Air Pollution Control Program
REGFORM Air Seminar

March 2017
Missouri Air Conservation Commission

- David Zimmermann, Chair
- Jack Jones, Vice Chair
- Mark Garnett
- Jack Baker
- Gary Pendergrass
- Two vacancies, Commission board page:
  [https://governor.mo.gov/get-involved/boards-and-commissions](https://governor.mo.gov/get-involved/boards-and-commissions)

March 2017
Air Pollution Work – Team Effort

- Air Pollution Control Program
- 5 Department Regional Offices
  - St. Louis, Kansas City, Northeast (Macon), Southeast (Poplar Bluff), Southwest (Springfield)
    - Steve Boone, Northeast Regional Office

- Environmental Services Program
  - Will Wetherell, Doug Thompson

- Local Air Agencies
  - St. Louis County, St. Louis City, Kansas City, Springfield
  - Work dependent on agency
Air Quality Planning Section

- Rulemakings
- State Implementation Plan (SIP) development
- National Ambient Air Quality Standard (NAAQS) boundary recommendations
- Computer modeling to support SIPs and for attainment demonstrations
Air Quality Planning Section
Darcy Bybee, Section Chief

Cheri Bechtel
Rules Unit
Wayne Graf
Aaron Basham
Paul Myers
Shelly Reimer
Seanmichael Stanley

SIP Unit
Emily Wilbur
Assem Abdul
Stacy Allen
Adel Alsharafi
Mary Evelyn Barnes
Mark Leath
Cliff Li
Bob Randolph

March 2017
Permit Section

- Issues permits for all applicable sources of air pollution
  - Construction and Operating Permits
- Processes permit applicability requests
- Performs air quality analysis for proposed sources
- Oversees permitting for local air agencies
Permits Section
Kendall Hale, Section Chief

Operating Permits
- Michael Stansfield
- Kristin Bailey
- David Buttig
- Bern Johnson
- Jill Wade
- Kasia Wasescha
- Nicole Weidenbenner
- Berhanu Getahun–StL

Construction Permits
- Susan Heckenkamp
- Sam Anzalone
- Alana Hess
- Jordan Hull
- Kathy Kolb
- David Little
- Hans Robinson
- Ryan Schott
- Chad Stephenson
- Chia-Wei Young

Permit Modeling
- Dawn Froning
- Kelly Robson

March 2017
Air Quality Analysis Section

- Obtains, tracks and analyzes air emission inventory questionnaire (EIQ) data
- Develops point emission inventory
- Coordinates statewide air monitoring network
- Develop Maximum Achievable Control Technology (MACT) databases
- Small business compliance assistance
Air Quality Analysis Section

Steve Hall, Section Chief

Data Management Unit
Nathan O’Neil
Jeanette Barnett
Jeanne Brown
Erin Henry
Jeffrey Stevens
Terry Stock
Brenda Wansing
Daronn Williams

Monitoring Unit
Patricia Maliro
Jerry Downs
Eric Giroir
Michael Maddux

Carlton Flowers

March 2017
Compliance/Enforcement Section

- Resolves enforcement actions from Regional Offices/Local Agencies; Refers cases to Attorney General, if necessary
- Conducts oversight of Vapor Recovery/IM, and stack tests
- Issues Asbestos Certifications, Contractor Registrations and Training Provider Accreditations, and tracks notifications
- Provides General Compliance Assistance
- Works with Regional Offices/Local Agencies to investigate citizen concerns and conduct routine inspections
  - asbestos, vapor recovery, open burning, dust, odors and general compliance
Compliance/Enforcement Section
Richard Swartz, Section Chief

Asbestos Unit
Stan Payne
Ethan Smith
Debbie Meyers
Cari Gerlt
Sara Hoover
Connie Kinney

Compliance Unit
Russell Sullivan
Cliff Johnson
Ernest Wilson
Jaime Rizo
Heather Lehman
Derek Apel

Testing & Emissions Unit
Josh Vander Veen
Steve Sidebottom
John Bullard
Laura Guinn
Stephanie Durbin

March 2017
Fiscal and Budget Section

- Prepares budget, manages cash flow and time accounting, accounts payable & receivables
- Administers federal grant projects
- Coordinates state and federal workplans and local memorandum of agreements
- Maintains record retention and responds to Sunshine Requests
- Reviews legislation and fiscal note requests
Fiscal and Budget
Carolyn Kliethermes, Section Chief

Grant Management
Deedra Beye

Fileroom Management
Amber Evans

Financial Operations Unit
Tim Largent
Sharon Thompson

Receptionist
Debbie Heinrich

March 2017
St. Louis Inspection and Maintenance

• Oversees vehicle inspection and maintenance program
• Performs covert and overt audits of emissions testing facilities
• Provides technical assistance and customer education
St. Louis Inspection and Maintenance
Chuck Dachroeden, Section Chief

Technical Services Unit
Joe Winkelmann
Neena Nallaballi
Angelo Vitullo

Inspection Services Unit
David Offu
Caroline Kargas
Antwane President
Mark Specht

