



1-Hour SO₂ NAAQS Implementation: Proposed Data Requirements Rule

Webinar for State and Local Air Agencies

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Overview

- SO₂ NAAQS Proposed Data Requirements Rule
 - Signed on April 17, 2014; pending FR publication
 - 60 day public comment period (docket EPA-HQ-OAR-2013-0711)
 - Final rule expected in late 2014
- Background: SO₂ NAAQS implementation strategy
- Elements of the SO₂ data requirements rule proposal
 - Expected implementation timeline / deadlines for state submittals
 - Source threshold options
 - Incentives for enforceable emission limits to avoid nonattainment designation
 - Ongoing assessment of air quality for areas designated “attainment”
- Discussion and questions



Background: SO₂ NAAQS Implementation Strategy (1)

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SO₂ area designations challenge:

- Current scope of SO₂ monitoring is limited
- Many of the existing monitors are not located to characterize peak concentrations and source-oriented impacts
- Resources for additional monitoring are also limited
- Where feasible, it is appropriate for EPA to develop reasonable approaches to protecting public health in unmonitored areas
- Some stakeholders allege there are NAAQS violations in certain unmonitored areas based on modeling they have done



Background: SO₂ NAAQS Implementation Strategy (2)

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- May 2012: EPA issued White Paper and held 3 stakeholder meetings with states/tribes, industry and environmental organizations to discuss a reasonable approach to SO₂ implementation.
 - Noted that modeling has been used in the past to characterize air quality for SO₂ designations purposes. Modeling allows for characterization of air quality around sources where monitoring is impractical.
- Key comments:
 - Implement through a notice and comment rulemaking
 - Broad support for emissions threshold to identify priority sources
 - States expressed concerns about costs of additional monitoring. Supported flexibility to choose to characterize air quality for priority sources through monitoring or modeling
 - Industry generally favored monitoring as traditional and more certain approach to characterize air quality.
 - Environmental groups strongly favored modeling as able to characterize air quality 360 degrees around the source, and able to provide data more quickly and for less cost than monitoring.



Background: SO₂ NAAQS Implementation Strategy (3)

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- February 2013 - EPA issued:
 1. Area designation “120-day letters” to states with monitored 1-hour SO₂ NAAQS violations;
 2. Letters regarding other areas stated EPA was not yet ready to propose designations; and
 3. Strategy Paper for SO₂ designations and implementation
 - Informed by input received in stakeholder meetings and written comments
 - Recommended development of future “SO₂ data requirements rule” and completing designations using data collected pursuant to the rule
 - Orderly nationwide process
 - Expeditious but workable schedule
 - State flexibility to use monitoring or modeling to characterize air quality
 - Incentives to establish enforceable emission limits to avoid nonattainment designation
 - Maintain traditional state and EPA roles in designation process



Background: SO₂ NAAQS Implementation Strategy (4)

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- May 2013 (first draft) and December 2013 (second draft): As part of the SO₂ strategy, and in preparation for issuance of the data requirements rule, EPA issued draft technical assistance documents (TADs) for public review
 - SO₂ Source-Oriented Monitoring TAD: guidance on identifying locations of peak ambient concentrations for ambient monitoring sites
 - SO₂ Modeling for Designations TAD: guidance on use of actual emissions and meteorological data in modeling analyses conducted as a surrogate for monitoring “current” air quality.
- August 2013: EPA issued final area designations for 29 areas



Elements of the SO₂ Data Requirements Rule Proposal

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- Key elements of the proposed rule
 1. Expected implementation timeline
 - Deadline for air agencies to declare to EPA which source areas would be modeled vs. monitored
 - Deadline for air agencies to submit new modeling or monitoring data to EPA
 - Discussion of intended dates for EPA action on future rounds of designations
 2. Source thresholds for identifying priority sources around which to characterize air quality through ambient monitoring or air quality modeling (serving as surrogate for monitoring)
 3. Discussion of incentives and procedures for air agencies to work with sources to adopt enforceable emission limits early enough to avoid nonattainment designation
 4. Provisions for ongoing assessment of air quality for areas designated attainment



