

Revised- Ohio's Recommended Designations for the 2010 1-hour SO₂ Standard Technical Evaluation

Ambient Air Quality Data

The air quality analysis examines the 3-year average of the 99th percentile of the yearly distribution of 1-hour daily maximum SO₂ concentrations for each county based on data for 2010 through 2012. The level of the new 1-hour SO₂ standard is 75 ppb. Data is retrieved from the U.S. EPA's Air Quality System (AQS) at <http://www.epa.gov/ttn/airs/airsaqs/> and is presented in ppb in all tables. Monitoring sites that have less than 75 percent capture in any one quarter are highlighted in red. Ohio EPA operates a network of federally approved monitors. AQS data retrieval sheets are provided in Appendix A. The State and local air monitoring stations (SLAMS) data certification report for calendar year 2011 is provided in Appendix B. The combined monitoring data for monitors 39-105-1001 and 39-105-0003 are provided in Appendix C. As noted above, Ohio EPA is committed to completing all QA/QC and certification for Ohio monitor 39-105-0003 by March 29, 2013. This is the only Ohio monitor that affects this revision request. It is Ohio EPA's understanding that the West Virginia Department of Air Quality intends to certify all of the WV data associated with these changes also.

Based on the most recent ambient data as shown in Table 1 below, Ohio has determined that several monitors in both Ohio and in West Virginia Counties which border Ohio are now attaining the standard. Given the most recent data, Ohio is, as detailed in the previous section, recommending several areas that may have potentially been designated nonattainment be designated as unclassifiable. The requested designations for all other counties remain the same as provided in our initial June 3, 2011 submittal and the subsequent revision submitted on April 12, 2012.

Table 1: SO2 Monitoring Data and Design Values												
County(s)	Proposed/Anticipated Designation	Designating Agency Proposing Nonattainment	Associated Monitor with ID	99th Percentile					3-year Design Value			Recommended Changes
				2009	2010	2011	2012	2009-2011	2010-2012			
Jefferson	Non-Attainment (Saline, Knox, Island Creek, Cross Creek, Steubenville, Wells, and Warren Townships)	Ohio EPA	39-081-0017	85.0	127.0	114.0	92.0	109	111	All monitors in Hancock county attain the standard. The Ohio portion which borders Hancock County, Saline, Knox, and Island Creek Townships, are recommended unclassifiable. Cross Creek, Steubenville, Wells, and Warren remain recommended as nonattainment.		
			39-081-0018	--	--	55.0	43.0	--	--			
			39-081-0020	--	--	43.0	31.0	--	--			
			54-009-0005 (Brooke Co., WV)	82.0	131.0	143.0	76.0	119	117			
			54-009-0007 (Brooke Co., WV)	81.0	92.0	75.0	66.0	83	78			
			54-009-0011 (Brooke Co., WV)	143.0	148.0	235.0	126.0	174	168			
			54-009-6000 (Brooke Co., WV)	--	--	46.0	31.0	46	39			
			54-029-0005 (Hancock Co., WV)	139.0	85.0	33.0	24.0	86	47			
			54-029-0007 (Hancock Co., WV)	113.0	50.0	36.0	34.0	66	40			
			54-029-0008 (Hancock Co., WV)	133.0	44.0	30.0	23.0	69	32			
			54-029-0009 (Hancock Co., WV)	131.0	68.0	66.0	44.0	88	59			
			54-029-0015 (Hancock Co., WV)	102.0	68.0	34.0	25.0	68	42			
			54-029-1004 (Hancock Co., WV)	97.0	51.0	63.0	45.0	70	53			
Meigs and Gallia	Non-Attainment (Addison and Cheshire Townships in Gallia, and Salisbury Township in Meigs County)	Ohio EPA (Cheshire and Salisbury) and Probable U.S. EPA (Addison)	39-105-1001	94.0	94.0	--	--	92	--	Cheshire, Addison, and Salisbury Townships attain the standard. Recommend unclassifiable.		
			39-105-0003	--	--	88.0	26.0	--	69			
Washington	Non-Attainment (Warren, Dunham, and Belpre Townships in Washington County)	Probable U.S. EPA	54-107-1002 (Wood Co., WV)	119.0	84.0	49.0	24.0	84	52	Monitor attains the standard. Recommend unclassifiable for these townships.		
Monitor data combined Incomplete Data												

Meigs and Gallia Counties (Addison, Cheshire, and Salisbury Townships)

In 2011, SO₂ monitoring site 39-105-1001, located in the city of Pomeroy in Meigs County, was re-located due to an unforeseen and permanent power interruption. The monitor was relocated to site 39-105-0003, approximately 125 yards distance from the previous location. This change was documented in Ohio's approved Air Monitoring Plan. The location of the two monitors is shown in Figure 1.