Jackie Heisler

March 2017
General Updates

Air Pollution Control Program
Air Quality Goals

- Improve air quality for all Missourians
  - Ozone, Lead, Particulate Matter
- Continue timely issuance of construction permits
- Eliminate Title V permit backlog
- Conduct timely inspections
Statewide Air Quality

- 66% of all Missourians are living in areas meeting all NAAQS (Ozone, Lead, PM$_{2.5}$)
Air Construction Permit Issuance

- **De Minimis and Minor**: Goal 90 Days, Average 66 Days
- **PSD**: Goal 184 Days, Average 64 Days
Title V Operating Permit Issuance

<table>
<thead>
<tr>
<th></th>
<th>Goal for Issuance</th>
<th>Average Issuance</th>
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<tbody>
<tr>
<td>Part 70</td>
<td>540</td>
<td>1075</td>
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<tr>
<td>Intermediate</td>
<td>540</td>
<td>920</td>
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<tr>
<td>Basic</td>
<td>60</td>
<td>330</td>
</tr>
</tbody>
</table>
Permitting

• New fees started January 1, 2017
  – Working through transition – if questions, please call (573) 526-3835

• Addressing Operating Permit Backlog

• Basic Operating Permit Updates

• Application Updates
Volkswagen

- [https://www.epa.gov/enforcement/volkswagen-clean-air-act-partial-settlement](https://www.epa.gov/enforcement/volkswagen-clean-air-act-partial-settlement)
- For future notifications: [http://dnr.mo.gov/env/apcp/cleandieselprogram.htm](http://dnr.mo.gov/env/apcp/cleandieselprogram.htm)
Air Quality Analysis Updates

Steve Hall
Air Pollution Control Program
Updates

• SO$_2$ NO$_2$, Lead and Particulate Matter Emissions Inventory and Trends
• Ozone Ambient Air Monitoring and Trends
• Website Resources
Sulfur Dioxide (SO₂) Point Source Emissions

Thousand Tons per Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions</th>
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<tr>
<td>2004</td>
<td>350</td>
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<td>2013</td>
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<td>2014</td>
<td>150</td>
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<tr>
<td>2015</td>
<td>146</td>
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</table>
Nitrogen Dioxide (NO₂) Point Source Emissions
Thousand Tons per Year

Thousands


2004: 169
2005: 169
2006: 166
2007: 160
2008: 135
2009: 100
2010: 100
2011: 100
2012: 100
2013: 100
2014: 100
2015: 77
Particulate Matter ($PM_{10}$) Point Source Emissions

(With $PM_{2.5}$ Fraction)

Thousand Tons per Year

Note: Not all sources reported $PM_{2.5}$ fraction prior to 2012.
Airborne Lead Point Source Emissions
Tons per Year

* Increased lead emissions for 2013 is the result of stack testing at a single facility. The facility shut down the processes that release emissions through the tested stacks at the end of the 2013 emission year, and the increased emissions are the result of the shut down activities.
Ozone (O₃) Ambient Air Monitoring

1996-2016 8-hour Ozone Design Value Trends
St. Louis, Kansas City Areas & Rural Site
(\(^{1}\)Quality Assured Data Through December 31, 2016)
## 1-HOUR Sulfur Dioxide (SO₂) Design Values

### Sites

<table>
<thead>
<tr>
<th>Sites</th>
<th>County</th>
<th>99th Percentile</th>
<th>St. Louis</th>
<th>1-hour Average (ppb)</th>
<th># of Exceedances</th>
<th>Design Value</th>
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<td>State Sites</td>
<td>2013</td>
<td>2014</td>
<td>2015</td>
<td>2016</td>
<td>2017&lt;sup&gt;c&lt;/sup&gt;</td>
<td>CV - 75</td>
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<td>Herculaneum, Mott</td>
<td>Jefferson</td>
<td>143</td>
<td>18</td>
<td>38</td>
<td>13</td>
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<td>Blair Street</td>
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<td>42</td>
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<td>24</td>
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<td>Margaretta</td>
<td>St. Louis City</td>
<td>20</td>
<td>22</td>
<td>17</td>
<td>8</td>
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<td>Rider Trail, 1-70&lt;sup&gt;****&lt;/sup&gt;</td>
<td>St. Louis Co.</td>
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<td>-</td>
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<td>Ameren Missouri, Labadie Sites</td>
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<td></td>
</tr>
<tr>
<td>Northwest&lt;sup&gt;^&lt;/sup&gt;</td>
<td>St. Charles</td>
<td>-</td>
<td>-</td>
<td>28</td>
<td>27</td>
<td>5</td>
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<td>Southwest*</td>
<td>Franklin</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>N/A</td>
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<tr>
<td>North*</td>
<td>St. Charles</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
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<td>Valley&lt;sup&gt;^&lt;/sup&gt;</td>
<td>Franklin</td>
<td>-</td>
<td>-</td>
<td>34</td>
<td>22</td>
<td>11</td>
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<td>Ameren Missouri, Rush Island Sites</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Natchez&lt;sup&gt;^^&lt;/sup&gt;</td>
<td>Jefferson</td>
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<td>-</td>
<td>13</td>
<td>27</td>
<td>5</td>
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<td>Weaver&lt;sup&gt;^^&lt;/sup&gt;</td>
<td>Jefferson</td>
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<td>-</td>
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<td>5</td>
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<td>Fults, IL&lt;sup&gt;^^^&lt;/sup&gt;</td>
<td>Monroe, IL</td>
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<td>14</td>
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<td>Kansas City</td>
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<td>State Sites</td>
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<td>Troost</td>
<td>Jackson</td>
<td>156</td>
<td>125</td>
<td>142</td>
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<td>Springfield</td>
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<td>State Sites</td>
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<td>South Charleston&lt;sup&gt;†&lt;/sup&gt;</td>
<td>Greene</td>
<td>31</td>
<td>33</td>
<td>14</td>
<td>3</td>
<td>†</td>
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<td>City Utilities of Springfield Sites</td>
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<tr>
<td>James River South&lt;sup&gt;†&lt;/sup&gt;</td>
<td>Greene</td>
<td>27</td>
<td>33</td>
<td>16</td>
<td>4</td>
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<td>Outstate</td>
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<td>State Sites</td>
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<tr>
<td>Buick Northeast</td>
<td>Iron</td>
<td>85</td>
<td>52</td>
<td>42</td>
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<td>Mark Twain State Park</td>
<td>Monroe</td>
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<td>9</td>
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<td>Doe Run Buick Sites</td>
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<td>Hw. 32 Northeast&lt;sup&gt;*&lt;/sup&gt;</td>
<td>Iron</td>
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<td>County Road 75&lt;sup&gt;*&lt;/sup&gt;</td>
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<td>Magnitude 7 Metals Sites</td>
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<td>Site #1 AECI Water Tower Location&lt;sup&gt;*&lt;/sup&gt;</td>
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<td>Site #2 East Graveyard&lt;sup&gt;*&lt;/sup&gt;</td>
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<tr>
<td>Site #3 West Entrance&lt;sup&gt;*&lt;/sup&gt;</td>
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<td>3</td>
</tr>
</tbody>
</table>
Website Resources

