TOPICS

• Emission Trends
• NAAQS Pollutant Developments
  — Ozone
  — SO₂
  — NO₂
  — PM₂.₅
• Boiler MACT
• MATS (Utility MACT)
• MACT Affirmative Defense
• Revenge of the Lawyers
  — CSAPR
  — GHGs
• Utility GHG NSPS
• The Future?
AIR EMISSION TRENDS IN VIRGINIA
Major Air Pollutant Emissions Trends in Virginia

- PM25
- SO2
- VOC
- NOX
NAAQS POLLUTANT DEVELOPMENTS
## NAAQS Schedule

<table>
<thead>
<tr>
<th>NAAQS</th>
<th>Final NAAQS Revision</th>
<th>State Recommendations</th>
<th>120-Day Letters</th>
<th>Final Designations</th>
<th>SIPs due *</th>
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<td>12/14</td>
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<td>8/14</td>
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<td>Early 2018</td>
<td>2020-2025</td>
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<td>6/10</td>
<td>6/11</td>
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* Final designations become effective 60 days after publication, SIPs are due either 18 months (lead, SO$_2$ and NO$_2$), no later than 2 years (CO), or 3 years (ozone and PM$_{2.5}$) after.
OZONE
MYTH OF THE LONG HOT SUMMER 2012

• **GOOD NEWS**
  – 2012 very similar to 2010 and 2011

<table>
<thead>
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<th>2009</th>
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<td>Total exceedance days</td>
<td>3</td>
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• **Ozone Air Quality Is Not Getting Worse in Virginia**
OZONE EXCEEDANCE DAYS 1997-2012

Number of Days 8-hour Avg. Daily Max. > .075 ppm

TOTAL NUMBER OF OZONE EXCEEDANCES 1997-2012

[Bar chart showing the total number of 8-hour average daily max. > 0.075 ppm, all sites from 1997 to 2012. The chart displays a downward trend over the years.]
IMPACT OF 2012 OZONE SEASON

• **BAD NEWS**

  – Freakishly good year 2009 data drops out of 3 yr ozone attainment design value calculations
  
  – Northern Va. design value now >85ppb (‘97 NAAQS)
  
  – Richmond and Tidewater design value now >75ppb (‘08 NAAQS)
    • Richmond ‘12 exceedance days = ‘11
    • Tidewater ‘12 exceedance days < ‘11 and ‘10
  
  – Too early for EPA response
    • Ozone Advance program credit?
NEXT OZONE STANDARD


• “Bridge Document”

• Comment period closes 10-12-2012

• [http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_index.html](http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_index.html)
...The final PA will seek to provide EPA staff conclusions related to the broadest range of policy options that could be supported by the currently available scientific evidence and technical information for consideration by the Administrator. ...
PRIMARY AND SECONDARY NAAQS

• Primary NAAQS Must Protect Human Health With an Adequate Margin of Safety
  – Costs are irrelevant

• Secondary NAAQS to Protect the Environment

• Currently the Secondary Ozone NAAQS is Set at the Primary NAAQS Level of 75ppb over 8 hrs
HIGHLIGHTS – PRIMARY STANDARD

• Seem to reference a lot of new studies
• Healthy adults show adverse effects from concentrations below the 60 ppb range
• Children important at-risk group
• Current standard should be revised
• Strong support for alternative standards to increase public health protections
HIGHLIGHTS – PRIMARY STANDARD

• Likely causal relationship between short term exposure and non-accidental and cardiopulmonary mortality

• *we believe that the reporting of multiple respiratory effects in healthy adults following exposures to 60 ppb O\textsubscript{3}, combined with the possibility that larger effects could be observed in asthmatics and members of other at risk groups, supports the appropriateness of including further exposure and risk analysis an alternative scenario at a level somewhat below 60 ppb.*

• Summertime North American background concentrations below 35 ppb in the east
HIGHLIGHTS – SECONDARY STANDARD

• Preliminary conclusion: ozone at current NAAQS levels can reasonably be anticipated to cause detrimental growth and productivity effects in sensitive vegetation.

• Evidence “confirms and strengthens” importance of a distinct averaging time, level and form from primary standard.

