

RECOMMENDATION FOR ADOPTION

PROPOSED REVISION TO

MISSOURI STATE IMPLEMENTATION PLAN – State of Missouri Regional Haze Plan 5-Year Progress Report

On May 29, 2014, the Missouri Air Conservation Commission held a public hearing concerning a revision to the Missouri State Implementation Plan (SIP) – Regional Haze Plan 5-Year Progress Report. A summary of comments received and the Air Program's corresponding responses is included on the following page. Revisions were made to the proposed plan as a result of comments received.

The revised plan has not been reprinted in the briefing document due to its volume. The entire revised plan is available for review at the Missouri Department of Natural Resources' Air Pollution Control Program, 1659 East Elm Street, Jefferson City, Missouri, 65101, (573)751-4817. It is also available online at <http://dnr.mo.gov/env/apcp/stateplanrevisions.htm>.

The Air Program recommends the commission adopt the plan as revised. If the commission adopts this plan, it will be the department's intention to submit it to the U.S. Environmental Protection Agency for inclusion in the Missouri State Implementation Plan.

**COMMENTS AND RESPONSES ON
PROPOSED REVISION TO
MISSOURI STATE IMPLEMENTATION PLAN –
State of Missouri Regional Haze Plan 5-Year Progress Report**

The public comment period for the proposed revision to the Missouri State Implementation Plan (SIP) for the Regional Haze Plan 5-Year Progress Report opened on April 28, 2014, and closed on June 5, 2014. Revisions to the proposed plan were made as a result of comments.

The following is a summary of comments received and the Missouri Department of Natural Resources' Air Pollution Control Program's (Air Program's) corresponding responses. Any changes to the proposed plan are included in the response to comments.

SUMMARY OF COMMENTS: During the public comment period for the proposed plan, the Air Program received three comments from EPA Region 7.

COMMENT #1: Under Section A.1.2 of the report, EPA Region 7 commented that the Air Program should address whether progress has been made toward Holcim-Clarksville's compliance with the emission limits imposed through a consent agreement to satisfy Best Available Retrofit Technology (BART) requirements.

RESPONSE AND EXPLANATION OF CHANGE: The Air Program added the language below to Section A.1.2 explaining that Holcim-Clarksville has ceased all SO₂ and NO_x emitting operations since the consent agreement and are now in compliance with the consent agreement.

“Since the consent agreement included in the 2009 plan, Holcim (US) Inc., in Clarksville, Missouri, has discontinued Portland cement manufacturing and hazardous waste fuel burning operations. Remaining operations at the facility include receiving, storing, and shipping. The facility's operating permit (OP2004-002) was reclassified from a Part 70 to a Basic operating permit in 2010. The facility's new SO₂ and NO_x potential emissions are both zero tons per year.”

COMMENT #2: EPA Region 7 commented that the Air Program should review the document and figures for consistent tense, timeframes, data values, and labels.

RESPONSE AND EXPLANATION OF CHANGE: The Air Program reviewed the document and made minor revisions to ensure correct and consistent tense, timeframes, values, and labels. Specifically, revisions of a grammatical nature were made in Sections A, B, and C.

COMMENT #3: EPA Region 7 commented that the Air Program should review and provide additional explanations for emission trend values in the tables in Section D.

RESPONSE AND EXPLANATION OF CHANGE: The Air Program reviewed Section D and added a discussion explaining the emissions trends depicted in the tables. The decreasing trend

in point source emissions of SO₂ and NO_x are of the greatest significance to visibility improvement, therefore, these trends are the focus of Section D. However, other pollutants and source sectors show varying trends that warranted additional clarification. These other trends include a slight increase in carbon monoxide (CO) emissions and fine particulate emissions, and a slight increase in fire and biogenic emissions. A majority of the changes are due to new calculation methods and emission factors being used to estimate emissions values. Despite these increases in emissions, the decrease in SO₂ and NO_x emissions from point sources and the corresponding improvement in visibility conditions are most significant and are the focus of the progress report.

RECOMMENDATION FOR ADOPTION

PROPOSED REVISION TO

MISSOURI STATE IMPLEMENTATION PLAN –

MARGINAL AREA PLAN FOR THE MISSOURI PORTION OF THE

ST. LOUIS NONATTAINMENT AREA FOR THE

2008 8-HOUR GROUND LEVEL OZONE

NATIONAL AMBIENT AIR QUALITY STANDARD

On May 29, 2014, the Missouri Air Conservation Commission held a public hearing concerning a revision to the Missouri State Implementation Plan (SIP) – Marginal Area Plan for the Missouri Portion of the St. Louis Nonattainment Area for the 2008 8-Hour Ground Level Ozone National Ambient Air Quality Standard. A summary of comments received and the Air Program’s corresponding responses is included on the following page. No revisions were made to the proposed plan as a result of comments received.