Expected Implementation Timeline: SO₂ Data Requirements Rule Proposal

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- **Late 2014:** EPA issues final rule
- **Jan. 2016:** Air agency: (1) identifies sources to be characterized with monitoring data; and (2) provides modeling protocol for other sources
- **July 2016:** Air agency updates annual air quality monitoring plan
- **Jan. 2017:**
 - New monitoring sites operational in January 2017
 - Air agency submits modeling analyses for “modeling” areas (i.e., areas above threshold for which they are not installing new monitors)
 - Air agency can submit boundary recommendations for all areas except those relying on new monitoring data (in future)
- **Dec. 2017:** EPA intends to designate areas not installing new monitors
 - Designations based on: modeling data, properly sited monitors showing attainment, areas having no sources
- **Early 2020:** New monitoring sites have 3 years of data; air agency submits monitoring data
 - Air agency can submit boundary recommendations for monitored areas
- **Dec. 2020:** EPA intends to designate areas for rest of country



Source Threshold Options (1)

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- Proposed thresholds are expressed in terms of annual tons of SO₂
 - Hourly emission rate data not available for all SO₂ sources
- Air agency will need to characterize air quality through monitoring or modeling for each source above the threshold
- Two-pronged approach is proposed
 - Lower threshold in more populated areas
 - Higher threshold in less populated areas



Source Threshold Options (2)

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Option	Threshold For SO ₂ Sources		Number of Sources**	Percent of National Emission†	Plus Sources In Designated Nonattainment Areas‡	Total Source Coverage	Total Annual Emissions Coverage
	Inside CBSAs Greater than 1M	Outside CBSAs Greater than 1M					
1*	1,000 TPY	2,000 TPY	447	75 %	47	496	90 %
2	2,000 TPY	5,000 TPY	271	66 %	47	323	82 %
3	3,000 TPY	10,000 TPY	159	54 %	47	211	69 %

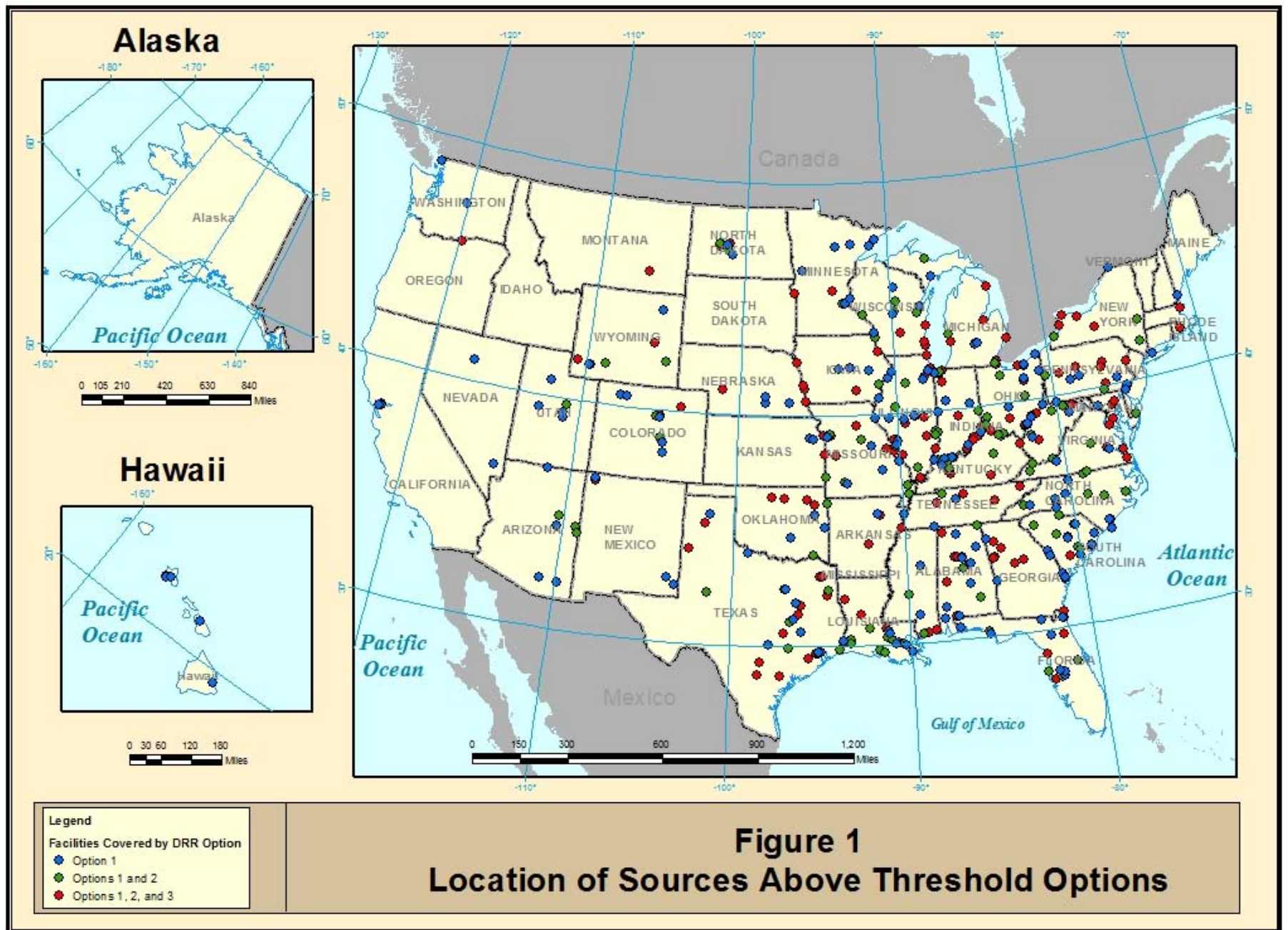
* Preferred option.

