, 2016, the EPA notified Michigan that we intended to designate the Bay County, Michigan, area as unclassifiable, due to our view that based on available information we could not determine whether the area was meeting the NAAQS. Additionally, we informed Michigan that our intended boundaries for the unclassifiable area consisted of the entirety of Bay County.

Our intended designation and associated boundaries were based on, among other things, the JC Weadock Generating Complex (JCW), a facility that is co-located with D.E. Karn, not being included in the modeling. Due to a Federal consent decree, the units at JCW were required to be retired by April 15, 2016. After careful review of the state's assessment, supporting documentation, and all available data, the EPA agreed that the modeling, assuming the shutdown of JCW, showed attainment of the NAAQS. However, since the assumption of the shutdown did not reflect the current state of the Bay County air quality, the EPA intended to designate Bay County as unclassifiable and anticipated finalizing the designation of the area as unclassifiable/attainment once the source was confirmed as shutdown. Detailed rationale, analyses, and other information supporting our intended designation for this area can be found in the preliminary technical support document for Michigan, and this document along with all others related to this rulemaking can be found in Docket ID EPA-HQ-OAR-2014-0464.

Assessment of New Information

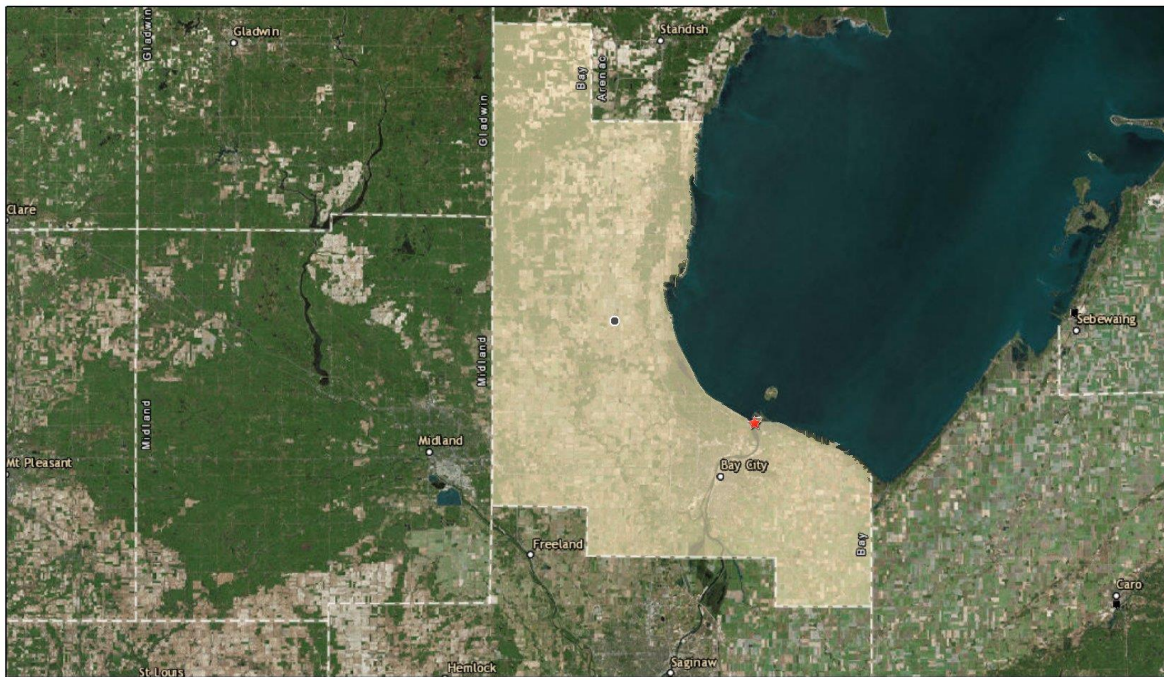
In our February 16, 2016, notification to Michigan regarding our intended unclassifiable designation for the Bay County, Michigan, area, the EPA requested that any additional information that the Agency should consider prior to finalizing the designation should be submitted by April 19, 2016. On March 1, 2016, the EPA also published a notice of availability and public comment period in the *Federal Register*, inviting the public to review and provide input on our intended designations by March 31, 2016 (81 FR 10563).

The EPA is explicitly incorporating and relying upon the analyses and information presented in the preliminary technical support document for the purposes of our final designation for this area, except to the extent that any new information submitted to the EPA or conclusions presented in this final technical support document, submitted comments, and our responses.

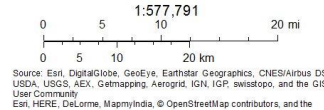
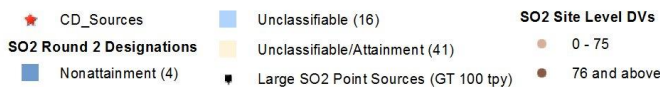
As further discussed below, after carefully considering all available data and information, the EPA determines that the Bay County, Michigan area is meeting the NAAQS, and therefore is designating the area as unclassifiable/attainment for the 2010 SO₂ NAAQS. The boundaries for this unclassifiable/attainment area consist of the entirety of Bay County, and are shown in the figure below. Nearby emitters of SO₂ are also included in the figure.

