

ARS Compliance Tip of the Month

April 26, 2010

National Ambient Air Quality Standards 1-Hour Nitrogen Dioxide (NO₂)

On January 22, 2010, the U.S. Environmental Protection Agency (EPA) Administrator signed a final rule containing a new National Ambient Air Quality Standard (NAAQS) for Nitrogen Dioxide (NO₂). The rule is based on a 1-hour averaging period, and while this averaging period is new, the pollutant has long had an annual averaging period standard.



Family members include nitrogen oxides (NO_x), and short-term exposure to NO_x causes adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. NO_x also reacts with volatile organic compounds (VOC) in the atmosphere to create ozone. Unfortunately, this isn't the kind of ozone in the atmosphere protecting us from the sun. Rather, it is ground-level, and is commonly called smog, that dingy pollution dirtying up the skyline over urban areas.

Unlike the other pollutants subject to the NAAQS, the new NO₂ standard is not measured in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Rather, the point of compliance is 100 parts per billion (ppb) based on the 3-year average of the 98th-percentile of the annual distribution of daily maximum 1-hour concentrations. If that is confusing to you, you're not alone. Translated into something those of us outside EPA can understand, the new standard is approximately 189 $\mu\text{g}/\text{m}^3$ for the highest 8th highest concentration, and if that still is confusing don't worry – that's what your crack Compliance Group at ARS is for!!!

An interesting twist to this rule is that unlike prior NAAQS rules, this one does not contain a "grandfather" exception for Prevention of Significant Deterioration (PSD) projects that have already submitted a complete permit application. Typically, if a project submits a complete application before the date the rule is final, they do not have to amend their application and conduct revised dispersion modeling. This final rule means that if you have a PSD application currently under review at a regulatory agency, you will have to revise the application and modeling to demonstrate compliance with the new NAAQS before your permit can be issued.

For those of you not impacted by the PSD-project NO₂ requirements, your EPA Regional Office and state agency will be determining the applicability of this rule for lesser-emitting sources. The usual process allows each state three years from the date of promulgation to revise their State Implementation Plan (SIP) to cover non-PSD projects. If you have a PSD application at a state agency, or even a Title V or synthetic minor permit under review, and would like to talk about this new NAAQS further, feel free to call me at 970/484-7941, e-mail amartinkus@air-resource.com, or contact your friendly and knowledgeable ARS project manager.

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Mr. Martinkus has nearly seven years' experience in air quality permitting and multi-media compliance specializing in issues affecting regulated industries. He is proficient with CAA, CWA, RCRA, CERCLA, EPCRA, and TSCA regulations and other federal and state environmental regulatory programs, and has diverse work experience with industrial/ manufacturing facilities as well as fuel-grade ethanol production facilities throughout the U.S.