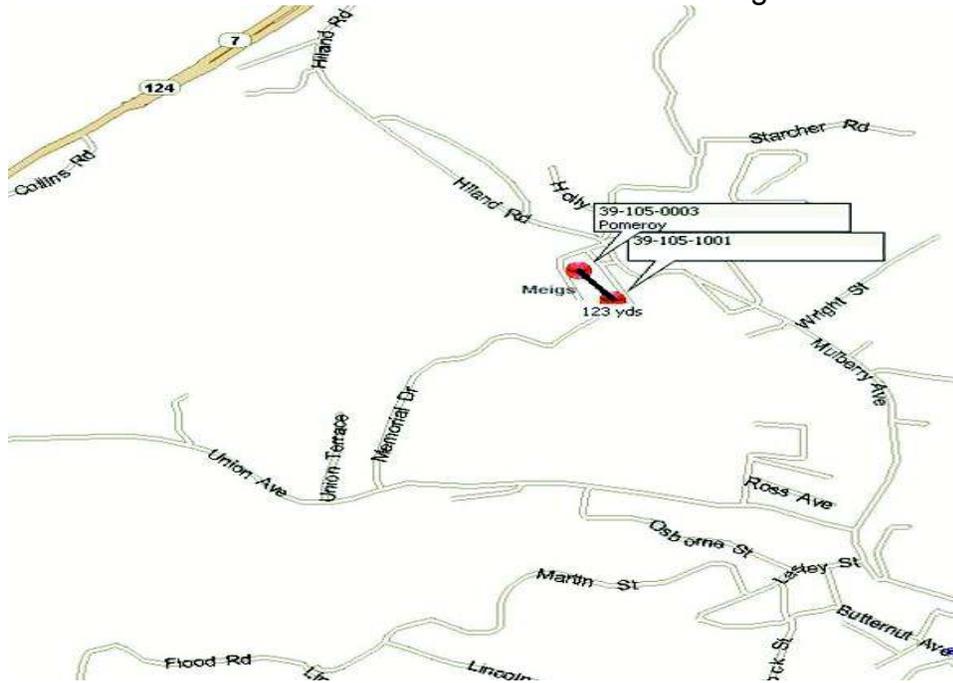


Figure 1: Meigs County (Pomeroy Monitors)

Relocation of the monitor interrupted data collection between June 29, 2011 and July 13, 2011. However, once combined, the data meets all data collection requirements for 2011. The combined single complete data set from which the 99th percentile was obtained yielded a passing design value for period 2010 to 2012 of 69 ppb. The combined data set was analyzed to determine the 99th percentile following the recommendations of 40 C.F.R Part 50, Appendix T; that is, the data were combined, the maximum daily value for each day of the year was determined and sorted in descending order to discern the 99th percentile. These data, in combined form, are provided in Appendix C.

Jefferson County (Saline, Knox, and Island Creek Townships)

In Ohio EPA's original June 3, 2011 submittal, Jefferson County was recommended as a partial nonattainment area, with those Ohio townships bordering Brooke and Hancock County, WV recommended nonattainment based, in part, upon the knowledge of violating monitors in both of those West Virginia Counties. The remainder of Jefferson

County was recommended as unclassifiable. Figure 2 shows the original recommended designation area.