Monitoring Information-
‘Bookmark’

- Design Value Reports
- Preliminary hourly data reports
- Monitoring Network Plans and More
- More improvements coming…
Monitoring Site GIS Map
Air Quality Planning Updates

Darcy Bybee
Air Pollution Control Program
Updates

• Ozone Status Overview
• Sulfur Dioxide (SO$_2$) Status Overview
• Webpage Resources and Updates
Ozone Status Overview
2008 Ozone Standard (75 ppb)

• Based on 2013-2015 air monitoring data, Missouri has attained the standard in St. Louis!
  dnr.mo.gov/env/apcp/airpollutants.htm

• Submitted Redesignation Request and Maintenance Plan to EPA (Sept 12, 2016).
  dnr.mo.gov/env/apcp/sips.htm
2015 Ozone Standard (70 ppb)

• Based on 2013-2015 air monitoring data:
  – Developed recommendation for the same St. Louis area as nonattainment (Sept. 30, 2016)
  – dnr.mo.gov/env/apcp/naaqsboundarydesignations.htm
  – We’ll cover the timeline in a minute.
Figure 3. St. Louis MSA and Current Nonattainment Area’s 2015 Ozone Monitoring Sites and their 2013-2015 Design Values

# - Site Name (13-15 DV in ppb)
Missouri Monitors
1 - Arnold West (70)
2 - Foley (68)
3 - Farrar (66)
4 - West Alton (71)
5 - Orchard Farm (69) *
6 - Bonne Terre (65)
7 - Pacific (65)
8 - Maryland Heights (70) *
9 - Blair Street (65)
Illinois Monitors
10 - Jerseyville (66)
11 - Nilwood (64)
12 - Alton (71)
13 - Maryville (69)
14 - Wood River (69)
15 - Houston (67)
16 - East St. Louis (66)
Timeline

Sept 30, 2016 • Recommendation to EPA

June 2017 • EPA sends 120-day letter

Aug 2017 • 120-day letter responses due

Oct 2017 • EPA finalizes area designations

2020 • SIPs due
Sulfur Dioxide (SO$_2$) Status Overview
2010 SO$_2$ Standard (75 ppb)

- 4 Rounds of Designations
- For more information:
  - General SO$_2$ Information: dnr.mo.gov/env/apcp(so2.htm
  - SO$_2$ Air Quality Monitoring: dnr.mo.gov/env/apcp/docs/so2monitoringdata.pdf
  - Boundary Recommendations: dnr.mo.gov/env/apcp/naaqsboundarydesignations.htm
  - State Implementation Plans: dnr.mo.gov/env/apcp/sips.htm
Implementation: 2010 SO$_2$ Standard

**Round 1: Existing Monitors**
- 2013: Two (2) areas designated (portions of Jackson and Jefferson Counties).
- 2018: Attainment for both.

**Round 2: Consent Decree**
- 2015-16: Three (3) areas considered. EPA did not designate any nonattainment areas.
- All 3 placed in future rounds of designations.

**Round 3: Data Requirements Rule (Modeling)**
- Dec 2016: Eight (8) counties/partial counties recommended for attainment.
- ~Aug 2017: Expect 120-day letter.
- Dec 2017: Deadline for EPA designations.