Figure 2: The EPA's final unclassifiable/attainment area: Bay County, Michigan

Bay County, Michigan Area



June 24, 2016



Office of Environmental Information (OE) | Data: U.S. Department of Commerce, U.S. Census Bureau, Geography Division | U.S. EPA Office of Air and Radiation (OAR) - Office of Air Quality Planning and Standards (OAQPS) | Source: U.S. Census Bureau | Earthstar Geographics | Esri, HERE, DeLorme |

Subsequent to our February 16, 2016, notification, the EPA received comments from MDEQ regarding our intended designation for this area. MDEQ stated that JCW is now permanently shut down due to a consent decree requiring shutdown by April 15, 2016, and requested an unclassifiable/attainment designation. The EPA agreed that the modeling submitted by MDEQ in the September 18, 2015, submittal is consistent with the modeling TAD, other than the assumption that JCW had no emissions. Now that JCW is shut down, the EPA finds that the modeling assuming zero tons per year of SO₂ emissions is appropriate, and therefore finds that Michigan’s modeling supports an unclassifiable/attainment designation.

A summary of the substantive comments from MDEQ regarding our intended unclassifiable designation for the Bay County, Michigan area, and our responses can also be found in the RTC.

Jurisdictional Boundaries:

Existing jurisdictional boundaries are considered for the purpose of informing our final unclassifiable/attainment area, specifically with respect to clearly defined legal boundaries. The EPA did not receive any comments regarding the intended boundaries for this area.

The EPA finds that our final unclassifiable/attainment area, consisting of the entirety of Bay County, are comprised of clearly defined legal boundaries, and we find these boundaries to be a suitably clear basis for defining our final unclassifiable/attainment area.

Conclusion

After careful evaluation of the state's recommendation, all timely comments and information received during the state and public comment period, and additional relevant information as discussed in this document, the EPA that the area around D.E. Karn is meeting the NAAQS and therefore is designating the area as unclassifiable/attainment for the 2010 SO₂ NAAQS. Specifically, the area is comprised of the entirety of Bay County. Now that JCW is shut down, the EPA has determined that Michigan's assumption of zero tons per year of SO₂ emissions from JCW is an appropriate modeling input and therefore that Michigan's modeling submission supports the Agency's final designation of unclassifiable/attainment for Bay County, Michigan.

At this time, our final designations for the state only apply to this area and the others contained in this final technical support document. Consistent with the court-ordered schedule, the EPA will evaluate and designate all remaining undesignated areas in Michigan by either December 31, 2017, or December 31, 2020.

Technical Analysis for Lansing, Michigan

Introduction

The Lansing, Michigan, area contains two stationary sources that according to the EPA's Air Markets Database emitted in 2012 either more than 16,000 tons of SO₂ or more than 2,600 tons of SO₂ and had an annual average emission rate of at least 0.45 lbs SO₂/mmBTU. Specifically, in 2012, the Eckert Generating Station (Eckert) emitted 3,677 tons of SO₂, and had an emissions rate of 0.58 lbs SO₂/mmBTU and the Erickson Generating Station (Erickson) emitted 2,685 tons of SO₂, and had an emissions rate of 0.64 lbs SO₂/mmBTU. As of March 2, 2015, these stationary sources had not met the criteria for being "announced for retirement." Pursuant to the March 2, 2015, court-ordered schedule, the EPA must designate the area surrounding these facilities by July 2, 2016.

In its September 18, 2015 submission, MDEQ recommended that the area surrounding the Eckert and Erickson electric generating facilities, specifically the entirety of Ingham and Eaton Counties, be designated as attainment based on an assessment and characterization of air quality from the facilities and other nearby sources which may have a potential impact in the area of analysis where maximum concentrations of SO₂ are expected.

This assessment and characterization was performed using air dispersion modeling software, i.e., AERMOD. Both the Eckert and Erickson Power Stations were analyzed using actual emissions for 2012 through 2014. Two smaller nearby sources were included and were modeling using allowable emissions. One other smaller nearby source was modeling using 2014 only emissions, but the emissions variance was not significant enough to warrant concern about the attainment status of this area. MDEQ followed the EPA's Modeling TAD for the purposes of modeling to characterize air quality for use in designations, and used allowable emissions or the most recent 3 years of actual emissions data and concurrent meteorological data. Surface meteorology and surface characteristics from the Capitol City Airport, 7 km to the north of Eckert Power Station, and coincident upper air observations from White Lake, MI, 88 km to the east, were selected as most representative of meteorological conditions within the area. MDEQ chose a fixed background concentration based on the Ingham County monitor design value. The background concentration for this area was determined by the state to be 17.9 ppb and was incorporated into the final AERMOD results. The state's modeling indicates that the predicted 99th percentile 1-hour average concentration within the chosen modeling domain is 53.3 ppb occurring about 3 km south of Erickson, and 11 km southwest of Eckert, well below the standard of 75 ppb. The EPA determined that there are no other significant sources of SO₂ in or near the county's borders not included in the modeling domain and that the modeling was done in accordance with Appendix W and the Modeling TAD.

On February 16, 2016, the EPA notified Michigan that we intended to designate the Lansing, Michigan, area as unclassifiable/attainment, based on our view that the area was meeting the NAAQS. Additionally, we informed Michigan that our intended boundaries for the unclassifiable/attainment area consisted of the entirety of Ingham and Eaton Counties. Our intended designation and associated boundaries were based on, among other things, modeling

submitted by the State that did not identify any other significant sources of SO₂ in either county or near their borders. Detailed rationale, analyses, and other information supporting our intended designation for this area can be found in the preliminary technical support document for Michigan, and this document along with all others related to this rulemaking can be found in Docket ID EPA-HQ-OAR-2014-0464.