The proposed plan has not been reprinted in the briefing document due to its volume. The entire proposed plan is available for review at the Missouri Department of Natural Resources’ Air Pollution Control Program, 1659 East Elm Street, Jefferson City, Missouri, 65101, (573)751-4817. It is also available online at <http://dnr.mo.gov/env/apcp/stateplanrevisions.htm>.

The Air Program recommends the commission adopt the plan as proposed. If the commission adopts this plan, it will be the department’s intention to submit it to the U.S. Environmental Protection Agency for inclusion in the Missouri State Implementation Plan.

**COMMENTS AND RESPONSES ON
PROPOSED REVISION TO**

MISSOURI STATE IMPLEMENTATION PLAN –

**MARGINAL AREA PLAN FOR THE MISSOURI PORTION OF THE ST. LOUIS
NONATTAINMENT AREA FOR THE 2008 8-HOUR GROUND LEVEL OZONE
NATIONAL AMBIENT AIR QUALITY STANDARD**

The public comment period for the proposed revision to the Missouri State Implementation Plan (SIP) for the *Marginal Area Plan for the Missouri Portion of the St. Louis Nonattainment Area for the 2008 8-Hour Ground Level Ozone National Ambient Air Quality Standard* (NAAQS) opened on April 28, 2014 and closed on June 5, 2014. No revisions to the proposed plan were made as a result of comments.

The following is a summary of comments received and the Missouri Department of Natural Resources' Air Pollution Control Program's (Air Program's) corresponding responses.

SUMMARY OF COMMENTS: During the public comment period for the proposed plan, the Air Program received comments from Dr. Bret Gustafson (individual), Dr. John Kissel (individual), and Andy Knott (Sierra Club). All three commenters testified during the public hearing before the Missouri Air Conservation Commission (MACC) on May 29, 2014. Two of the commenters supplied written copies of their testimonies in addition to their verbal testimonies.

COMMENT #1: All three commenters referenced the health effects of high ozone concentrations. The comments cited concerns over public health and the number of asthma cases in the St. Louis area and compared these figures with the rest of the State and country.

RESPONSE: As outreach and education are key elements of the Department's mission, the Air Program encourages public participation and appreciates the commenters' concerns about air quality and public health issues in the St. Louis area. The Air Program acknowledges the effects of ozone on certain health and respiratory conditions, and it is the Air Program's mission to protect air quality in the state to ensure the safety of public health.

No changes to the plan were made as a result of this comment.

COMMENT #2: All three commenters suggested that the Air Program should take a proactive approach to addressing ozone in the nonattainment area by requiring controls for ozone precursors, particularly oxides of nitrogen (NO_x), on large stationary sources such as power plants. A couple of the commenters recognized the reductions in mobile emissions, but urged the Air Program to focus their efforts on controlling stationary sources especially power plants. Sierra Club specifically urged the Air Program to prioritize additional controls on stationary sources to include Selective Catalytic Reduction (SCR) as a Reasonably Available Control Technology (RACT).

RESPONSE: The purpose of this plan is to fulfill the State's obligations pursuant to federal Clean Air Act (CAA) Section 182(a) for the St. Louis Marginal ozone nonattainment area. The U.S. Environmental Protection Agency (EPA) establishes the thresholds for each ozone nonattainment area classification based on how close the area is to attaining the standard; marginal areas are the closest to attaining the standard. The primary requirement of a Marginal Area Plan is a comprehensive, complete and accurate inventory of ozone precursor emissions for the area. The CAA requirements for Marginal areas do not include an attainment demonstration or a review of control strategies because there is the expectation that the continued emission reductions from the control strategy already in place will result in attainment within three years after designation. This three-year timeframe is designed to allow the controls that have been implemented, or are being phased in, to fully take effect.

There has been a downward trend in ozone air quality concentration values for the St. Louis area in recent years. For the 2014 ozone season, the first monitored exceedance of the 2008 NAAQS occurred on August 4. This is the latest the St. Louis area has gone without an exceedance of the prevailing standard since these types of records have been kept starting in 1992. Though the Air Program expects the area to be in compliance by the December 31, 2015 attainment date based on continued emission reductions from the current control strategy, if this does not occur, the area can be reclassified to moderate. A moderate classification would obligate the Air Program to submit an attainment demonstration including an update to the area's control strategy and RACT determination. The Emissions Inventory of this plan expedites the development of any potentially necessary attainment demonstration and RACT SIP revision in the future by establishing an appropriate emissions accounting and baseline. In addition, EPA is expected to propose a new potentially stricter ozone standard by the end of 2014, to be finalized by the end of 2015, which could result in a moderate or higher nonattainment classification for the St. Louis area. Whether St. Louis becomes a moderate nonattainment area under the 2008 ozone NAAQS or a new, more stringent ozone NAAQS, the Air Program would be required to evaluate additional control strategies for stationary sources, including SCR and other controls as possible RACT measures.