**Round 4: Data Requirements Rule (Monitoring)**
- 4 areas installing new air quality monitors.
- 2017-19: Collect air monitoring data.
- May 2020: Recommendations due to EPA.
- Dec 2020: Deadline for EPA designations.
2010 1-hour SO$_2$ NAAQS: Existing and Recommended Area Classifications and Boundaries
Webpage Resources and Updates
Cross-State Air Pollution Rule Webpage
Cross-State Air Pollution Rule

• New webpage for CSAPR Allocations!
  – Notifications of identified non-operating units and new unit set-asides
  – Opportunities to provide ‘objections’
  – Etc.

• Wepage is live!
    (also found in the list of “Featured Pages” on the main program webpage)
Cross-State Air Pollution Rule (CSAPR)

Allocation Procedure for the Cross-State Air Pollution Rule

Missouri maintains state implementation plans (SIPs) that the EPA has approved to allow the state to reallocate emission allowances for the control periods starting in 2017. The allowances pertain to the CSAPR trading programs for NOx annual and SO2 annual group 1. The allocation methods for these two programs are codified in state rules 10 CSR 10-6.372 and 10 CSR 10-6.376.

These rules require the department’s Air Pollution Control Program to submit allowance allocations under these two programs every year to EPA. This webpage provides the required notifications and objection periods for the air program’s allowance allocation submissions.

Procedures for Allocation of CSAPR NOx and SO2 Annual Units

Allocation of Existing Units

- Public notification of identified non-operating units (Updated 2/24/17)

- Facilities can submit objections to units that the state lists as non-operating during the last two control periods. Click here by April 1, 2017, to submit objections.

- Public notification of state’s response to objections for identified non-operating units (Updated 2/24/17)

- State submittal of existing unit allocations to EPA (Updated 2/24/17)

- EPA records the state submitted existing unit allocations for future year(s).

Allocation of New Units
EPA Resources
EPA Resources

• You can find all Missouri approved rules and plans on EPA’s webpage:
  – SIP Status Reports:  [www3.epa.gov/airquality/urbanair/sipstatus/reports/mo_areabypoll.html](http://www3.epa.gov/airquality/urbanair/sipstatus/reports/mo_areabypoll.html)
Missouri

EPA Approved Missouri Regulations
40 CFR 52.1320(c)

Missouri Department of Natural Resources
Division 10 - Air Conservation Commission

Chapter 1  Organization
Chapter 2  Air Quality Standards and Air Pollution Control Regulations for the Kansas City Metropolitan Area
Chapter 3  Air Pollution Control Regulations for the Outstate Missouri Area
Chapter 4  Air Qu
- State, Local and Tribal Programs
- Federally Approved Regulations
- Policy & Guidance
- Search Air Pages
- About Region 7
- A-Z Index
- News & Events

Chapter 5  Air Quality Standards and Air Pollution Control Regulations for the Springfield-Greene County Area

Chapter 6  Air Quality Standards, Definitions, Sampling and Reference Methods, and Air Pollution Control Regulations for the State of Missouri

Local Agency Ordinances
# Chapter 6 - Air Quality Standards and Air Pollution

## Air Quality Standards, Definitions, Sampling and Reference Methods, and Air Pollution Control Regulations for the State of Missouri

<table>
<thead>
<tr>
<th>Rule</th>
<th>Title</th>
<th>Pages</th>
<th>Size</th>
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<tr>
<td>10 CSR 10-6.010</td>
<td>Ambient Air Quality Standards</td>
<td>3 pp</td>
<td>34 KB</td>
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<tr>
<td>10 CSR 10-6.020</td>
<td>Definitions and Common Reference Tables</td>
<td>132 pp</td>
<td>367 KB</td>
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<td>Sampling Methods for Air Pollution Sources</td>
<td>6 pp</td>
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<td>Reference Methods</td>
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<td>Start-Up, Shutdown, and Malfunction Conditions</td>
<td>5 pp</td>
<td>22 KB</td>
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<td>10 CSR 10-6.060</td>
<td>Construction Permits Required</td>
<td>45 pp</td>
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<td>8 pp</td>
<td>28 KB</td>
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<td>62 pp</td>
<td>132 KB</td>
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<td>Restriction of Emission of Fluorides</td>
<td>2 pp</td>
<td>16 KB</td>
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SIP Webpage Updates!
Webpage Updates!!!

• Reminder: To get the full picture of SO$_2$, you must visit a minimum of 4 DNR webpages.
State Implementation Plan

There are **six different criteria pollutants** for which the U.S. Environmental Protection Agency (EPA) is required to set National Ambient Air Quality Standards (NAAQS). EPA is also required to review each national air standard every five years to determine if the current standard is still adequate to protect public health, or if it should be revised.

After EPA revises or sets a new standard for a criteria pollutant, the boundary designation process begins.

1. States submit boundary recommendations to EPA. The **boundary designation submittals for all criteria pollutants** are available online.
2. EPA reviews the recommendations and designates areas across the country as either nonattainment or attainment/unclassifiable based on air quality monitoring or modeling data.
3. If an area is designated as nonattainment for a certain NAAQS it means the area either is not meeting the standard or is significantly contributing to an area not meeting the standard.

