

**Final Rule on the Implementation of the New Source Review Provisions for  
Particulate Matter Less Than 2.5 microns (PM<sub>2.5</sub>)  
Fact Sheet**

**Action**

- On May 8, 2008, the Environmental Protection Agency (EPA) issued final rules governing the implementation of the New Source Review (NSR) program for particulate matter less than 2.5 micrometers in diameter (PM<sub>2.5</sub>). PM<sub>2.5</sub> also is known as fine particles.
- Today's final NSR rule complements the Agency's PM<sub>2.5</sub> final implementation rule issued on April 25, 2007 which addresses the non-NSR provisions of PM<sub>2.5</sub> NAAQS. A related rule, proposed on September 21, 2007, would complete the PM<sub>2.5</sub> preconstruction review program framework by establishing increments, significant impact levels, and significant monitoring concentrations for PSD. Together, these three rules will establish the framework for implementing preconstruction permit review for the PM<sub>2.5</sub> NAAQS.
- This rule finalizes several NSR program requirements for sources that emit PM<sub>2.5</sub> and other pollutants that contribute to PM<sub>2.5</sub>:

*Pollutants that Contribute to PM<sub>2.5</sub> Subject to NSR Regulations*

- Fine particles can be emitted directly from a facility or formed secondarily in the atmosphere from emissions of other compounds referred to as precursors. This rule requires NSR permits to address directly emitted PM<sub>2.5</sub> as well as pollutants responsible for secondary formation of PM<sub>2.5</sub> as follows:
  - Sulfur dioxide (SO<sub>2</sub>) – regulated
  - Nitrogen oxides (NO<sub>x</sub>) – regulated unless state demonstrates that NO<sub>x</sub> emissions are not a significant contributor to the formation of PM<sub>2.5</sub> for an area(s) in the state
  - Volatile organic compounds (VOC) – not regulated unless state demonstrates that VOC emissions are a significant contributor to the formation of PM<sub>2.5</sub> for an area(s) in the state
  - Ammonia – not regulated unless state demonstrates that ammonia emissions are a significant contributor to the formation of 5 PM<sub>2.5</sub> for an area(s) in the state
- This rule does not initially require states to account for gases that could condense to form particles (called “condensables”) in PM<sub>2.5</sub> emissions limits in PSD or nonattainment NSR permits until the earlier of the date the transition period ends or January 1, 2011. EPA has adopted a transition period for the collaborative validation of test methods used to measure emissions of these particles.

*Major Source Thresholds*

- EPA's air permitting programs rely upon emissions thresholds to determine when program requirements apply to new facilities. If a new facility will emit target air

pollutants in amounts greater than the major source threshold, the facility is considered a major source and must obtain permits that specify required emissions controls.

- The rule defines sources as major for the PM<sub>2.5</sub> PSD NSR requirements if they are:
  - Included as one of the specific twenty-eight source categories listed in the current Federal PSD requirements and emit 100 or more tons per year (tpy); or
  - Not included on this list and emit 250 or more tpy.
- Sources are defined as major for nonattainment NSR provisions if they emit 100 or more tpy of PM<sub>2.5</sub>.

#### *Significant Emissions Rates*

- EPA's air permitting programs use significant emission rate levels to determine when NSR requirements apply to existing facilities. Significant emission rates are used to evaluate whether a proposed project at an existing facility is considered a major modification and therefore requires the facility to obtain permits.
- This rule sets the significant emissions rate for direct PM<sub>2.5</sub> and precursor pollutants as follows:
  - Direct PM<sub>2.5</sub> emissions at 10 tpy
  - SO<sub>2</sub> emissions at 40 tpy
  - NO<sub>x</sub> emissions at 40 tpy
  - VOC emissions (if regulated) 40 tpy unless the state demonstrates that a lower rate is appropriate.

#### *Interpollutant Offset Trading*

- This final rule allows interpollutant trading under the PM<sub>2.5</sub> nonattainment NSR program on a regional or statewide basis, but precludes such trading on a permit-by-permit basis.
- The permissible interpollutant offset trading allows reductions in direct PM<sub>2.5</sub> to offset precursor emissions increases, emissions reductions of one precursor to offset emissions increases of another precursor, and reductions in precursor emissions to offset direct PM<sub>2.5</sub> emissions increases.
- To facilitate these trading provisions, EPA has provided acceptable trading ratios that specify the amount of each pollutant which may be traded for any other. States may elect to use EPA's trading ratios or develop their own subject to EPA approval.

