



EAST-WEST GATEWAY Council of Governments

Creating Solutions Across Jurisdictional Boundaries

History of Other Criteria Pollutants

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for maximum allowable concentrations of six “criteria” pollutants in outdoor air. Other than ground-level ozone and particulate matter, these criteria pollutants include: carbon monoxide; lead; sulfur dioxide; and nitrogen dioxide.

Carbon Monoxide

Part of the St. Louis region, consisting of the city of St. Louis and that portion of St. Louis County within the I-270 loop, is classified as a limited maintenance (in attainment) area for carbon monoxide. As of March 29, 2019 the end of the 20-year maintenance period has been reached.

Lead Standard

In Oct 2008, the EPA strengthened the 1978 lead standard to 0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). EPA in 2010 designated as non-attainment an area within the city limits of Herculaneum in Jefferson County. The Doe Run Company’s primary lead smelter was in Herculaneum. In April 2013 MoDNR submitted to EPA an attainment demonstration plan describing how the area would achieve compliance with this standard and a 2011 consent decree. In this federal multi-media consent decree between the Doe Run Company, EPA and the State of Missouri, Doe Run agreed that sinter plant and blast furnace operations at its primary lead smelter in Herculaneum would be shut down by spring 2014. EPA approved the attainment demonstration, effective Nov 19, 2014. Area is still in nonattainment.

In Illinois, EPA designated Granite City and Venice Township as non-attainment of the 2008 lead standard. The Illinois Environmental Protection Agency (Illinois EPA) worked with the affected facility on a State Implementation Plan (SIP)/rule which describes action(s) to bring this area into attainment. The facility in Granite City has installed controls so it can comply with this rule. Illinois EPA has submitted the final lead rule to EPA and an update to a previous lead SIP. At the end of 2015, the Granite City area had

clean monitor data for lead which was certified and submitted to EPA. Shortly thereafter, EPA will issue a Clean Data Finding. On March 28, 2018 EPA redesignated the Granite City and Venice Township to attainment of this standard and approved the Illinois maintenance plan describing how the area will continue to maintain (attain) the 2008 lead standard. Maintenance period covers 20 years.

Sulfur Dioxide (SO₂) Standard

In 2010, EPA revised the primary SO₂ standard, setting it at 75 parts per billion (ppb). EPA developed a designation strategy to designate in rounds those areas considered to be in attainment of the standard, nonattainment and unclassifiable (not enough data at the time). In the initial round, states were to evaluate those areas with monitors where 2009 – 2011 data indicates a violation of this standard and nearby areas containing sources which may contribute to the violation. In the next rounds, the states were to describe air quality in those areas without SO₂ monitors or significant SO₂ sources. State air agencies would be working on Attainment Demonstration Plans for Round 1 nonattainment areas as well as the process to identify future nonattainment areas. On March 2, 2015 the U.S. District Court for the D.C. Circuit approved a consent decree between EPA, the Sierra Club and the Natural Resources Defense Council setting out how EPA will complete the remaining rounds of SO₂ designations. The second round of designations was to be completed by July 2, 2016, the third by December 31, 2017 and the last by December 31, 2020. The 2017 and 2020 designation deadlines had already been established by EPA.

In round 1 EPA designated a portion of east central Jefferson County as nonattainment in 2013. This nonattainment area includes all of Herculaneum and Festus townships and those portions of Valmeyer and Selma townships in Jefferson County. In October 2017 EPA found that, based on 2013-2015 monitor data submitted by Missouri, this area was in compliance with the 2010 standard. MoDNR developed a Jefferson County SO₂ maintenance plan describing how the area will continue to maintain (attain) this standard and re-designation request. These documents were submitted to EPA in December 2017. Supplemental information subsequently was submitted to EPA. Effective February 28, 2022, EPA redesignated this area from nonattainment to attainment for the SO₂ standard. A 20 year maintenance period has begun.

For Round 2, EPA informed Missouri, Illinois and 26 other states of sources and areas that were to be evaluated and were to submit designation recommendations for them by September 2015. In the St. Louis region, Illinois EPA evaluated an area around the Dynergy Wood River power plant in Madison County, and MoDNR examined an area

around the Ameren Missouri Labadie Energy Center in Franklin County. In 2016, EPA designated as non-attainment a small area surrounding a steel facility in Alton Township in Madison County. In the Missouri portion of the St. Louis region, EPA classified a portion of St. Charles and Franklin Counties around the Ameren Missouri Labadie Energy Center as unclassifiable (at that time sufficient data is not available for EPA to make a designation that area is either attainment or non-attainment). Illinois EPA prepared an attainment plan and worked with the source to correct the problem. The Alton Township Attainment Demonstration Plan was approved by EPA in March 2023. Illinois EPA has submitted to EPA a redesignation to attainment request and Maintenance Plan. Monitoring data for the period 2017 – 2019 for area around the Labadie Energy Center in Missouri was reviewed by EPA. In 2020 this area was found to be in attainment of the 2010 SO₂ standard.

EPA's 2015 Data Requirements Rule set out the criteria for the Round 3 and Round 4 evaluation process for the states to follow to prepare their designation recommendations. The rule covers sources which emitted more than 2,000 tons of SO₂ in 2014. A source can either conduct computer modeling (Round 3) or install monitors (Round 4) to demonstrate compliance with the SO₂ standard. Some sources could opt for federally enforceable emission limits of less than 2,000 tons per year which would remove the need to monitor or perform modeling. In January 2017 Missouri and Illinois submitted their Round 3 designation recommendations based on modeling output to EPA. Effective April 9, 2018, EPA found that Missouri and Illinois counties were in attainment. Sources taking the monitoring option need three years of data (2017 – 2019) before the state can make a recommendation. EPA is to make the Round 4 designations by the end of 2020. There are no Round 4 sources of interest located in the St. Louis region.

Nitrogen Dioxide (NO₂) Primary Standard

In January 2010, EPA set a new one-hour standard of 100 ppb for NO₂. As part of the implementation of this standard, EPA set out new air monitoring and reporting requirements. In urban areas, NO₂ monitors are to be installed near major roads (within 164 feet) as well as other sites at which peak maximum concentrations are expected to occur. The monitoring network is to begin operating by Jan 1, 2013. Based on the population of the St. Louis region, two near-roadway monitors are required. MoDNR conducted site evaluation and site selection in conjunction with EPA. The first near-roadway monitor is adjacent to I-64/US 40 in Forest Park in the City of St. Louis and began operation in January 2013, carbon monoxide and PM_{2.5} data is also collected at this site. The second site near roadway was operational in early 2015. It is located at I-70 and Rider Trail in St. Louis County, west of the I-70 and I-270 exchange.

Based on 2008-2012 monitor data, in 2012, EPA determined that no area in the US is violating the 2010 NO₂ standard. As sufficient air quality data is received from the new NO₂ monitor network, EPA will revisit the designation of areas as in attainment of the standard, in non-attainment or unclassifiable because additional data is needed.