



Power plant chimney spew clouds of gas and particles into the air. Air pollution standards set by the EPA have become stricter over the years, and now may be impossible to achieve. (PublicDomainPictures/pixabay.com)

Air Quality Standards: An Ever-Changing Target

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Commentary

My colleague Steve Milloy, curator of the invaluable common-sense website [Junk Science](#), sent me a link to a press release issued by the Center for Biological Diversity (CBD) last week. The CBD's [thundering press release](#) cites a study that purports to demonstrate that the “University of North Carolina coal plant spews asthma-causing pollution.”

Knowing that I am going on 35 years as an air quality expert in my day job, Milloy asked for my opinion of the study. The answer, to use the marvelous phrase Milloy coined, is that this is just another example of “scare pollution.”

In their press release, the CBD described emissions from the coal-fired plant at UNC–Durham in the typical hysterical terms that environmental groups utilize when they issue a call to action.

The UNC emissions are supposedly “dangerous” and “toxic” and they “far exceed Clean Air Act limits.” Perrin de Jong, described as a staff attorney for CBD, warned that continued operation of the coal-fired plant “means that students, staff, and faculty can face air pollution at levels that can trigger dangerous asthma attacks, inflame lung diseases, and even kill people.”

These terrifying conclusions are based on a study conducted for the CBD by Lindsey Meyers, who identifies himself as a consultant who has a master’s in geography (2012) from California State University–Northridge. His study was titled “Air Dispersion Modeling Analysis for Verifying Compliance of Allowable Emissions with the One-Hour SO₂ and NO₂ NAAQS: UNC Manning and Cogeneration Power Plants.”

Before we dive into the study itself, a bit of background is in order. Acronyms first:

- SO₂: Sulfur dioxide, a pollutant primarily associated with acid rain. U.S. emissions of SO₂, like emissions of virtually all air pollutants, have dropped enormously over the past 40-plus years.
- NO₂: Nitrogen dioxide, a pollutant associated with respiratory issues. U.S. NO₂ emissions also have dropped enormously over the past four decades and industrial sources, like coal-fired power plants, now contribute a relatively small part of national NO₂ emissions. NO₂ emissions are a fractional part of nitrogen oxides (NO_x) emissions that have been linked to asthma by some.
- NAAQS: National Ambient Air Quality Standards. These are, in effect, the Environmental Protection Agency’s (EPA) official definition of “clean air” with

ENVIRONMENTAL PROTECTION AGENCY'S (EPA) OFFICIAL DEFINITION OF CLEAN AIR WITH respect to the six criteria pollutants: sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, particulate matter, and lead. The criteria pollutants are the most common and their effects—with the exception of lead—are generally treated as chronic rather than acute. Pollutants whose impact may be acute are separately regulated as Hazardous Air Pollutants under Section 112 of the Clean Air Act.

Changing Goalposts

When establishing a NAAQS for a particular pollutant, the EPA considers the potential effect, with regards to human health and the environment, of particular concentrations of criteria pollutants in the air we breathe. However, NAAQS are moving targets.

Historically, when most of the nation has achieved compliance with a particular NAAQS for a particular pollutant, the EPA has simply raised the bar, retroactively claiming the old NAAQS was insufficiently protective of human health and the environment, and thus justifying implementing a new, more stringent NAAQS. This was common practice in both Democrat and Republican administrations.

In 2010, the Obama-era EPA implemented the most stringent NAAQS for NO₂, SO₂, and particulate matter less than 2.5 microns in diameter (PM-2.5) that had ever been contemplated. They were, and are, ridiculous standards, demanding a level of cleanliness that even “The Odd Couple’s” Felix Unger would find offensive. There are many good people working for the EPA, and many of them privately—but never publicly, of course—would acknowledge that the new NAAQS were designed to fail.

It was a subtle but brilliant maneuver designed to kill coal forevermore. I’m morally certain it was calculated to be such by President Barack Obama and his environmental director at the time, true believer Lisa Jackson. The locus of the strategy was the point that Meyer stumbled upon—or perhaps sought out—I don’t know which: dispersion modeling.

Under EPA rules, if a new project is large enough, it must perform computer

dispersion modeling to show that emissions from the proposed project will never, ever violate a NAAQS for any criteria pollutant. Practically any new coal-fired power plant would be large enough to trigger the modeling requirement.

By setting the SO₂, NO₂, and PM-2.5 NAAQS ridiculously low, the EPA ensured that no proposed new coal-fired power plant, no matter how energy efficient or well controlled, could ever get through the modeling exercise. Game. Set. Match.

Meyers discovered the flip side of the impossible-to-attain standards: Apply them to an existing source and play the right modeling game and you can condemn virtually any source you want. We can perform the following exercise for any pollutant associated with UNC–Durham, but let's use NO₂ emissions as an example.

The Data

The EPA publishes official nationwide emission data every three years as the [National Emissions Inventory \(NEI\)](#). The NEI identifies the sources of all air pollutant emissions and the amounts of air pollutants they emit. The last NEI officially published is dated 2014 (the 2017 data is still being audited).

According to the 2014 NEI, total NO_x emissions in North Carolina dropped from around 700,000 tons per year in 2002 to just over 300,000 tons per year in 2014. Most of those NO_x emissions are associated with mobile sources—cars, trucks, and the like—about 216,000 tons in 2014. [The UNC–Durham campus contributed less than 300 tons](#) of NO_x emissions in 2014, less than 0.1 percent of the statewide total. If one is genuinely and unbiasedly interested in the big environmental picture, UNC–Durham is a very small fish in the pond.

The proof in this particular pudding is that Meyers could have run the same modeling exercise practically anywhere within a biscuit-toss of any combustion source in North Carolina and come up with the same result: The source would be in violation of the ludicrous NO₂ NAAQS.

I've performed modeling runs with backyard barbecues. wood-fired fireplaces.

natural gas-fired generators, and other everyday sources. The result is almost always the same—concentrations of criteria pollutants that vastly exceed today's NAAQS for one or more criteria pollutants.

Given the fact that emission rates of criteria pollutants have been dropping so fast for so long in America, and given the fact that it is almost impossible for a combustion source to “pass” the sort of modeling exercises Meyers proposes, and given the fact that there is no correlation between increasing asthma rates in the United States and decreasing air pollution rates in the same time period, maybe it's time to stop demonizing fossil fuels?

Just sayin' ...

(Screenshot)

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