



Air Pollution Regulatory Overview

2012 Cemtek Emissions

Monitoring Seminar and Training Session

Institute of Clean Air Companies

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ICAC gives the air
pollution control and
monitoring industry a
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Regulatory Overview



NAAQS – National Ambient Air Quality Standards

- Six NAAQS – ozone, PM, SO₂, NO₂, lead, and carbon monoxide
- NAAQS establish permissible concentrations of these pollutants in the “ambient,” or outside, air
- Primary health-based standards and secondary welfare-based standards for each NAAQS

NAAQS (cont.)

- States must then establish State Implementation Plans (SIPs) to attain and maintain the NAAQS within their borders
- EPA statutory duty to review each NAAQS every 5-years based on the latest scientific evidence and cannot consider costs

8-Hour Ozone NAAQS

- ❑ Bush EPA set a revised eight-hour, 0.075 ppm (75 ppb) primary standard in March 2008
- ❑ CASAC recommendation for 60-70 ppb
- ❑ In January 2010 Obama EPA proposed reconsideration of Bush review – proposed 60-70 ppb
- ❑ Final expected August 2010 - then July 2011
- ❑ White House pulled back the reconsideration in September 2011 – rationale that next review already scheduled / too near (!) – political decision



8-Hour Ozone NAAQS (cont.)

- ❑ White House pulled back the reconsideration in September 2011 – rationale that next review too near
- ❑ EPA then announced it is implementing 75 ppb standard – final designations May 21, 2012 – 46 nonattainment areas – 36 marginal, 3 moderate
- ❑ Marginal attainment date – 12/31/15 (2013-2015 DV)
- ❑ Moderate attainment date – 12/31/18 (2016-2018 DV)
- ❑ Next review already ongoing – proposal in October 2012 (?), final in July 2014
- ❑ Recent evidence of premature mortality / cardiovascular effects due to ozone exposure

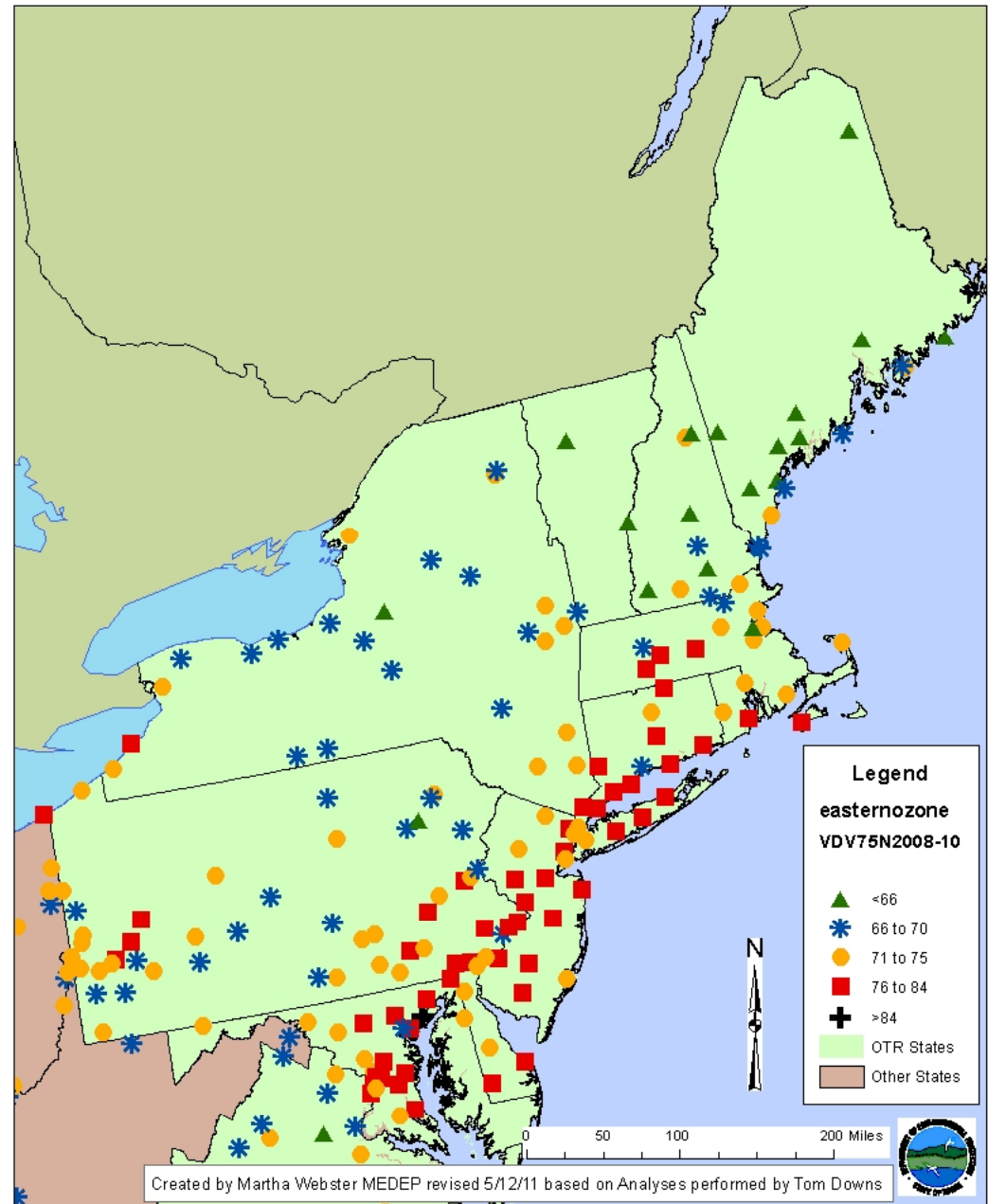


Preliminary 2008-2010 Design Values in the OTR

Note: Includes two years of cooler and wetter weather and a down economy.