Assessment of New Information

In its February 16, 2016 notification to Michigan regarding the intended unclassifiable/attainment designation for the Lansing, Michigan area, the EPA requested that any additional information that the Agency should consider prior to finalizing the designation should be submitted by April 19, 2016. On March 1, 2016, the EPA also published a notice of availability and public comment period in the *Federal Register*, inviting the public to review and provide input on our intended designations by March 31, 2016 (81 FR 10563).

The EPA is explicitly incorporating and relying upon the analyses and information presented in the preliminary technical support document for the purposes of our final designation for this area, except to the extent that any new information submitted to the EPA or conclusions presented in this final technical support document and our RTC, available in the docket, supersede those found in the preliminary document.

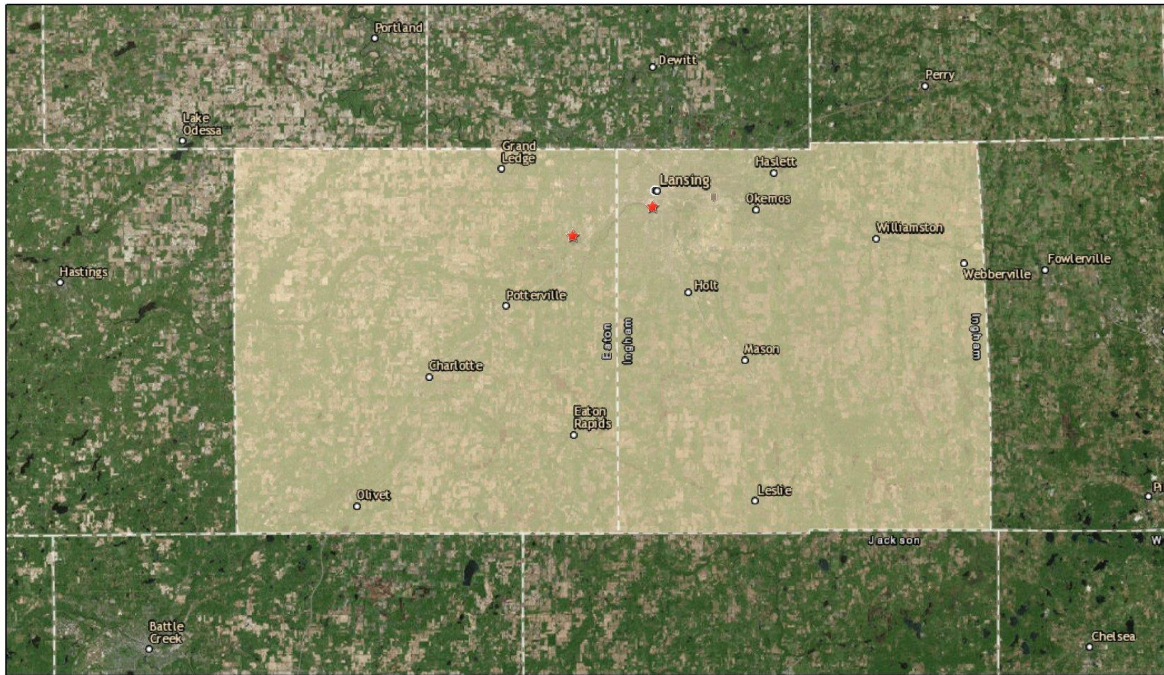
The EPA did not receive any additional information from Michigan, nor did it receive any public comments regarding our intended unclassifiable/attainment designation for the Lansing, Michigan, area.

Conclusion

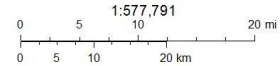
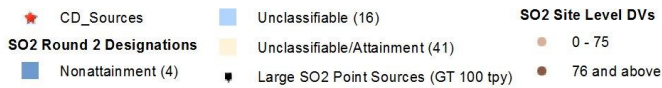
Therefore, based on the information available to the EPA at this time, including the analyses performed for the purposes of the preliminary technical support document and in the absence of any new information that would otherwise lead to a different conclusion regarding air quality in the area or any new information that would otherwise lead to a different conclusion regarding the area boundaries, the EPA determines that the Lansing, Michigan, area is meeting the NAAQS, and therefore is designating the area as unclassifiable/attainment for the 2010 primary SO₂ NAAQS. The boundaries for this unclassifiable/attainment area consist of the entirety of Ingham and Eaton Counties, and are shown in the figure below. Nearby emitters of SO₂ are also included in the figure.

Figure 3: The EPA's final unclassifiable/attainment area: Lansing, Michigan

Lansing, Michigan Area



June 24, 2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the

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Office of Environmental Information (OE) | Data: U.S. Department of Commerce, U.S. Census Bureau, Geography Division | U.S. EPA Office of Air and Radiation (OAR) - Office of Air Quality Planning and Standards (OAQPS) | Source: U.S. Census Bureau | Earthstar Geographics | Esri, HERE, DeLorme |

At this time, our final designations for the state only apply to this area and the others contained in this final technical support document. Consistent with the court-ordered schedule, the EPA will evaluate and designate all remaining undesignated areas in Michigan by either December 31, 2017, or December 31, 2020.