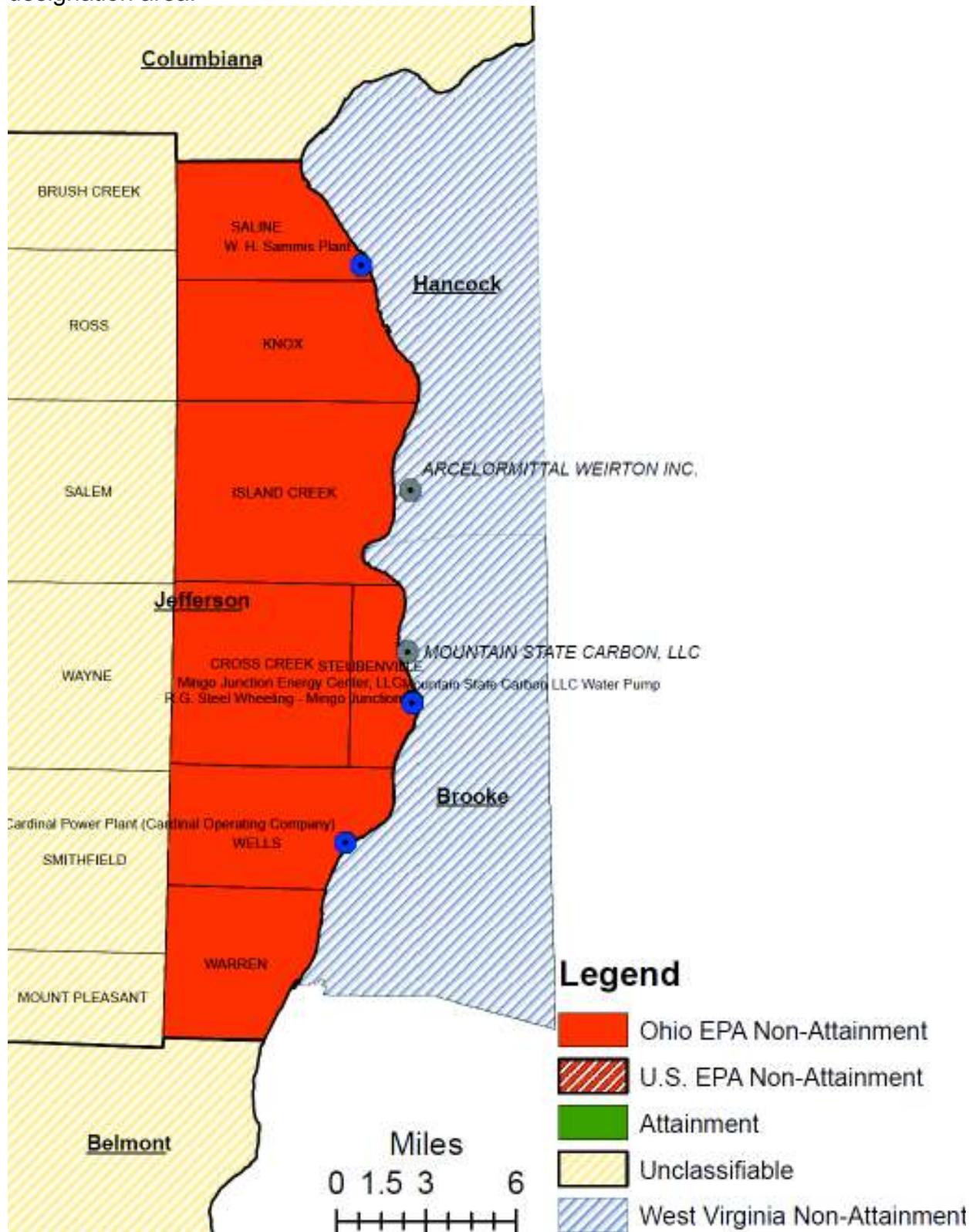


Figure 2: Jefferson County Nonattainment Area

Nonattainment designation recommendations were based, in part, on knowledge of violating monitors in both Brooke and Hancock County, WV and the violating monitor in Jefferson County, Ohio. Using the most recent monitoring data for 2012, as shown in Table 1, all monitors in Hancock County are in attainment of the standard using the 2010 to 2012 design value. Indeed, these areas demonstrate a dramatic improvement in air quality. Ohio EPA is therefore recommending that those townships in Jefferson County which border Hancock County in West Virginia be designated unclassifiable. These townships include Saline, Knox, and Island Creek. As shown in Figure 2, the only major source of SO₂ emissions in this area is the W.H. Sammis Plant in Saline Township. In our June 3rd submittal, it was stated the meteorology of the region dictates that this facility would primarily impact the Hancock County monitor, to the East. It is reasonable in examining the meteorology of the region to conclude that the W.H. Sammis Plant is not the impacting source on the still-violating monitors in Jefferson County, Ohio and Brooke County, WV. All other townships in Jefferson County will retain their original recommended designation, therefore Cross Creek, Steubenville, Wells, and Warren townships are recommended to be designated nonattainment, and the remainder of the County unclassifiable.

Washington County (Warren, Dunham, and Belpre Townships)

As stated previously, Ohio EPA was informed via several conversations with U.S. EPA Region 5 of the possibility of several townships in Ohio which do not have an ambient SO₂ monitor, but may potentially impact monitors in other states, being designated nonattainment by U.S. EPA. These conversations indicated that Warren, Dunham, and Belpre Townships in Washington County, which border Wood County, WV, may be designated nonattainment in this manner. Based on the most recent monitoring data from monitor 54-107-1002, located in Parkersburg, WV (Wood County), this monitor is now showing attainment of the standard, with a 2010 to 2012 design value of 52 ppb. Although 2011 data does not meet the capture criteria for this monitor, a substitution analysis of the data was conducted in accordance with 40 C.F.R Part 50, Appendix T. Ohio EPA and the West Virginia Department of Environmental Protection worked jointly on this analysis and both are in support of the results. The West Virginia Department of Environmental Protection will be providing details of the analysis in a similar submittal as this. Therefore, Ohio EPA is recommending that those townships in Washington County which border Wood County, WV be designated as unclassifiable, as per Ohio EPA's June 3rd submittal. Ohio EPA extends this recommendation to any other townships which border Wood County, West Virginia.