

One-Hour SO₂ Update

Clean Air Act Advisory Group

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SO₂ ...how we got here

- EPA first set the NAAQS for SO₂ in 1971:
 - 140 parts per billion (ppb) 24-hour primary standard
 - 30 ppb annual average primary standard
 - 500 ppb 3-hour average secondary standard
- Last review completed in 1996 – EPA did not revise
- EPA sued, case remanded in 1998 – no action till 2010
- EPA released the new 1-hour NAAQS on June 2, 2010
- Two existing primary standards were revoked
- New 1-hour primary standard of 75 ppb
 - Based on 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations
- All Kansas monitors meet the current SO₂ standard

Then Things Went South

- Requirement to conduct modeling problematic
 - Inadequate guidance
 - Inadequate resources
 - Not enough time
- Still.....we had a plan
- States and industry put pressure on EPA
- EPA sent letter to states changing SIP requirements
- EPA hosted 3 meetings on alternate processes
- EPA issued Technical Assistance Documents
- Data regulation proposed

SO₂ Source-Oriented Monitoring TAD

- Second draft technical assistance document released in Dec 2013
- Provide guidance on how to monitor ambient air in proximity to an SO₂ emission source
- Three recommended approaches:
 - conduct modeling to aid in monitoring site placement
 - conduct exploratory monitoring
 - use emissions data, monitoring data, and modeling to determine permanent monitoring site placement
- Siting at peak concentration locations
- Expect multiple monitors per site
- Plan far ahead for this option
- Model ASAP if this is under consideration

SO₂ NAAQS Modeling TAD

- Second draft released in Dec 2013
- Supersedes the March 2011 guidance
- Designation modeling.....look at existing air quality, not potentials
- Recommended approaches which discuss:
 - Use of temporally varying actual emissions
 - Source characterization – model sites that exceed with AERSCREEN
 - Meteorological data – 3 years
 - Model selection - AERMOD
 - Background concentrations - KS uses design values less directly impacted days

EPA SO₂ Data Requirements Rule

- Proposal published in Federal Register on April 17, 2014
- Established implementation timeline
- Proposed source threshold options
 - Lower threshold: 1,000 TPY (CBSA > 1M)
 - Higher threshold: 2,000 TPY (outside CBSAs)
- Modeling could be used to demonstrate attainment (must continue to model every three years)
- SO₂ monitoring would likely require three per site
- Final rule expected late 2014
- Issues
 - Form of 1-hour limits in permits or agreements
 - Impact of SSM agreements or regulations
 - If monitoring, develop monitoring plan and discuss with KDHE how it will be operated

Data Requirements Rule Timeline

- **2014:** EPA proposes and finalizes Data Requirements Rule
- **Jan. 2016:** Air agency identifies sources for monitoring; provides modeling protocol for others
- **June 2016:** Air agency provides updated monitoring plan
- **Jan. 2017:**
 - New monitoring sites operational by 1/1/17
 - KDHE submits analysis and boundary recommendation for modeled areas
- **Dec. 2017:** EPA designates new nonattainment areas based on modeling
- **Early 2020:** KDHE submits boundary recommendations for monitored nonattainment areas
- **Late 2020:** EPA designates rest of country

EPA SO₂ Consent Decree

- Lawsuit filed by Sierra Club and NRDC to compel EPA to complete remaining designations
- Published in FR June 2, 2014
- Consent decree establishes dual thresholds:
 - Areas with units emitting 16,000 TPY or
 - Those emitting >2,600 TPY with emission rates of 0.45 SO₂/MMBtu or higher
- EPA required to complete designation process 16 months after Consent Decree is approved
 - Inadequate time to install monitors (3 years data) and;
 - To conduct modeling runs, negotiate agreements, etc.
- Process on hold until EPA determines if they will sign the CD which supersedes Data Rule timelines

Consent Decree Timeline

- If the decree were signed September 1, 2014
- 16 mos. later, EPA to sign a *Federal Register* **final** notice of promulgation of designations – Jan 2016
- 18 mos. after designations (nonattainment), attainment plan due – July 2017
- 5 years after designations, attainment due date – January 2021
- Date when unit would have to have controls in place or shut down still uncertain

Questions?



Our vision is 'healthy Kansans living in safe and sustainable environments'.
The state belongs to all of us - "Kansas Don't Spoil It"