Technical Analysis for Marquette County, Michigan

Introduction

The Marquette County, Michigan, area contains a stationary source that, according to the EPA's Air Markets Database, emitted in 2012 either more than 16,000 tons of SO₂ or more than 2,600 tons of SO₂ and had an annual average emission rate of at least 0.45 lbs SO₂/mmBTU. Specifically, in 2012, the Presque Isle Power Plant (Presque Isle) emitted 6,028 tons of SO₂ and had an emissions rate of 0.513 lbs SO₂/mmBTU. As of March 2, 2015, this stationary source had not met the criteria for being "announced for retirement." Pursuant to the March 2, 2015, court-ordered schedule, the EPA must designate the area surrounding this facility by July 2, 2016.

In its September 18, 2015 submission, MDEQ recommended that the area surrounding Presque Isle, specifically the entirety of Marquette County, be designated as attainment based on an assessment and characterization of air quality from the facility and other nearby sources which may have a potential impact in the area of analysis where maximum concentrations of SO₂ are expected.

This assessment and characterization was performed using air dispersion modeling software, i.e., AERMOD. Presque Isle was analyzed using actual emissions for 2012 through 2014. A smaller nearby source was included and modeling using allowable emissions. One other smaller nearby source was modeling using 2014 only emissions, however, the 2012 and 2013 emissions were actually lower than 2014, so this use of annual actual emissions from 2014 was a more conservative approach than using year-specific emissions data. MDEQ followed the EPA's Modeling TAD for the purposes of modeling to characterize air quality for use in designations, and used allowable emissions or the most recent 3 years of actual emissions data and concurrent meteorological data. Surface meteorology and surface characteristics from the Munising, MI, 60 km to the northwest, and coincident upper air observations from Gaylord, MI, 272 km to the southeast, were selected as most representative of meteorological conditions within the area. MDEQ chose a fixed background concentration based on the Forest County, WI monitor design value. The background concentration for this area was determined by the state to be 6.8 ppb and was incorporated into the final AERMOD results. The state's modeling indicates that the predicted 99th percentile 1-hour average concentration within the chosen modeling domain is 39.9 ppb occurring about 7.5 km south west of the power plant, well below the standard of 75 ppb. The EPA determined that there are no other significant sources of SO₂ in or near the county's borders not included in the modeling domain and that the modeling was done in accordance with Appendix W and the Modeling TAD.

On February 16, 2016, the EPA notified Michigan that it intended to designate the Marquette County, Michigan, area as unclassifiable/attainment, based on our view that the area was meeting the NAAQS. Additionally, the EPA informed Michigan that the intended boundaries for the unclassifiable/attainment area consisted of the entirety of Marquette County. The intended designation and associated boundaries were based on, among other things, modeling submitted by the State that did not identify any other significant sources of SO₂ in or around the county. Detailed rationale, analyses, and other information supporting our intended designation for this

area can be found in the preliminary technical support document for Michigan, and this document along with all others related to this rulemaking can be found in Docket ID EPA-HQ-OAR-2014-0464.

Assessment of New Information

In the February 16, 2016, notification to Michigan regarding the EPA's intended unclassifiable/attainment designation for the Marquette County, Michigan, area, the EPA requested that any additional information that the Agency should consider prior to finalizing the designation should be submitted by April 19, 2016. On March 1, 2016, the EPA also published a notice of availability and public comment period in the *Federal Register*, inviting the public to review and provide input on our intended designations by March 31, 2016 (81 FR 10563).

The EPA is explicitly incorporating and relying upon the analyses and information presented in the preliminary technical support document for the purposes of our final designation for this area, except to the extent that any new information submitted to the EPA or conclusions presented in this final technical support document and our RTC, available in the docket, supersede those found in the preliminary document.

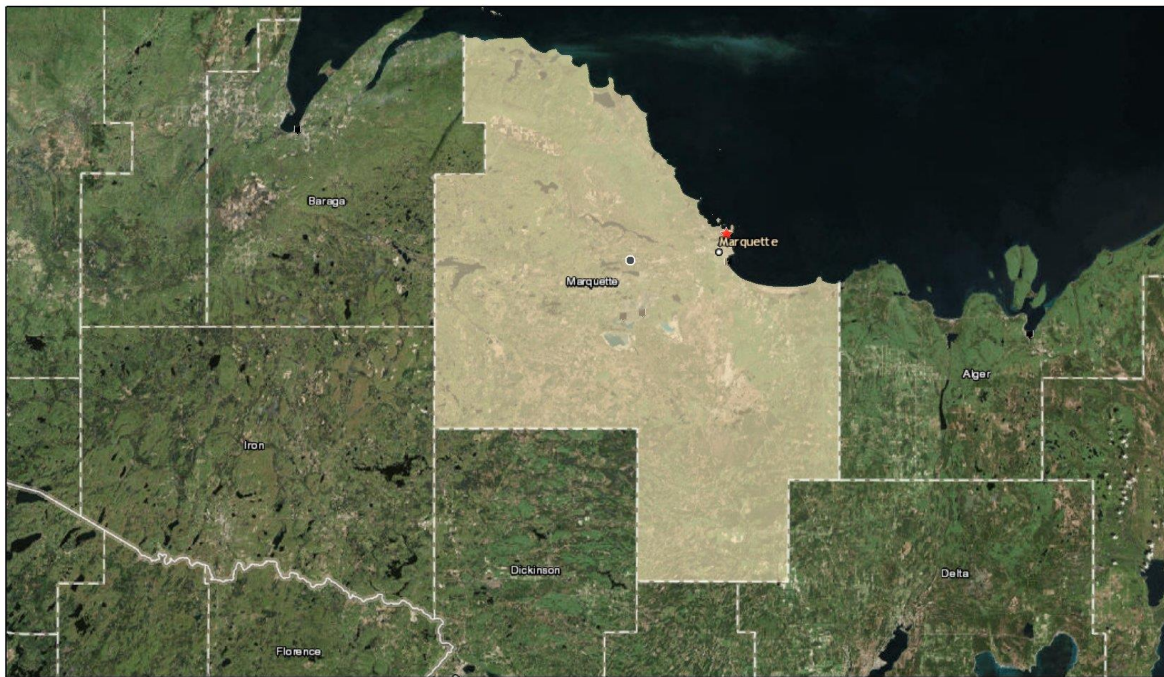
Subsequent to our February 16, 2016, notification, the EPA did not receive any additional information from Michigan, nor did we receive any public comments regarding our intended unclassifiable/attainment designation for the Marquette County, Michigan area.