After the boundary designations are complete the State Implementation Plan (SIP) begins.

1. Missouri’s SIP is a compilation of all rules, regulations and documents giving the state authority to implement, enforce, attain, maintain and demonstrate compliance for each standard as required under the Clean Air Act.
2. All SIPs are required to go through public comment periods and if adopted by the Missouri Air Conservation Commission, they are submitted to EPA for adoption in the federally approved SIP.

If EPA adopts the plan submission, the SIP becomes federally enforceable. A **summary of Missouri’s federally approved SIP** is available on EPA’s website and Missouri’s approved SIP is also codified at 40 CFR 52 Subpart AA.

**Types of SIPs**

Every time a NAAQS is revised, the state is required to submit a SIP.

- **Attainment/unclassifiable areas**: The state is required to submit an infrastructure SIP that demonstrates the state’s authority to implement and enforce the standard and demonstrate that compliance with the standard will continue to be maintained.
Attainment/unclassifiable areas: The state is required to submit an infrastructure SIP that demonstrates the state’s authority to implement and enforce the standard and demonstrate that compliance with the standard will continue to be maintained.

Nonattainment areas: The state is required to submit several different documents as part of the SIP for these areas under each standard in which the area has been designated nonattainment. The scope of the different SIP submittals required for each nonattainment area depends on the severity of the nonattainment area and the pollutant for which the area has been designated nonattainment.

- Nonattainment areas are usually required to submit an attainment demonstration SIP. This portion of the SIP lays out all of the control strategies required to demonstrate the nonattainment area will meet the new standard by a certain date, known as the attainment date.
- Nonattainment area plans also typically require submission of a comprehensive emission inventory, a demonstration that reasonably available control measures have been implemented and a demonstration that reasonable further progress goals will be achieved. Finally, once an area that has been designated as a non-attainment area has monitored pollutant levels in compliance with the standard for an extended period, then the area can submit a maintenance plan and be redesignated to maintenance area. The maintenance plan must demonstrate how the area will continue to maintain compliance with the standard for 10 years after attainment has been reached.

This webpage shows the more recent SIPS submissions the state has made to EPA. Some submissions have been federally approved, while others are still pending EPA approval. SIP elements are revised from time to time and the more recent revisions to SIPS are also listed on this website.

Ozone | Particulate Matter | Lead | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Regional Haze | Interstate Transport | Administrative | TMAQ | Air Quality Management Plan (AQMP)

Ozone
The first ozone NAAQS was published in 1979. The standard was based on one-hour average concentrations. In 1997, EPA revised the ozone NAAQS and the new standard was based on a design value stemming from 8-hour average concentrations. In 2008, EPA again revised the ozone standard. The 2008 standard is lower than the 1997 standard, but still based on a design value stemming from 8-hour average concentrations.

See Ozone for more information.

2008 8-hr 03 Standard: 75 parts per billion, or ppb
On Sept. 22, 2011, the U.S. Environmental Protection Agency released a memorandum to clarify for states the status of the 2008 Ozone National Ambient Air Quality Standard. In this document, EPA explicitly stated that the current standard is 0.075 parts per million, or 75 parts per billion. This standard is based on a three year design value, which is calculated by taking the fourth highest daily high 8-hour average concentration recorded each year, for three years and averaging the three years together.
Sulfur Dioxide, or SO₂

Additional information is available on the department's Sulfur Dioxide webpage and on EPA's Sulfur Dioxide Implementation webpage.

2010 Primary standard (1-hour average): 75 ppb.

In 2010, this standard was revised. The 2010 revision added a primary 1-hour SO₂ standard and revoked the primary annual and 24-hour SO₂ standards. Previous to the 2010 NAAQS revision, the entire state was designated as attainment or unclassifiable under the annual and 24-hour primary SO₂ standards. Under this revised standard, monitored pollutant concentrations are used to designate nonattainment and attainment areas for the initial round of designations. The state developed a revised boundary recommendation in April 2013, which can be found on the NAAQS Boundary Designations page. The 2010 SO₂ standard is based on a three year design value, which is calculated by taking the 99th percentile of the daily high 1-hour average concentrations recorded each year, for three years and averaging the three years together.

Infrastructure SIP

- Missouri State Implementation Plan Revision – Section 110 Infrastructure Requirements for the 2010 Sulfur Dioxide National Ambient Air Quality Standard (MACC Adoption: June 2013) (Pending EPA Approval)

Section 110 Infrastructure SIP for the 2010 SO₂ NAAQS

Jefferson County Area

- Nonattainment Area Plan for the 2010 1-Hour Sulfur Dioxide National Ambient Air Quality Standard – Jefferson County Sulfur Dioxide Nonattainment Area (MACC Adoption: May 2015) (Pending EPA Approval)

Jefferson County SO₂ Nonattainment Area Plan

Appendix A
Appendix B
Appendix C
Appendix D
Appendix E
Appendix F
Appendix G
Appendix H
Appendix I
Appendix J

The modeling performed in support of the Jefferson County Nonattainment Plan takes into account federally enforceable SO₂ emission reductions from the closure of the Doe Run Herculaneum primary lead smelter. The closure of the smelter was required by the consent decree between Doe Run, the department and the U.S. Environmental Protection Agency filed in the United States District Court in the Eastern District of Missouri, Case No. 4:10-cv-01895-JCH, and entered on Dec. 21, 2011. We are providing a link to this document for reference:

Clean Data Determination Modeling Documentation
Clean Data Determination Supplement

- Attachment 1

Jackson County Area

- Nonattainment Area Plan for the 2010 1-Hour Sulfur Dioxide National Ambient Air Quality Standard – Jackson County Sulfur Dioxide Nonattainment Area (MACC Adoption: August 2015) (Pending EPA Approval)

Jackson County SO₂ Nonattainment Area Plan
Appendix A
Appendix B
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Secondary standard (3-hour average): 500 ppb.