Parts per Billion (ppb)





PM_{2.5} NAAQS

- 5-year review occurring in conjunction with remand of annual standard (15 ug/m³)
- EPA staff paper recommendations of 11-13 ug/m³ (annual average), daily average from 30 to 25 ug/m³
- Proposed rule June 29, 2012 – comment period ended August 31 – proposal is 12-13 ug/m³, “taking comment” on 11 ug/m³, retain daily average
- Secondary standard proposed defined in terms of a PM_{2.5} visibility index – 24-hour average at 30 or 28 dv
- Near-roadway PM_{2.5} monitoring proposal -one location in each urban area with a population of 1 million or more – operational by 1/1/2015



PM 2.5 NAAQS (Cont.)

- Nonattainment designations in 2014; designations effective in 2015
- Attainment (under Subpart 1 of Clean Air Act) within 5 years of final designations (2020)



PM 2.5 NAAQS (Cont.)

- Currently, 55 areas in the U.S. (with a total population of more than 100 million) that are designated as nonattainment for either the annual or 24-hour PM_{2.5} standards
- EPA presentation to OMB on June 4, 2012: “Nationally, based on PM_{2.5} air quality in 2005, we estimate:
 - **130,000 - 320,000 excess deaths**
 - 5.4% of all deaths related to PM_{2.5}”



Other NAAQS

- 1-hour SO₂ NAAQS
 - First-time 1-hour SO₂ standard of 75 ppb
 - Effective August 23, 2010
 - How big is SO₂ footprint? Modeling issues
 - EPA denied reconsideration petition January 26, 2011
 - Court upheld standard in 7/20/2012 decision
- 1-hour NO₂ NAAQS
 - Primarily mobile-source related
 - Effective April 12, 2010
 - Court upheld standard in 7/17/2012 decision
- Secondary NO_x/SO_x NAAQS (Note: withdrawn in 2011)
 - Ecological effects, acid neutralizing capacity metric
 - First multipollutant, multi-media NAAQS

Cross-State Air Pollution Rule (CSAPR)

- Final July 7, 2011, remanded to EPA 12/30
- An upwind state's obligation to eliminate its **significant contribution** to downwind nonattainment based on 1997 8-hour ozone and 1997/2006 PM_{2.5} standards
- Clean Air Interstate Rule (CAIR) in effect until final, legal transport rule



CSAPR (continued)

- DC Circuit Court decision August 21, 2012 – vacated and remanded – CAIR still! in place
 - EPA exceeded authority under the Clean Air Act
 - Two-step process for determining each listed upwind state's emission reduction obligations
 - The cost-based calculation in step two of the CSAPR process (which establishes the state budgets) could force a state to reduce its emissions *more* than the contribution amount calculated via the air quality-based measurement in step one
 - Imposing FIPs simultaneously with its quantification of the states' reduction obligations without first allowing each state to submit a compliant SIP
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CSAPR (continued)

- ❑ Imposing FIPs simultaneously with its quantification of the states' reduction obligations without first allowing each state to submit a compliant SIP
 - A state's SIP cannot logically be deemed deficient with respect to the good neighbor obligation (thereby triggering EPA's FIP authority) until EPA has first quantified the state obligation and given the state an opportunity to respond
 - EPA's "FIP First" approach is inconsistent with the Clean Air Act's federal-state division of labor, which grants to the states the initial right to develop and enforce SIPs
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CSAPR (continued)

- Vigorous dissent by Judge Rogers forms basis of appeal
- What's next?
 - EPA has 45 days to file an appeal
 - Lengthy delay for addressing transport
 - EPA remand – re-do significant contribution analysis
 - Impacts on NAAQS attainment (especially NE states), Nox, regional haze (“Better-than-BART”)
- MATS still the big driver for utility sector



Mercury and Air Toxics Rule

- EPA proposal – March 16, 2011
- Final rule published in *Federal Register* on February 16, 2012
- Emission reductions in proposed rule - 91 % of the mercury, acid gas emissions (HCl, HF) 91 %, SO₂ emissions 55%
- Compliance by April 2015 (4/2016 with 1-year extension with state approval)
- EPA approval for 1 more year based on reliability



ICI Boiler MACT

- EPA announced reconsideration March 21, 2011
 - Accepted new data and comments on reconsideration through July 15, 2011
 - Reconsidered final rule submitted to OMB for inter-agency review May 17, 2012
 - Pollutant-by-pollutant MACT methodology – DC Circuit Court of Appeals hearing first substantive challenge
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Regional Haze

- EPA has been proposing and finalizing many Western state regional haze SIPs
- NO_x is primary visibility-impairing pollutant in western Class 1 areas (national parks, wilderness areas)
- Battle between LNB / OFA / SNCR (proposed by states) vs. SCR (proposed by EPA)
- When EPA disapproves a SIP, they have to propose a FIP (Federal Implementation Plan)



Still to come ...

- Coal Combustion Residue (CCR) Regulation – still delayed
 - 316(b) Cooling Tower Rule – entrainment vs. impingement and level of state discretion
 - Deadline was July 27, 2012
 - EPA announced 11-month extension to June 27, 2013
 - Effluent guidelines for power sector
 - Proposal by July 23 (?), final by January 31, 2014
 - Water driving decisions?
 - Utility GHG NSPS for new units proposed March 27, 2012 – existing units in future?
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Thank You!

Institute of Clean Air Companies

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