Conclusion

Therefore, based on the information available to the EPA at this time, including the analyses performed for the purposes of the preliminary technical support document and in the absence of any new information that would otherwise lead to a different conclusion regarding air quality in the area or any new information that would otherwise lead to a different conclusion regarding the area boundaries, the EPA determines that the Marquette County, Michigan, area is meeting the NAAQS, and therefore is designating the area as unclassifiable/attainment for the 2010 SO₂ NAAQS. The boundaries for this unclassifiable/attainment area consist of the entirety of Marquette County, and are shown in the figure below. Nearby emitters of SO₂ are also included in the figure.

Figure 4: The EPA's final unclassifiable/attainment area: Marquette County, Michigan

Marquette County, Michigan Area



June 24, 2016

- | | | |
|--------------------------|--------------------------------------|--------------------|
| ★ CD_Sources | Unclassifiable (16) | SO2 Site Level DVs |
| SO2 Round 2 Designations | Unclassifiable/Attainment (41) | 0 - 75 |
| ■ Nonattainment (4) | Large SO2 Point Sources (GT 100 tpy) | 76 and above |

0 10 20 40 mi

0 15 30 60 km

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Getmapping, Aerotri, IGN, IGP, swisstopo, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the

Web AppBuilder for ArcGIS

Office of Environmental Information (OE) | Data: U.S. Department of Commerce, U.S. Census Bureau, Geography Division | U.S. EPA Office of Air and Radiation (OAR) - Office of Air Quality Planning and Standards (OAQPS) | Source: U.S. Census Bureau | Earthstar Geographics | Esri, HERE, DeLorme |

At this time, the final designations for the state only apply to this area and the others contained in this final technical support document. Consistent with the court-ordered schedule, the EPA will evaluate and designate all remaining undesignated areas in Michigan by either December 31, 2017, or December 31, 2020.

Technical Analysis for Monroe County, Michigan

Introduction

The Monroe County, Michigan, area contains a stationary source that, according to the EPA's Air Markets Database, emitted in 2012 either more than 16,000 tons of SO₂ or more than 2,600 tons of SO₂ and had an annual average emission rate of at least 0.45 lbs SO₂/mmBTU. Specifically, in 2012 the Monroe Power Plant (Monroe) emitted 49,151 tons of SO₂, and had an emissions rate of 0.62 SO₂/mmBTU. As of March 2, 2015, this stationary source had not met the criteria for being "announced for retirement." Pursuant to the March 2, 2015, court-ordered schedule, the EPA must designate the area surrounding this facility by July 2, 2016.

In its September 18, 2015 submission, MDEQ recommended that the area surrounding Monroe, specifically the entirety of Monroe County, be designated as attainment based on an assessment and characterization of air quality from the facility and other nearby sources which may have a potential impact in the area of analysis where maximum concentrations of SO₂ are expected.

This assessment and characterization was performed using air dispersion modeling software, i.e., AERMOD. Monroe was analyzed using allowable emissions reflective of recent controls. A smaller nearby source was also modeled using an allowable limit. Two other nearby sources were modeled using 2014 actual emissions, however, the 2012 and 2013 emissions only varied slightly from the 2014 emissions, so these emissions variances were not significant enough to warrant concern about the attainment status of this area. The state also assumed an allowable emission of zero tpy for the nearby J. R. Whiting Generating Complex (Whiting) which was required by a consent decree to shut down by April 15, 2016. MDEQ followed the EPA's Modeling TAD for the purposes of modeling to characterize air quality for use in designations, and used allowable emissions or the most recent 3 years of actual emissions data and concurrent meteorological data. Surface meteorology and surface characteristics from the Toledo, Ohio station, 50 km to the southwest, and coincident upper air observations from White Lake, Michigan station, 90 km to the north, were selected as most representative of meteorological conditions within the area. MDEQ chose a fixed background concentration based on a monitor from the nearby Sterling State Park without data for when the Monroe Power Plant was impacting the monitor. However, only two years of data were available, so the highest 4th high was selected from the two years. The result was higher, and therefore more conservative, than the result from the Michigan City, IN monitor that has been previously relied upon for this area despite being based on less than three years of data. The background concentration for this area was determined to be 18.2 ppb, and that value was incorporated into the final AERMOD results. The state's modeling indicates that the predicted 99th percentile 1-hour average concentration within the chosen modeling domain is 61 ppb occurring about 3 km northwest of the power plant, below the standard of 75 ppb. The EPA determined that there are no other significant sources of SO₂ in or near the county's borders not included in the modeling domain and that the modeling was done in accordance with Appendix W and the Modeling TAD. Although the EPA agreed that the modeling analysis assuming the shutdown of Whiting showed attainment of the

standard, the EPA did not have any information on Whiting's current impact on the area, so was therefore not able to determine the collective impact of Monroe and Whiting.