** These do not include sources located in nonattainment areas designated in 2013.

† Total SO₂ emissions in 2011 were 5.8 million tons.

‡ There are 47 sources with annual emissions greater than 1,000 tpy in nonattainment areas designated in 2013.

- EPA preference is Option 1
 - “90% emissions” option discussed in May 2012 white paper and stakeholder meetings
 - Minimum monitoring requirement for source-oriented lead NAAQS addresses 90% of the stationary source emissions
 - Many states supported a threshold of 2,000 tpy
 - 2013 designations generally reflect sources above these thresholds
 - No state would have more than 32 sources
 - Close to 10% of the target sources were included in 2013 area designations





Incentives for Enforceable Emission Limits to Avoid Nonattainment Designation

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- Air agencies can avoid nonattainment designation for certain areas by working with sources to establish permanent and enforceable emission limitations by January 2017 that show compliance with the SO₂ NAAQS through modeling
 - Emission limits would need to be incorporated into the SIP and made federally-enforceable (e.g. through source-specific SIP revision, minor NSR permit, consent decree, etc.)
 - Can take into consideration emission reduction measures that will be implemented for Mercury and Air Toxics Standard (MATS) and other rules



Ongoing Assessment of Air Quality for Areas Designated “Attainment”

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- If areas are designated “attainment” after states provide monitoring or modeling data, states will be required to verify ongoing attainment
- Monitors deployed to meet the requirements of this rule in general must continue operation. However, the rule proposes that a monitor may be shut down if it meets certain criteria, including:
 - Two proposed options:
 1. if design value is below 50% of standard;
 2. if design value is below 80% of standard.
- Modeled areas
 - For other pollutants, monitors are available to track emissions in the future, but this will not be true for SO₂ where state chooses modeling option
 - Three options are proposed for ongoing assessment of attainment
 1. Air agency assesses emissions annually, conducts modeling every 3 years
 2. Air agency assesses emissions annually; if total SO₂ emissions increase, air agency recommends whether more modeling is needed; RA considers case-by-case
 3. Air agency conducts screening modeling every 3 years



Questions?

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For more information:

SO₂ NAAQS Implementation website:

<http://www.epa.gov/airquality/sulfurdioxide/implement.html>

Submit comments:

<http://www.regulations.gov>, docket EPA-HQ-OAR-2013-0711

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