

NSR/NAAQS/GHG Update

Environmental Focus 2012

Air & Waste Management Association – Louisiana Section

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2012 Topics

NSR Reform – Report Card

The Actual to Projected Future Actual Applicability Test

Source Aggregation

Short Term NAAQS

Potential Impacts of the GHG NSPS

GHG BACT Status

NSR Reform

	Scorecard In Effect	Abandoned, Stayed or Revoked
10 yr Baseline Emissions Lookback	✓	
Actual to Future Actual Methodology – How does it work?	✓	
Actual PALS	✓	
Clean Unit Test		X
Pollution Control Project Exclusion		X
Flexible Permitting and NSR Green Groups		X
RMRR Bright-Line Test		X
Aggregation Rule		X
Hourly Test for EGUs		X



Three Categories Post-NSR Reform Projects

Significant emissions increase – triggers NSR

Insignificant emissions increase but ATPA triggers Reasonable Possibility Rule recordkeeping and/or reporting requirements

Insignificant emissions increase but ATPA does not trigger Reasonable Possibility Rule

- **What if EPA doesn't agree with the ATPA estimate?**
- Note – regardless if there is a significant increase PSD has been triggered

Actual to Projected Actual

Background on the Detroit Edison Case

- First case decided under the 2002 reform rules
- EPA alleged NSR violations related to typical maintenance projects
- EPA motion for preliminary injunction denied
- Company filed for summary judgment on the grounds that it complied with the rules:
 - Submitted notice of the project ahead of time
 - Provided emissions projections indicating no significant emissions increase of NSR regulated pollutants
 - Post-project tracking underway
- EPA contended that the company should have predicted a significant emissions increase
- Judge granted summary judgment to the company – all that had to be done was properly done under the rules

Actual to Projected Actual

District Court decision:

- “While Plaintiff focuses largely on the text of the CAA, Plaintiff does not recognize the function of the 2002 NSR rules and Michigan's State Implementation Plan, which lessens the pre-construction burden on existing facilities so long as certain requirements are met.”
- “These rules, while still following the directives and intent of the CAA, provide source operators with greater flexibility by giving them a post-construction opportunity to fulfill their obligations under the CAA.”
- “Plaintiff may pursue NSR enforcement if and when post-construction monitoring shows a need to do so. Therefore, the Court finds that the instant action is premature, and that summary judgment for Defendants is appropriate.”

Actual to Projected Future Actual

The District Court decision is on appeal in the 6th Circuit:

- EPA argues that it should be able to:
 - Enforce prior to a project based on projections
 - Enforce based on emissions projections even after construction
 - Enforce based on post-project monitoring
- EPA asserts that § 52.21(r)(6) is just a recordkeeping requirement that does not alter the Agency's established enforcement mechanisms

Actual to Projected Future Actual

The company argues that:

- EPA's argument is inconsistent with the plain language of the rule
 - If the project does not cause a significant actual emissions increase, it does not trigger NSR
- EPA's current litigating position is contradicted by the Agency itself in the record of the 2002 NSR Reform Rule

Actual to Projected Future Actual

What happens next?

- EPA filed its reply brief in June, so the case is fully briefed
- Oral argument expected later this year
- A decision soon thereafter

Source Aggregation Status Report

Case-by-case decision since 1980 but what factors matter?

“The Wehrum Memo” issued in January 2007 attempting to add certainty based on proximity

The McCarthy memo issued September 2009 – withdraws Wehrum memo and relies upon 1980 PSD guidance and rules and appears to rely upon functional dependence leading to a series of decisions

Summit Petroleum appeal – Wehrum was correct

Source Aggregation Background

The “Stationary Source” definition is critical to permitting Major Sources and Major Modifications

Stationary Source means “any building, structure, facility, or installation which emits or may emit a regulated air pollutant

Since promulgation of the 1980 NSR Rules – a three part test to determine if pollutant emitting activities should be aggregated

- Sources must belong to same industrial category – i.e. primary SIC Code
- Sources must be contiguous or adjacent, and
- Activities must be under common control

EPA decisions over-time have added functional interdependence as a test for adjacency. Leading to aggregated source miles apart

2007 Wehrum Memo focused on proximity as a key factor for Oil and Gas fields

2009 McCarthy Memo withdraws Wehrum memo and focuses on 1980 case-by-case

Summit Petroleum Background

Gas sweetening plant in Michigan, minor unless aggregated with sour gas wells

100 sour gas wells connected by pipeline supplying sweetening plant. Up to 8 miles apart and covering 43 square miles

Summit owns the pipeline connecting the wells to the plant but not the land between the wells and plant

2005 – Summit requests determination if wells should be aggregated with sweetening plant

2009 - EPA Region 5 determines wells and sweetening plant should be aggregated after considering the “nature of the relationship between the facilities” and the “degree of interdependence between them”

Summit appeals to Sixth Circuit

The Sixth Circuit Decision

Plain meaning of the term “adjacent” is unambiguous

The functional interdependence test is not appropriate – purpose of activities is an “impermissible and illogical stretch”

EPA policy not entitled to deference

Vacated the Summit aggregation decision and remanded it to the Agency for further assessment

The decision is informative but only binding in the Sixth Circuit

The Pennsylvania Conundrum

Source Aggregation DEP and EPA vs. NGOs

The Issue

- Pennsylvania's published guidance in the shale region relies upon the $\frac{1}{4}$ mile test
- But – two refineries some 17 miles apart were considered a single source for some recent permitting decisions
- NGOs Object

NSR and NSPS

EPA proposed an NSPS for GHG emissions on April 13, 2012

Key elements of the proposal:

- Covers only new units:
 - Not reconstructed or modified units
 - Not existing sources
- Combines all fossil EGUs into one category:
 - Covers gas, oil, and coal fired units
 - Covers all technologies (PC, FB, IGCC, GT)
 - Would not cover simple cycle GTs and non-continental EGUs
 - Special provisions for CHP

NSR and NSPS

Emissions standards:

- 1000 lb CO₂/MWh, output based
- Alternative compliance provision:
 - 30-year averaging period
 - 1800 lb/MWh interim standard
 - 1000 lb/MWh standard must be met over the 30-year period
- EPA claims no costs and no benefits

Transitional sources:

- Defined as projects with a PSD permit in hand at proposal
- Not covered if construction commences w/in 12 months of proposal

NSR and NSPS

Key NSR issues:

- Would an NSPS for new units set the “BACT floor” for modifications under PSD?
 - EPA was silent on this issue in the proposal
 - Answer should squarely be “no”
 - But, not complete consistency between PSD and NSPS applicability:
 - e.g., a new unit under NSPS might be a major modification under PSD
 - Innovative arguments almost surely will be made

Will the NSPS change the effect of the PSD GHG “Tailoring Rule”?

- EPA claims in the NSPS proposal that the Tailoring Rule will continue to apply as it currently does after the GHG NSPS is adopted
- EPA states in the preamble that it intends to include confirming language in the final rule, but did not propose actual rule text on this point

NSR and NSPS

Tailoring Rule (cont'd)

- The Tailoring Rule was implemented by defining the term “subject to regulation”
- This definition operates in conjunction with the definition of “regulated NSR pollutant,” which includes a catch-all for pollutants otherwise subject to regulation under the Act
- But, the definition of “regulated NSR pollutant separately covers a pollutant subject to a standard under § 111

Bottom line: a fix is needed, and EPA should not finalize the NSPS until the NSR rules are amended and states have the opportunity to obtain SIP approval of their amended NSR rules

What are The New and Proposed NAAQS?

Pollutant	NAAQS	SIL	Form of the Standard	More Stringent than existing NAAQS?
SO ₂ 1-hour	75 ppb hourly average (~195 ug/m ³)	3 ppb (~8 ug/m ³)	4 th High Daily Max (99 th percentile); average over 3/5 years	Approx. 5 x more stringent
NO ₂ 1-hour	100 ppb hourly average (~189 ug/m ³)	4 ppb (~8 ug/m ³)	8 th High Daily Max (98 th percentile) average over 3/5 years	Approx. 7 x more stringent
PM _{2.5} 24-hour Annual	35 ug/m ³ 15 ug/m ³ 12-13 proposed	1.2 ug/m ³ 0.3 ug/m ³	24-hour: 98 th percentile (averaged over 3/5 years)	Approx. 5 x more stringent than PM ₁₀

Common Challenges for New NAAQS

- Low Significant Impact Levels (SILs); Low Standards/Increments for PM_{2.5}
- High Background Relative to the NAAQS
- Multi-source analyses time/resource consuming
- Ammunition for public interest groups
- Current Air Quality Models are NOT designed to address probabilistic standards; other unresolved technical issues
- Result: Emissions controls required for meeting NAAQS could exceed control-based standards (e.g. BACT, MACT, NSPS) or impose unplanned controls for existing sources

GHG Permit Experience to Date

EPA comment letters on proposed GHG permitting actions at:
<http://www.epa.gov/nsr/ghgcomment.html>

As of June 2012 – 43 permits issued but 20 pending in Region VI
(Arkansas and Texas)

EPA comments – largely address power (21 of 29 comment
letters)

Region VI in-process permits largely petrochemicals

Initial GHG Permit Guidance – Key Points

Issued in November 2010 and Revised in March 2011

No air quality modeling

Long term/annual compliance periods suggested

No redefining of the “source” but what does that mean?

Large sources need to consider CCS

Clean fuels need to be considered

BACT review for new sources extends to non-emitting units

Takeaways – Universal Comments

EPA except in very unusual circumstances will insist on CO₂e emissions limits

Averaging time for GHG should be 12-month rolling average

The Agency will require consideration of CO₂ continuous emission monitors and documented approach to other GHGs

Don't forget to specify test methods for all pollutants including GHGs

Address emissions during startup and shutdown

CCS must be considered but is likely not economical

Takeaways (2) – The Unusual

NSCR may be preferable to SCR due to N₂O reductions – See U.S. Nitrogen Permit

Don't forget non-traditional sources such as:

- Fire pumps and emergency generators – See Crawford Renewable Energy
- Circuit Breakers which may be fugitive source of SF₆ - See Hoosier Energy and TEC (draft IDEM permit)

For uncertain GHG emissions, include a “conservative” emissions limit as BACT and adjust downwards based on stack testing – See Elizabethtown Energy

Permits should have ton per year and ton/megawatt-hour limits – See Kennecott Repowering Project

Carbon Capture is commercially available for low concentration streams (8 to 12%, such as gas turbines) – See University of Wisconsin

2012 Remaining Issues and Updates

The Extent of EPA Authority – Appeals court vacates EPA's rejection of Texas Flex Permit Program

Tailoring Rule Step 3 finalized with no reduction in thresholds

PM2.5 PSD modeling guidance due by end of 2012. To address precursor emissions, secondary formation of PM2.5, and the role of background concentrations in a cumulative impact analysis

No relaxation in sector based enforcement

For more information

Ken Weiss

ERM

350 Eagleview Blvd., Suite 200

Exton, PA 19341

+1.610.524.3897 (office)

+1.610.745.0786 (cell)

ken.weiss@erm.com

Bill Wehrum

Hunton & Williams LLP

1900 K Street NW

Washington, DC 20006

+1.202.955.1637 (office)

+1.301.585.1113 (cell)

wwehrum@hunton.com