On February 16, 2016, the EPA notified Michigan that it intended to designate the Monroe County, Michigan area as unclassifiable, due to our view that available information did not support a determination regarding whether the area was meeting the NAAQS. Additionally, it informed Michigan that our intended boundaries for the unclassifiable area consisted of the entirety of Monroe County. Our intended designation and associated boundaries were based on, among other things, the fact that Whiting, a facility that is near Monroe, was not included in the modeling. Due to a Federal consent decree, the units at Whiting were required to be retired by April 15, 2016. After careful review of the state's assessment, supporting documentation, and all available data, the EPA agreed that the modeling, assuming the shutdown of Whiting, showed attainment of the NAAQS. However, since the assumption of the shutdown did not reflect the current state of the Monroe County air quality, the EPA intended to designate Monroe County as unclassifiable and anticipated finalizing the designation of the area as unclassifiable/attainment once the source was confirmed as shutdown. Detailed rationale, analyses, and other information supporting our intended designation for this area can be found in the preliminary technical support document for Michigan, and this document along with all others related to this rulemaking can be found in Docket ID EPA-HQ-OAR-2014-0464.

Assessment of New Information

In our February 16, 2016, notification to Michigan regarding our intended unclassifiable designation for the Monroe County, Michigan, area, the EPA requested that any additional information that the Agency should consider prior to finalizing the designation should be submitted by April 19, 2016. On March 1, 2016, the EPA also published a notice of availability and public comment period in the *Federal Register*, inviting the public to review and provide input on our intended designations by March 31, 2016 (81 FR 10563).

The EPA is explicitly incorporating and relying upon the analyses and information presented in the preliminary technical support document for the purposes of our final designation for this area, except to the extent that any new information submitted to the EPA or conclusions presented in this final technical support document and our RTC, available in the docket, supersede those found in the preliminary document.

As further discussed below, after carefully considering all available data and information, the EPA determines that the Monroe County, Michigan, area is meeting the NAAQS, and is designating the area as unclassifiable/attainment for the 2010 primary SO₂ NAAQS. The boundaries for this unclassifiable/attainment area consist of the entirety of Monroe County, and are shown in the figure below. Nearby emitters of SO₂ are also included in the figure.

Figure 5: The EPA's final unclassifiable/attainment area: Monroe County, Michigan

Monroe County, Michigan Area



June 24, 2016

★ CD_Sources
■ SO2 Round 2 Designations
■ Nonattainment (4)
■ Unclassifiable (16)
■ Unclassifiable/Attainment (41)
● SO2 Site Level DVs
● 0 - 75
● 76 and above
■ Large SO2 Point Sources (GT 100 tpy)

1:577,791
 0 5 10 20 mi
 0 5 10 20 km
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Geomapping, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community
 Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the Web AppBuilder for ArcGIS

Subsequent to our February 16, 2016, notification, the EPA received comments from MDEQ regarding our intended designation for this area. MDEQ stated that Whiting is now permanently shut down due to a consent decree requiring shutdown by April 15, 2016 and requested an unclassifiable/attainment designation. The EPA agreed with the modeling submitted by MDEQ in the September 18, 2015, submittal other than the assumption that Whiting had no emissions. Now that Whiting is shut down, assuming zero tons per year of SO₂ emissions is appropriate and Michigan's modeling supports an unclassifiable/attainment designation.

Besides MDEQ, the EPA received substantive comments regarding our intended unclassifiable designation for the Monroe County, Michigan, area from DTE Energy regarding our intended designation for this area. In sum, DTE Energy objected to the EPA's proposed unclassifiable designation for Monroe County based on that the retirement date (April 15, 2016) for Whiting had not passed. DTE Energy stated that adequate documentation has been provided to the EPA to designate Monroe County as attainment and there was no useful purpose for the interim "unclassifiable" label since even with conservative assumptions, the modeling demonstration clearly shows that the standard is attained. DTE Energy also commented that there are three years of monitoring data with a design concentration well below the NAAQS at a location as close as possible to the modeled peak impact receptor for Monroe Power Plant. DTE Energy also objected to the use meteorological data from Toledo Express Airport because it is 50 kilometers away from the Monroe Power Plant and Lake Erie has a profound effect on wind speed and direction when light gradient winds are present in Monroe County. The EPA agrees that now that Whiting is shut down, assuming zero tons per year of SO₂ emissions is appropriate and

Michigan's modeling supports an unclassifiable/attainment designation. The EPA maintains that meteorological data were selected from the Toledo Express Airport because the Toledo Airport had a more complete data set than the Monroe Custer Airport. The Toledo Express Airport, also near Lake Erie, had one minute ASOS data available, and Monroe Custer Airport did not. Therefore, the EPA's view is that the Toledo Express Airport offered a more appropriate data set within the guidelines of Appendix W and the Modeling TAD.