On April 3, 2012, EPA promulgated a final rule to retain the current secondary standard for SO₂. The entire state is currently designated as attainment or unclassifiable under this standard.

Regional Haze Plan

All states were required by the Clean Air Act to submit Regional Haze SIPS in order to address
Webpage Updates—Why?

• Multiple webpages lead to duplicative—or in some cases missing or conflicting—information.

• Encyclopedia-type information is an outdated format and difficult to scan for information.
Our Plan: Update our webpage structure!

• Have a central informational webpage
  – *What are SIPs? Boundary Recommendations? What is a nonattainment area?*

• Links to the different pollutants
  – Each pollutant will have a one-stop shop of information
    • General pollutant information
    • Boundary recommendations
    • SIPs
    • Important links (air monitoring, EPA webpages, etc.)
Example!

• We started with the SO$_2$ webpages.
• We’d like your feedback:
  – Content
  – Organization
• We hope to update all planning webpages in the near future.
Sulfur Dioxide

Sulfur dioxide is a colorless gas with a strong, suffocating odor. Sources of sulfur dioxide emissions include fossil-fuel fired power plants, metal/ore processing industries, other industries that combust fossil fuels, and certain nonroad engines such as locomotives and marine vessels. Exposure to elevated concentrations of sulfur dioxide can cause irritation of the throat and lungs, leading to difficulty breathing, increased asthma symptoms and other respiratory illnesses. The department monitors sulfur dioxide levels in the air at locations across the state. Missouri's sulfur dioxide air monitoring sites

Sulfur dioxide is one of the Environmental Protection Agency's criteria air pollutants – commonly found air pollutants that at high enough levels can harm people and the environment. Because of the potential to harm people and the environment, the federal Clean Air Act and Missouri Air Conservation Law limit the amount of sulfur dioxide that sources can emit into the atmosphere. Sulfur dioxide also contributes to the formation of secondary fine particle pollution, which is a subset of particulate matter, another criteria pollutant. Additional information about sulfur dioxide can be found on EPA's sulfur dioxide webpage.

Sulfur Dioxide National Ambient Air Quality Standard (NAAQS)

In June 2010, EPA established a new 1-hour primary sulfur dioxide standard of 75 parts-per-billion. The previous sulfur dioxide primary standards set in 1971 included a 24-hour standard at 140 parts-per-billion and annual standard at 30 parts-per-billion. There is also a secondary sulfur dioxide standard based on a 3-hour average set at 500 parts per billion. When EPA revised the sulfur dioxide standard in 2010, they revoked the two previous primary standards, replacing them with the new 1-hour primary standard and they retained the existing secondary standard.
2010 1-hr SO₂ Primary Standard: 75 ppb

When EPA revises a NAAQS, states are allowed to submit boundary designation recommendations to EPA to be considered when EPA establishes the final boundary designations. For most criteria pollutants, states are given one year following a NAAQS revision to submit their recommendations and EPA finalizes boundary designations within two years of the NAAQS revision.

The EPA has chosen a different approach to establish boundary designations under the 2010 sulfur dioxide standard. Unlike other criteria pollutants, sulfur dioxide is almost exclusively a point source-emitted pollutant. Additionally, transport of sulfur dioxide emissions is typically more localized and is less likely to be observed on a regional scale. A monitoring network large enough to adequately cover all large sources would be prohibitively expensive and an affordable network would leave large gaps in coverage. Therefore, EPA has decided to use a hybrid monitoring-modeling approach for sulfur dioxide. Additionally, EPA is splitting the boundary designation process into multiple rounds. The initial round for boundary designations was based on available ambient air quality monitoring data. Additional rounds of designations are based on a hybrid approach involving emissions inventory analysis, an enhanced monitoring network and extensive use of refined air dispersion modeling. [https://www.epa.gov/sulfur-dioxide-designations](https://www.epa.gov/sulfur-dioxide-designations)

As the state develops new boundary designation recommendations and state implementation plans, they will be made available for public review and comment online at the Air Program’s Public Notice webpage.