Ozone season NO_x emissions from power plants within the Missouri side of the St. Louis nonattainment area declined by 248 tons from 2012 to 2013, while NO_x emissions from on-road mobile sources in the area declined by approximately 265 tons during the same period. It is true that power plant NO_x emissions comprise the vast majority of NO_x emissions from point sources (i.e., large stationary sources), but point sources only comprise 28 percent (%) of the total NO_x emissions for the St. Louis area. Since the mobile source sector contributes more than half of the area's entire NO_x emissions, it is appropriate to rely heavily on emission reductions from this source category to achieve the area's ozone air quality goals. Federal motor vehicle engine standards are responsible for much of the reductions in the mobile source category by requiring emission reductions at the engine/vehicle manufacturer level. Because of the continued tightening of federal motor vehicle emission standards, each time an older car is retired and replaced by a newer car (referred to as 'fleet turnover'), further emission reductions are achieved. Moreover, motor vehicle emission standards are expected to continue to drop, accounting for additional new reductions, as a result of the recently promulgated federal Tier 3 standards to be implemented starting in the 2017 model year.

One commenter stated that NO_x emissions over the past seven years, especially at Ameren Plants,

are virtually stable. Since the Emissions Inventory presented in this plan is from the year 2011, it is unclear to which seven-year period the commenter is referring. The Air Program's data shows that NO_x emissions from power plants in the area have steadily decreased. For the most recent seven-year period from 2007 to 2013, there was a nearly 13% reduction in NO_x emissions from the four Ameren power plants in the St. Louis nonattainment area. Since emissions typically have year-to-year fluctuations (peaks and valleys on a graph), the best way to analyze emission reductions is to look at the overall trend over an extended period. Table 1 below lists the total ozone season NO_x emissions for each year from 1995 to 2013 from the coal-fired boilers at the following four Ameren facilities: Meramec, Labadie, Sioux, and Rush Island. (The only four power plants on the Missouri side of the St. Louis nonattainment area).

Table 1: St. Louis Area Power Plants Total Ozone Season NO_x Emissions (May - September)	
Year	NO_x (tons/ozone season)
1995*	26,511
1996	22,121
1997	23,543
1998	24,103
1999	22,275
2000	20,949
2001	15,949
2002	15,233
2003	15,289
2004	13,020
2005	12,967
2006	11,556
2007	9,825
2008	10,233
2009	9,971
2010	10,806
2011	11,329
2012	8,800
2013	8,565

[Source: EPA's Clean Air Market Division (CAMD)]

[* 1995 is the first year CAMD provides this data on an annual basis]