The EPA also received substantive comments regarding our intended unclassifiable designation for Monroe County, Michigan, area from the Sierra Club. The Sierra Club stated that the EPA should designate Monroe County as in nonattainment with the 1-hour SO₂ NAAQS. The Sierra Club stated that modeling provided by MDEQ is not in accordance with EPA's Modeling TAD or Appendix W, and does not support an unclassifiable designation. The Sierra Club stated that the modeling demonstrates violations and is consistent with EPA's Modeling TAD as it modeled actual emissions from all the sources in Monroe County that are likely to cause or contribute to an exceedance of the NAAQS for the period from 2012 to 2014. The Sierra Club stated that MDEQ's modeling uses an emission rate for the J.R. Whiting facility that reflects neither actual historical SO₂ emissions nor CAA enforceable emissions. The Sierra Club stated that, absent an enforceable 1-hour limit, there is no basis for revising downward J.R. Whiting's historical emissions to zero. The EPA disagrees that the modeling provided by MDEQ for the Monroe County area is not in accordance with Appendix W and the Modeling TAD. The EPA notes that the Modeling TAD allows for the modeling of allowable emissions or actual emissions to represent the current air quality. Allowable emissions are often more reflective of the current air quality, rather than historical actual emissions, especially when recent controls have been installed, such as at the Monroe facility. Assuming no emissions from a permanently shut-down facility is also appropriate to reflect current air quality conditions. Now that Whiting is shut down, the EPA finds that assuming zero tons per year of SO₂ emissions is appropriate and the EPA finds that Michigan's modeling supports an unclassifiable/attainment designation for the Monroe County Area.

Jurisdictional Boundaries:

Existing jurisdictional boundaries are considered for the purpose of informing our final unclassifiable/attainment area, specifically with respect to clearly defined legal boundaries. Subsequent to our February 16, 2016, notification, the EPA did not receive any comments regarding the intended boundaries for this area.

The EPA believes that our final unclassifiable/attainment area, consisting of the entirety of Monroe County, are comprised of clearly defined legal boundaries, and we find these boundaries to be a suitably clear basis for defining our final unclassifiable/attainment area.

Conclusion

After careful evaluation of the State's recommendation, all timely comments and information received during the state and public comment period, and additional relevant information as discussed in this document, the EPA determines that the area around Monroe is meeting the NAAQS, and therefore is designating the area as unclassifiable/attainment for the 2010 SO₂ NAAQS. Specifically, the area is comprised of the entirety of Monroe County.

Now that Whiting is shut down, the EPA has determined that Michigan's assumption of zero tons per year of SO₂ emissions from Whiting is an appropriate modeling input and therefore Michigan's modeling submission supports the Agency's final designation of unclassifiable/attainment for Monroe County, Michigan.

At this time, our final designations for the State only apply to this area and the others contained in this final technical support document. Consistent with the court-ordered schedule, the EPA will evaluate and designate all remaining undesignated areas in Michigan by either December 31, 2017, or December 31, 2020.

Technical Analysis for Ottawa County, Michigan

Introduction

The Ottawa County, Michigan, area contains a stationary source that, according to the EPA's Air Markets Database, emitted in 2012 either more than 16,000 tons of SO₂ or more than 2,600 tons of SO₂ and had an annual average emission rate of at least 0.45 lbs SO₂/mmBTU. Specifically, in 2012, the J.H. Campbell Generating Station (J.H. Campbell) emitted 21,501 tons of SO₂ and had an emissions rate of 0.52 lbs SO₂/mmBTU. As of March 2, 2015, this stationary source had not met the criteria for being "announced for retirement." Pursuant to the March 2, 2015, court-ordered schedule, the EPA must designate the area surrounding this facility by July 2, 2016.

In its September 18, 2015, submission, MDEQ recommended that the area surrounding J.H. Campbell, specifically the entirety of Ottawa County, be designated as unclassifiable/attainment based on an assessment and characterization of air quality from J.H. Campbell and other nearby sources which may have a potential impact in the area of analysis where maximum concentrations of SO₂ are expected.

This assessment and characterization was performed using air dispersion modeling software, i.e., AERMOD. J.H. Campbell was analyzed using actual emissions for 2012 through 2014. No other sources were included in the modeling domain. MDEQ followed the EPA's Modeling TAD for the purposes of modeling to characterize air quality for use in designations, and used the most recent 3 years of actual emissions data and concurrent meteorological data. Surface meteorology and surface characteristics from the Muskegon MI, 29 km to the north, and coincident upper air observations from Green Bay, Wisconsin, 230 km to the northwest, were selected as most representative of meteorological conditions within the area. MDEQ chose a fixed background concentration based on the Grand Rapids monitor design value. The background concentration for this area was determined by the state to be 10.3 ppb and was incorporated into the final AERMOD results. The state's modeling indicates that the predicted 99th percentile 1-hour average concentration within the chosen modeling domain is 53 ppb occurring about 3.5 km northeast of the power plant, well below the standard of 75 ppb. The EPA determined that there are no other significant sources of SO₂ in or near the county's borders not included in the modeling domain and that the modeling was done in accordance with Appendix W and the Modeling TAD.

On February 16, 2016, the EPA notified Michigan that we intended to designate the Ottawa County, Michigan area as unclassifiable/attainment, based on our view that the area was meeting the NAAQS. Additionally, we informed Michigan that our intended boundaries for the unclassifiable/attainment area consisted of the entirety of Ottawa County. Our intended designation and associated boundaries were based on, among other things, modeling submitted by the State that did not identify any other significant sources of SO₂ in or around the county. Detailed rationale, analyses, and other information supporting our intended designation for this area can be found in the preliminary technical support document for Michigan, and this document along with all others related to this rulemaking can be found in Docket ID EPA-HQ-OAR-2014-0464.