**Infrastructure plan: 2010 SO₂ standard**

- **Initial round of boundary designations, state implementation plans for 2010 SO₂ standard**
  - Initial round: Plans for nonattainment area – Jefferson County (part), St. Louis
  - Initial round: Plans for nonattainment area – Jackson County (part), Kansas City
  - Round 2 -- Consent Decree Round
  - Round 3 -- Modeling
  - Round 4 -- Monitoring
  - Related Links
<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>July 2011</td>
<td>2010 Original 1-Hour Sulfur Dioxide Boundary Recommendation and Technical Support Document</td>
</tr>
<tr>
<td></td>
<td>Summary of sulfur dioxide boundary recommendations</td>
</tr>
<tr>
<td>February 2013</td>
<td>EPA 120-Day Letter</td>
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<tr>
<td></td>
<td>Attachment to EPA 120-Day Letter</td>
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<tr>
<td>April 2013</td>
<td>2010 Revised 1-Hour Sulfur Dioxide Boundary Recommendation</td>
</tr>
<tr>
<td>Aug. 5, 2013</td>
<td>Federal Register Notice Initial Round Boundary Designations for the 2010 SO2 NAAQS</td>
</tr>
</tbody>
</table>
We want your feedback!

• Focus
• Format
• Anything else you would like to share

darcy.bybee@dnr.mo.gov
(or see me--I’ll be here all day!)
Compliance Enforcement Updates

Richard Swartz
Air Pollution Control Program
Compliance Assistance

• We are always happy to assist
• Always happy to discuss a rule interpretation
• Always happy to discuss the nuances of your permit
• Always happy to help you move toward compliance
## Compliance Assistance Visits

http://dnr.mo.gov/cav/compliance.htm

The Missouri Department of Natural Resources wants to help businesses, communities and industrial facilities better understand the requirements of their environmental regulations – and avoid future violations of those permits. Beginning July 1, 2014, the department’s Division of Environmental Quality will offer compliance assistance visits (CAVs) to those regulated by the department. These voluntary visits can be requested by answering the questions below or by contacting one of the department’s regional offices.

A CAV would be beneficial to a facility faced with a change in permit or regulatory requirements, or when there is a change in operational status or management at the facility. CAVs will assist with understanding regulatory requirements, help with achieving and maintaining compliance, and provide a continuing resource for technical assistance. CAVs are not intended to take the place of existing processes about permits or other environmental requirements.

The department will come to the facility to meet with the person requesting the visit, as well as the other members of the facility. In general, the CAV process will begin with a discussion about permits or other environmental requirements. The visit will then proceed to review the facility’s permit requirements, followed by discussions about operational issues.

Upon completion of such a visit, a CAV may be made regarding operations or regulatory compliance. A CAV is not intended to take the place of the facility and will not result in a determination of compliance or non-compliance issues. In the event that issues are observed, the facility will be asked to address them. In situations where the factors presented pose imminent harm to human health or the environment, the department will notify the facility and a compliance inspection will be made.

### Compliance Assistance Visit Requests

Visit Requests

Submit Request

### Contact Information

**Department of Natural Resources**

P.O. Box 176
Jefferson City, MO 65102

800-361-4827

573-751-3443

Contact Us

Report an Environmental Concern

### Regional Office Locations

<table>
<thead>
<tr>
<th>Regional Office</th>
<th>Location</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kansas City</td>
<td>Lee’s Summit</td>
<td>(816) 251-0700</td>
</tr>
<tr>
<td>Northeast</td>
<td>Macon</td>
<td>(660) 385-8000</td>
</tr>
<tr>
<td>St. Louis</td>
<td>St. Louis</td>
<td>(314) 416-2960</td>
</tr>
<tr>
<td>Southeast</td>
<td>Poplar Bluff</td>
<td>(573) 840-9750</td>
</tr>
<tr>
<td>Southwest</td>
<td>Springfield</td>
<td>(417) 891-4300</td>
</tr>
</tbody>
</table>
Small Business Assistance – Air Program
http://dnr.mo.gov/env/apcp/smbus.htm#assistance

- Department of Natural Resources
  Air Pollution Control Program
  P.O. Box 176
  Jefferson City, MO 65102
  573-751-4817 Phone
  800-361-4827 Phone
  573-751-2706 Phone
Carlton Flowers
Enforcement

- Fewer Notices of Violation (NOVs)
- More Letters of Warning (LOWs)
- Discontinue Notices of Excess Emissions (NOEEs)
- Start up, Shut down, Malfunction justification still accepted per the state rule
Compliance Unit

Compliance Reports – Total 1,892 Last Year

• Annual Compliance Certifications – 384
• Semi-Annual Compliance – 214
• MACT & NSPS – 1,294
• Coordinate with regional office staff regarding inspections
• Coordinate variances
| Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # | Subpart | Name                                      | # |
|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|---|---------|-------------------------------------------|--- |
Area Sources – Who has Authority?