#### *Revised SIP Submittal Deadlines*

- States with EPA approved PSD programs and those with PM<sub>2.5</sub> nonattainment areas have up to three years from the publication of this final rule to submit revised State Implementation Plans (SIPs) incorporating these NSR requirements.

#### *Timing of Implementation of the Rule*

- Upon the effective date of this rule, this rule will apply immediately:
  - in states that implement EPA's PSD rule through delegation (delegated states); and
  - in nonattainment areas of the states, through the 'transitional' NSR provisions (contained in Appendix S of 40 CFR 51) until a revised SIP is adopted.
- States with EPA approved PSD programs, should continue to use the existing interim approach of relying on PM<sub>10</sub> (inhalable particles smaller than, or equal to, 10 micrometers in diameter) as surrogate for PM<sub>2.5</sub> until their revised SIPs are adopted.

#### **Background**

- Congress established the NSR program as part of the 1977 Clean Air Act Amendments and modified it in the 1990 Amendments.
- The New Source Review (NSR) program requires industrial facilities to obtain permits outlining emissions controls for target air pollutants before they begin construction.
- The three types of NSR permitting requirements are:
  - Prevention of Significant Deterioration (PSD) permits which are required for new major sources or a major source making a major modification in areas that meet national ambient air quality standards (NAAQS);
  - Nonattainment NSR permits which are required for new major sources or major sources making a major modification in areas that violate NAAQS (nonattainment areas); and
  - Minor source permits.
- NSR is a preconstruction permitting program that serves two important purposes.
  - First, it ensures the maintenance of air quality standards when factories, industrial boilers and power plants are modified or added. In areas that do not meet the national air quality standards, NSR assures that new emissions do not slow progress toward cleaner air. In areas that meet the standards, especially pristine areas like national parks, NSR assures that new emissions fall within air quality standards.
  - Second, the NSR program assures that state-of-the-art control technology is installed at new plants or at existing plants that are undergoing a major modification.
- Fine particles in the atmosphere are made up of a complex mixture of components.

Common constituents include: Sulfate; nitrate; ammonium; elemental carbons; a great variety of organic compounds; and other inorganic materials.

- During the 1997 review of the nation's ambient air quality standards for particles, EPA established the first standards for PM<sub>2.5</sub> setting a daily standard of 65 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and an annual standard of 15  $\mu\text{g}/\text{m}^3$ . In addition, EPA slightly revised the existing standards for PM<sub>10</sub> as a part of this review.
- In 2006, EPA revised the standards for fine particles by lowering the daily standard to 35  $\mu\text{g}/\text{m}^3$  and retaining the current annual of 15  $\mu\text{g}/\text{m}^3$ . EPA also retained the existing 24-hour PM<sub>10</sub> standard of 150  $\mu\text{g}/\text{m}^3$ , but revoked the annual PM<sub>10</sub> standard, because available evidence does not suggest a link between long-term exposure to PM<sub>10</sub> and health problems.
- After sufficient monitoring data was collected by state, local and tribal governments, EPA designated areas as "attainment" or "nonattainment" for the PM<sub>2.5</sub> standards, and these designations became effective in April 2005. The Clean Air Act requires the state to submit an implementation plan to EPA within three years once an area is designated as nonattainment. For the 1997 fine particle standards, state plans are due in April 2008.

#### **For More Information**

- Interested parties can download information on the proposal from EPA's Web site at: [www.epa.gov/nsr](http://www.epa.gov/nsr).
- Today's final action and other background information are also available either electronically in [www.regulations.gov](http://www.regulations.gov), EPA's electronic public docket and comment system, or in hard copy at EPA's Air and Radiation Docket and Information Center, Environmental Protection Agency, Room 3334, 1301 Constitution Avenue, NW, Washington, DC (Docket ID No. EPA-HQ-OAR-2003-0062). The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742.
- For more information, call Mr. Raj Rao at 919-541-5344 or email at [rao.raj@epa.gov](mailto:rao.raj@epa.gov).