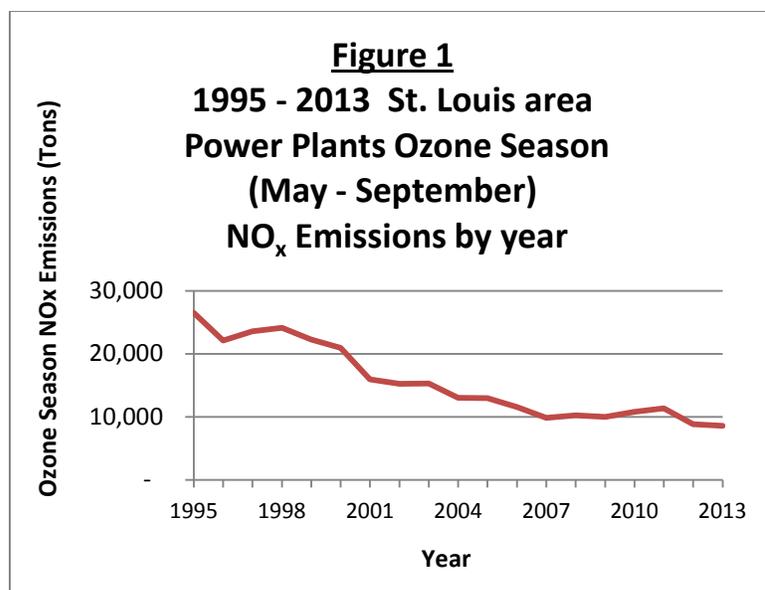


Figure 1 (above) plots these emissions and demonstrates a continuing downward trend of NO_x emissions from power plants in the St. Louis area. From 1995 to 2013 there has been a 68% decrease in emissions while the period from 2003 to 2013 shows a 44% decrease. We fully expect the downward trend in NO_x emissions from power plants to continue based on multiple recent and forthcoming federal regulations expected to impose additional controls on power plants over the next several years. Such rules include the Implementation of the 2010 Sulfur Dioxide (SO₂) NAAQS, the Utility Mercury and Air Toxics Standard (MATS), CAIR Phase II or the Cross-State Air Pollution Rule (CSAPR), and proposed Carbon Dioxide (CO₂) emission standards under CAA Section 111(d). Of these four rules, the only rule that directly controls ozone season NO_x is CAIR Phase II or the CSAPR (when it is reinstated). The other three rules control emissions of other pollutants from power plants, but are all likely to result in NO_x reductions as a co-benefit.

One commenter cites the St. Louis Area's Early Progress Plan (EPP) for the 2008 NAAQS that was adopted by this Commission on March 28, 2013, noting the plan assumes NO_x emissions from power plants will remain steady in the near future. The Air Program made this conservative assumption about power plant emissions in order to add a margin of safety to the EPP's projection showing that total ozone precursor emissions for the St. Louis region will continue declining in the future.

In summary, this plan meets all CAA Section 182(a) plan submission requirements for the St. Louis marginal nonattainment area for the 2008 ozone NAAQS. Multiple regulations currently in place and phasing in over the next several years are expected to continue significantly reducing emissions from power plants and other sources in the area, bringing the St. Louis area into attainment of the 2008 ozone NAAQS by the end of 2015. As future regulatory measures are finalized or become necessary, the Air Program will evaluate all options, including the ones suggested by the commenters, in future plans for the area.

No changes to the proposed plan were made as a result of this comment.

COMMENT #3: Sierra Club commented that St. Louis will likely be bumped up to a moderate nonattainment classification. Also, EPA has proposed a more stringent ozone standard, which St. Louis is at risk of being out of compliance. In addition to the serious health consequences, being nonattainment brings other ramifications such as stricter new source permitting that have economic development impacts. The Sierra Club urges the Department to get out of ahead of the issue by taking measures to address the core causes.

RESPONSE: As stated above in the response to comment #2, the marginal nonattainment classification and associated plan obligations assume that the continued emission reductions from the control strategy currently in place has a very good chance of demonstrating compliance with the 2008 ozone NAAQS by the end of 2015. The St. Louis area has been experiencing a downward trend in ozone air quality concentrations and we expect this trend to continue. At such time as the St. Louis area is reclassified to a moderate nonattainment under the 2008 standard or a new standard is promulgated and the area is designated nonattainment, the Air Program will fulfill the State's plan submission obligations pursuant to the CAA, which will include an attainment demonstration and adjustments to the area's control strategies as needed.

Nevertheless, the Air Program is not waiting until a new standard is released, or for the area's potential reclassification, to get out ahead by starting the plan development process early: the Air Program is currently reviewing EPA's 2018 emissions inventory projections and modeling input files in an preemptive effort to develop a modeling construct to support any additional planning requirements in the event these scenarios occur. Similarly, even though the federal 2008 Ozone NAAQS implementation rule has not been finalized yet, the Air Program has, through this plan, developed the base-year emissions inventory for the area, which is the first step in the process of developing an attainment demonstration and evaluating additional control measures if required in the future.

Additionally, the Air Program is getting ahead of the situation by working on the implementation of proposed, pending and potential new federal rules affecting power plants prior to these rules even being finalized. As noted previously, these federal regulations include the implementation of the 2010 SO₂ NAAQS, MATS, CAIR Phase II or CSAPR, and proposed CO₂ emission standards under CAA Section 111(d) (known as the "Clean Power Plan"). As an example, the Air program is taking a proactive approach regarding EPA's proposed Clean Power Plan affecting CO₂ emissions from existing power plants. This rule was proposed in the Federal Register on June 18, 2014, and the Air Program conducted an initial informational meeting for stakeholders on July 14, 2014. The Air Program will continue its outreach and coordination effort for EPA's Clean Power Plan to allow for meaningful stakeholder input into the state's plan development process. Though not all of these federal regulations directly target power plant NO_x emissions, they are likely to result in NO_x emissions reductions as a co-benefit, thus furthering the goal to control ozone concentrations in the St. Louis area.

No changes to the plan were made as a result of this comment.