- Some federal rules DNR does not have enforcement authority
- These rules still show up in your permit
- It can get confusing
- Web site clarifies authority
- [http://dnr.mo.gov/env/apcp/areasource.htm](http://dnr.mo.gov/env/apcp/areasource.htm)
- Questions? Call us! (573) 751-4817
Gateway Vehicle Inspection Program

- Joint safety & emissions testing program in St. Louis metro area
- Partnership with Highway Patrol
  - Coordination with Department of Revenue
- ~750,000 vehicle inspections per year
- 850 licensed inspection stations
- 4,700 licensed inspectors
Gateway Vehicle Inspection Program

- Opus Inspection – Current Contractor
- World Wide Environmental Products – New Contractor
- Transitioning This Spring
Stack Test Oversight

- Receive & review test protocols
- Observe emissions test
- Review test reports – received 327 reports in 2016
- CEMS audits – 4 in 2016
- stacktesting@dnr.mo.gov
Asbestos Unit

• New fees January 1, 2017
• Streamlined internal processes
• Applications modified – more user friendly
• Audit paper work modified – more user friendly for auditor and training provider
• Compliance Assistance
• AsbestosNotifications@dnr.mo.gov
Thank you!
richard.swartz@dnr.mgov
Permit Updates

Kendall Hale
Air Pollution Control Program
Operating Permit Focus

- Timely completeness reviews
- Regular correspondence with applicant
- Streamlined internal review process
- Revised application forms
- Instructions/guidance on website
Areas of Emphasis for Operating Permits

• Improved record keeping pages
• Compliance plans when necessary in order to process the application in a timely manner
• Statement of Basis
  – Explanation of rule applicability
  – Potential emissions calculations
  – History of installation, including name changes
  – Is the installation considered a Named Installation
  – Dates of relevant stack testing
  – Any other pertinent information
Basic Operating Permit Changes

• No longer required simply due to the existence of an incinerator

• In the process of changing the requirement for a Basic Operating Permit due to the applicability of a New Source Performance Standard (NSPS) or Maximum Achievable Control Technology (MACT)

• Streamlining the application process
Streamlined Basic Operating Permit Process

• Application will be in the form of an excel workbook.
• The workbook will be pre-populated with data from MoEIS and e-mailed to the company.
• Company will update emission unit list, fill in any missing data, and submit the application electronically.
• Air Program will review the application, update MoEIS, and add applicable regulations to a database.
• Final permit will be e-mailed to company.
• A more detailed presentation and discussion will occur at the next Air Forum meeting.
Basic Operating Permits
What is their Purpose?

• Provides one reference document of applicable regulations for companies and inspectors.

• Allows the Air Program an opportunity to update emission unit lists and possible missing MoEIS data.

• Applicable rules database will allow the Air Program to better identify and communicate with companies affected by new or revised regulations.
EPA’s Proposed Revision to the Petition Provisions of the Title V Permitting Program

• Specifies the content and format of a Title V petition
• Provides direction as to how to submit a petition
• Requires written responses to public comments be provided to EPA with the draft Title V permit
• Provides guidance on recommended practices for permitting authorities to ensure complete administrative records and notice to the public when EPA’s 45 day review period beings
Construction Permit Focus

• Improved application forms
• Changes to review process for construction industry (rock crushers, concrete batch plants, and asphalt plants)
• Size of interactive inventories used when conducting an air quality analysis
• Default release parameters used when conducting an air quality analysis
When is Modeling Required for a Construction Permit?

• If potential emissions are below or limited to the respective de minimis level, then no air quality analysis is required.

• If potential emissions are above the de minimis level, then an air quality analysis is required. A screening analysis is allowed if appropriate.

• Specifically for PM and SO$_2$, a refined air quality analysis is required if potential emissions are greater than 50 tons/year.
Hazardous Air Pollutant (HAP) Modeling

- Required if the potential emissions are greater than the Screen Modeling Action Level (SMAL)
- Can request a limit to less than the SMAL level and avoid modeling
- Results of modeling compared to the Risk Assessment Level (RAL)
- If there is an applicable MACT standard and the MACT has undergone a residual risk analysis, then no modeling is required
Helpful Permitting Links

- Air Pollution Control Program’s Permit Webpage: [http://dnr.mo.gov/env/apcp/permits.htm](http://dnr.mo.gov/env/apcp/permits.htm)
  - Operating and Construction Permit Fees
  - Permits on public notice
  - Issued permits
  - Construction Permit Guidance
  - Permit Modeling Guidance
  - Operating Permit Guidance (coming)

- SMAL and RAL for hazardous air pollutants
Contact Information

• Kendall Hale, Permit Section Chief
  kendall.hale@dnr.mo.gov

• Susie Heckenkamp, NSR Unit Chief
  susan.heckenkamp@dnr.mo.gov

• Mike Stansfield, Operating Permit Unit Chief
  michael.stansfield@dnr.mo.gov

• Permit Section Phone Number
  573-526-3835
Other Air Program Reminders
How To Stay Informed

Public notices – rules, permits, state plans:

Air Program Advisory Forum:
http://dnr.mo.gov/env/apcp/airadvisory/apcpstakeholder.htm
Air Program Contact Information

Air Program’s web page:
http://www.dnr.mo.gov/env/apcp/index.html

- firstname.lastname@dnr.mo.gov

- Front Desk (573) 751-4817
Kyra L. Moore, Director
MDNR Air Pollution Control Program
1659 E. Elm Street
Jefferson City, MO 65102
(573) 751-7840
(573) 751-0303 direct line
kyra.moore@dnr.mo.gov
Division of Environmental Quality Acting Director: Steven Feeler

Date: March 2, 2017

Nothing in this document may be used to implement any enforcement action or levy any penalty unless promulgated by rule under chapter 536 or authorized by statute.