Understanding the Permitting Impacts of the Proposed Ozone NAAQS

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Presentation Overview

- Proposed Ozone NAAQS
- NSR Permitting Impacts on Future Nonattainment Areas
- PSD Permitting Impacts
- Next Steps
Proposed Ozone NAAQS
Ground Level Ozone Formation

Stratospheric Ozone:

- \( \text{O}_2 \) + sunlight \( \rightarrow \) \( \text{O} + \text{O} \)
- \( \text{O} + \text{O}_2 \) \( \rightarrow \) \( \text{O}_3 \)

Good

Ground-level Ozone:

- \( \text{VOC} + \text{NO}_x \) + sunlight \( \rightarrow \) \( \text{O}_3 \) (and other products)

Bad

EPA’s Proposed December 2014 Rule

> Published in the Federal Register December 17, 2014
> Propose to lower the primary and secondary NAAQS to within the range of 65 to 70 ppb
  ❖ http://www.epa.gov/groundlevelozone/actions.html
> Add an Appendix U to 40 CFR Part 50 detailing data selection, handling, and reporting requirements for ozone NAAQS
> Revise ambient monitoring requirements for ozone monitoring
> Add a grandfathering provision to the PSD permitting program exempting pending permits from the revised ozone NAAQS when they are fully promulgated
> EPA anticipated to finalize ozone NAAQS in October 2015
Current Compliance with Proposed Ozone NAAQS

Source: http://epa.maps.arcgis.com/apps/StorytellingSwipe/index.html?appid=a3c9f378699045749a85e9c04728fc79&webmap=3b3e0960060141c7828fc93b14e3d4d2
EPA Projected Compliance with Proposed Ozone NAAQS

Source: http://epa.maps.arcgis.com/apps/StorytellingSwipe/index.html?appid=a3c9f378699045749a85e9c04728fc79&webmap=3b3e0960060141c7828fc93b14e3d4d2

Sound solutions delivered uncommonly well
NSR Permitting Impacts on Future Nonattainment Areas
NA-NSR Permitting Requirements in Non-Attainment Areas (1 of 2)

> Lowest Achievable Emission Rate (LAER) - emissions control level required for each source of ozone (NO\textsubscript{X} or VOC) emissions

- “Most stringent emission limitation contained in any state implementation plan (SIP) or achieved in practice (AIP)”
- Irrespective of cost
- Review SIP requirements - emission limits adopted by any state agency as a rule, regulation, or permit
- Review AIP requirements - EPA RACT/BACT/LAER Clearinghouse (RBLC) for similar emission sources
NA-NSR Permitting Requirements in Non-Attainment Areas (2 of 2)

> Offsets - to increase release of ozone \((\text{NO}_x\text{ or VOC})\), the source must either:
  
  - Reduce emissions of NOx/VOC elsewhere at the plant, or
  - Purchase the “reduction credits” from another company (emissions banking)
  - Creditable offsets must be obtained at the appropriate ratio, depending on nonattainment classification of area

> Site Justification - Alternative Sites Analysis
> State-wide Facility Compliance Certification
PSD Permitting Impacts
“Grandfathering” of permitting regarding non-attainment designations should occur until October 2017

- Review final standard and ozone background concentrations in your area carefully
- It may be time to dust off those project plans

Careful review of the preamble documentation necessary......
At present, the EPA is evaluating the models and techniques available to address atmospheric chemistry of ozone formation in assessing such single source impacts, and as part of that evaluation has conducted discussions of such tools with the regulatory modeling community. Consistent with its commitment to engage in a rulemaking process to determine whether updates to Appendix W in 40 CFR part 51 are warranted, the EPA is planning to propose a rulemaking in the spring of 2015 to consider whether to update Appendix W. If the EPA concludes that it is technically and scientifically appropriate, it will propose appropriate regulatory updates to Appendix W as part of that rulemaking and may also make related updates to technical guidance, as appropriate.
Proposed Grandfathering Provisions for the New Ozone NAAQS Proposal

- EPA is proposing a grandfathering provision for pending PSD permits
  - Similar to grandfathering provisions for PM$_{2.5}$ NAAQS effective in 2013

- Grandfathering applicable to:
  - Facilities that have received a completeness letter from the state agency for their PSD permit application
  - Facilities that have received a draft PSD permit, for states that do not issue official completeness letters
  - Timing is critical!
Single Source Ozone Impacts Modeling?

> Proposed revisions and guidance address the secondary chemical formation of ozone and PM$_{2.5}$ associated with precursor emissions from single sources
> Currently unclear how this will impact future PSD applications for NOx/VOC
  > Associated future rulemaking - establishment of Modeling Emission Rates for Precursors (MERPs)
> Appendix W updates primary topic of discussion at EPA 11th Modeling Conference (August 12-13, 2015)
Next Steps
What Can You Do?

> Review proposed ozone standard
> Understand ozone trends in your area
> Evaluate timing of future projects
  * Apply for permits as soon as possible if your area will be impacted by the new ozone standard!
> What will future permitting require for a demonstration of compliance with the new ozone standard?