Assessment of New Information

In our February 16, 2016, notification to Michigan regarding our intended unclassifiable/attainment designation for the Ottawa County, Michigan area, the EPA requested that any additional information that the Agency should consider prior to finalizing the designation should be submitted by April 19, 2016. On March 1, 2016, the EPA also published a notice of availability and public comment period in the *Federal Register*, inviting the public to review and provide input on our intended designations by March 31, 2016 (81 FR 10563).

The EPA is explicitly incorporating and relying upon the analyses and information presented in the preliminary technical support document for the purposes of our final designation for this area, except to the extent that any new information submitted to the EPA or conclusions presented in this final technical support document and our RTC, available in the docket, supersede those found in the preliminary document.

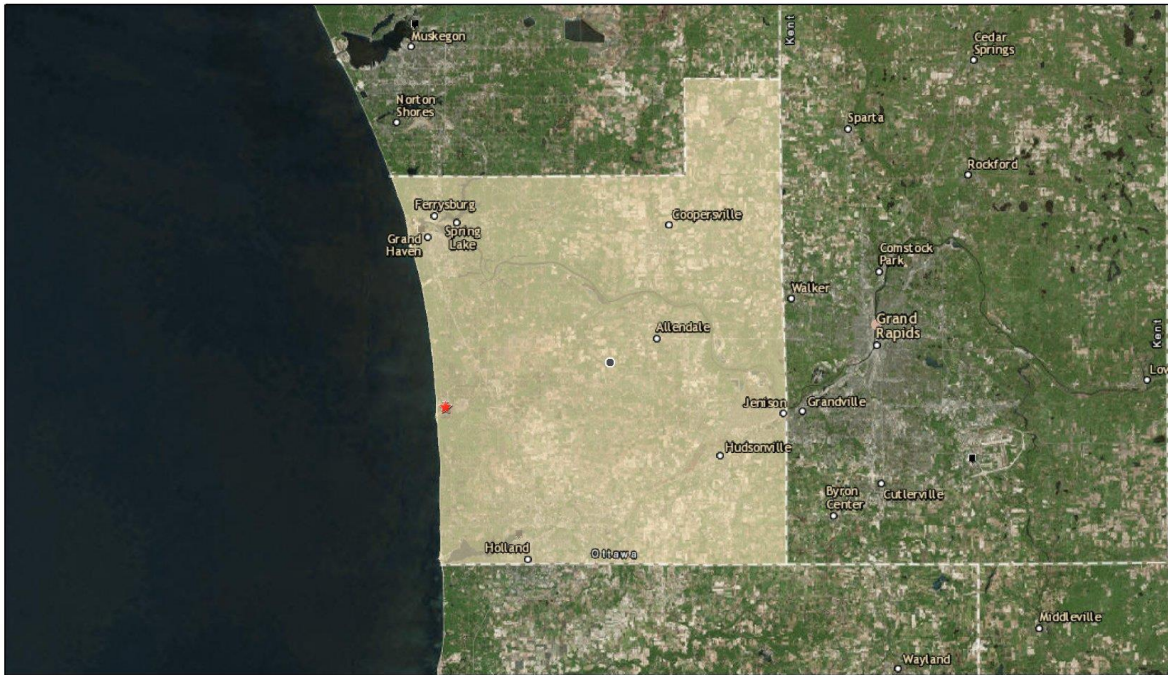
Subsequent to our February 16, 2016, notification, the EPA did not receive any additional information from Michigan, nor did we receive any public comments regarding our intended unclassifiable/attainment designation for the Ottawa County, Michigan area.

Conclusion

Therefore, based on the information available to the EPA at this time, including the analyses performed for the purposes of the preliminary technical support document and in the absence of any new information that would otherwise lead to a different conclusion regarding air quality in the area or any new information that would otherwise lead to a different conclusion regarding the area boundaries, the EPA determines that the Ottawa County, Michigan, area is meeting the NAAQS, and therefore is designating the area as unclassifiable/attainment for the 2010 SO₂ NAAQS. The boundaries for this unclassifiable/attainment area consist of the entirety of Ottawa County, and are shown in the figure below. Nearby emitters of SO₂ are also included in the figure.

Figure 6: The EPA's final unclassifiable/attainment area: Ottawa County, Michigan

Ottawa County, Michigan Area



June 24, 2016

★ CD_Sources

SO2 Round 2 Designations

■ Nonattainment (4)

■ Unclassifiable (16)

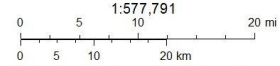
■ Unclassifiable/Attainment (41)

■ Large SO2 Point Sources (GT 100 tpy)

SO2 Site Level DVs

● 0 - 75

● 76 and above



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, Aero, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the

Web AppBuilder for ArcGIS

Office of Environmental Information (OE) | Data: U.S. Department of Commerce, U.S. Census Bureau, Geography Division | U.S. EPA Office of Air and Radiation (OAR) - Office of Air Quality Planning and Standards (OAQPS) | Source: U.S. Census Bureau | Earthstar Geographics | Esri, HERE, DeLorme |

At this time, our final designations for the State only apply to this area and the others contained in this final technical support document. Consistent with the court-ordered schedule, the EPA will evaluate and designate all remaining undesignated areas in Michigan by either December 31, 2017, or December 31, 2020.