



Fact Sheet

South Carolina Department of Health and Environmental Control • www.scdhec.gov

Nonattainment Permitting

What does nonattainment mean?

Every five years, the United States Environmental Protection Agency (EPA) considers revising the National Ambient Air Quality Standards (NAAQS) for six “criteria pollutants”: particulate matter, carbon monoxide, lead, sulfur dioxide, nitrogen dioxide and ground-level ozone. The standards apply to the concentrations of these pollutants outdoors. If the air quality in a geographic area does not exceed any of the NAAQS, then that area is designated attainment; areas that do not meet all the NAAQS are called nonattainment areas. In 2008, the EPA revised the ground-level ozone standard, making it much more protective of human, animal and plant life. The impact of a nonattainment designation is the same for any of the criteria pollutants.

In early 2008, the EPA lowered the ozone standard to 75 parts per billion. However, because the panel of scientists recommending a change had recommended an even stricter standard at that time, the EPA is now considering a new standard between 60 and 70 parts per billion and plans to announce its final decision in August 2010. Since many areas of South Carolina will likely be in nonattainment of the new ozone standard, this fact sheet focuses on efforts to bring those areas back into attainment of the ozone standard. Often, wind moves ozone-forming pollutants (oxides of nitrogen, or NO_x, and volatile organic compounds, or VOCs) away from their sources. Ozone-forming reactions take place while the wind blows the pollutants through the air. As a result, this type of air pollution is often more severe miles away from the source than it is at the source.

Pollutants such as NO_x and VOCs travel across country and state lines. Therefore, when a metropolitan area covers more than one state (like the Charlotte metropolitan area that includes parts of York County in SC), their local governments and air pollution control agencies must cooperate to solve the problem. The states use the permit system outlined in the Clean Air Act (CAA) to make sure factories, power plants and other regulated sources meet their air quality requirements.

How is an area designated “nonattainment”?

The designation of attainment or nonattainment is based on data collected from monitors at locations in urban and rural settings around the state. The data is collected by each state and submitted to the EPA as a nonattainment boundary designation proposal. After reviewing the state’s proposed boundary designations, EPA will comment on and/or modify the proposed boundaries and allow states and local areas to provide supporting documentation on key factors like emissions, traffic and commuting patterns, population density and expected growth. Public comments are also accepted during that time. The EPA then designates the area as attainment or nonattainment with the standard. The EPA will announce these designations for ground-level ozone in March 2010. If an area is designated as nonattainment, the area must develop and implement control plans to reduce ozone-forming pollution.

The Core Based Statistical Area (CBSA) or Combined Statistical Area (which includes two or more adjacent CBSAs) is the starting point or “presumptive” boundary for a nonattainment area. This starting point is recommended because the factors used to establish CBSAs are similar to the factors considered in determining whether a nearby area is contributing to the violation of the realistic deadlines for reaching clean-up goals. Not only must nonattainment areas meet deadlines, but states with nonattainment areas must show the EPA that they are making reasonable further progress, or moving forward, on clean-up before the deadline.

What is a State Implementation Plan (SIP)?

Every state has a plan, called a State Implementation Plan, for keeping the state from violating any of the NAAQS. When an area is designated nonattainment for any pollutant, the affected state must revise its State Implementation Plan (SIP). This revision, also known as an Attainment Demonstration SIP, outlines the measures the area will take to meet the NAAQS. Through the SIP, the state designs its approach to reducing the ozone level in the air and emissions of ozone precursors. One of the air pollution control processes used in many states is called New Source Review (NSR).

What is New Source Review, and how does it improve air quality?

The NSR process was established as part of the CAA Amendments of 1977. NSR is a preconstruction permitting program that ensures air quality will not become significantly worse from the addition of new facilities or modifications to existing facilities and that the emissions will not slow progress toward cleaner air. NSR permits are legal documents that specify what construction is allowed, what emission limits must be met, and how often the source may operate. To assure that sources keep their emissions below their limits, permits also contain reporting, monitoring and recordkeeping requirements.

Under NSR, all stationary sources must get permits before they start construction. There are three types of NSR permits: Prevention of Significant Deterioration (PSD), Nonattainment NSR (NNSR) and Minor NSR.

- PSD permits are required for new major sources or for a major source making a major modification. PSD permits require a facility to install the Best Achievable Control Technology (BACT) to ensure that new emissions will not cause or contribute to a violation of any applicable NAAQS.
- NNSR applies to new or expanding major sources in nonattainment areas. NNSR requirements are customized for the nonattainment area. All sources subject to NNSR must install pollution control equipment designed for the lowest achievable emission rate (LAER); they must also provide emissions offsets and provide an opportunity for public involvement.
- Minor NSR is for stationary sources that do not require PSD or NNSR permits. The purpose of Minor NSR permits is to prevent the construction of sources that would interfere with attainment or maintenance of a NAAQS or violate the pollution control strategies in nonattainment areas.

What are offsets?

A major source, or major modification of a source, planned in a nonattainment area must obtain emission reductions before its permit can be issued. The emission reductions are generally obtained from existing sources nearby. The emission reductions, or “offsets,” must make up for the increased emissions from the new source or modification to ensure reasonable progress toward meeting the NAAQS. The emission reductions must also provide a net air quality benefit. Offsets make it possible for an area to move toward attainment of the NAAQS while still allowing some industrial growth.

What happens when an area meets the NAAQS?

Once a nonattainment area meets the NAAQS and the additional redesignation requirements outlined in the CAA, the EPA will designate the area to attainment as a “maintenance” area. Using the air quality tools provided by the CAA, namely the SIP and NSR, and working with local governments to develop initiatives for reducing air pollution, the SC Department of Health and Environmental Control is working to maintain and improve air quality in South Carolina.

For more information, visit: <http://www.atsdr.cdc.gov/tfacts126.html>

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