• Not only is EPA Poised to Substantially Lower Primary \( O_3 \) NAAQS, but to Promulgate Stringent Secondary NAAQS too!
ONE HOUR
SULFUR DIOXIDE
BACKGROUND

• Clean Air Act Envisions Federal-State Partnership
  – EPA set health-based ambient standards (NAAQS)
  – States implement NAAQS

• The 1-hr SO$_2$ NAAQS of 75 ppb, based on 99$^{th}$ percentile of annual distribution of daily maximum 1-hr values, became effective August 23, 2010

• *Implementation of the 1hr SO$_2$ NAAQS poses great challenges for many States*
SO₂ IMPLEMENTATION BACKGROUND

• March 2011 - EPA issued guidance on designations for the 2010 primary SO₂ standard. This guidance included recommendations on how to conduct modeling for designations

• October 2011 - EPA published draft guidance on state implementation plan submissions for the 2010 primary SO₂ standard and invited public comment on the draft guidance from October 3, 2011, to December 2, 2011

• Unworkable modeling-only implementation approach with impossible 6/13 deadline
SO$_2$ IMPLEMENTATION BACKGROUND

- Comments received on the approach for informing initial designations, and remaining uncertainties about the analytic approach that States will use for designation determinations and for general implementation, show that EPA had insufficient information to make area designations by June 2012.

- May 2012 - EPA convened meetings with stakeholders to refine the approach for implementing the SO$_2$ standard and to ensure that states will have the information needed to implement the standard.

- Modeling v Monitoring
1-Hour SO$_2$ NAAQS Monitoring: Key Questions

• Is monitoring sufficient to determine whether ambient SO$_2$ levels meet the NAAQS and are protective of public health without the need for additional modeling?
• What is an appropriate number of monitors to site around a source to assess air quality?
• Is it reasonable for states to consider relocating monitors within their states?
• What options exist for paying for the expanded SO$_2$ monitoring network?
• Would stakeholders be willing to conduct monitoring at new locations or provide funding to assist states in conducting such monitoring?
• For potential stakeholder operated monitors, what kind of oversight would the states need to perform?
1-Hour SO$_2$ NAAQS
Modeling: Key Questions

• What criteria should be used to prioritize sources to be modeled in an area where there is no nearby monitor?

• How should the modeling be performed?
  – Size cut-offs?
  – Actual emissions?

• Are there situations where modeling is preferable to monitoring?

• Are there situations where monitoring is preferable to modeling?
1-Hour \( \text{SO}_2 \) NAAQS

Implementation: Key Questions

• Should EPA set forth the approach in guidance or a rule?
• What is a reasonable schedule to completed the following tasks?
  – designing a sufficient monitoring network
  – deploying a new monitor or moving a monitor from an existing location
  – performing modeling analyses
• How should States and EPA use these data to address violations in unclassifiable areas? Are there alternative approaches to avoid redesignating these areas as “nonattainment”?
• How should EPA address unclassifiable areas with no emissions or shown to have no monitored or modeled violations? What requirements, if any, are appropriate to support designating these areas as attainment?
*Under 40 CFR 63.6(i)(4)(i)(B), facilities may request an extension for the MACT compliance date for up to one year, for the installation of control equipment. Such requests must be submitted N/L/T 120 days prior to the compliance date.
Extension of the Deadline for Area Designations for the 1-hr SO$_2$ NAAQS

- July 27, 2012 – EPA issued a notice that the deadline for area designations for the 2010 primary SO$_2$ NAAQS is being extended for up to one year.
- The Clean Air Act requires EPA to complete the designation process within two years of the promulgation date of a revised standard unless there is insufficient information to make these decisions. In such a case, EPA may take up to an additional year to make the designations.
- June 2013 - EPA intends to make area designations for the 2010 primary SO$_2$ standard.
  - Based on monitoring?
  - Virginia has no monitored exceedances

ADDITIONAL INFORMATION

- EPA’s Sulfur Dioxide Designations website at: http://www.epa.gov/so2designations
ONE HOUR NITROGEN DIOXIDE NAAQS
BACKGROUND

• On January 22, 2010 EPA strengthened the primary national ambient air quality standard (NAAQS) for nitrogen dioxide (NO$_2$) to increase protection of public health by:
  – adding a 1-hour NO$_2$ standard at 100 parts per billion (ppb); and
  – retaining the annual average NO$_2$ standard at a level of 53 ppb

• Compliance based on the 3-year average of the 98$^{th}$ percentile of the annual distribution of daily maximum 1-hour average concentrations
**NO₂ NAAQS IMPLEMENTATION**

- *Like with the 1-hr SO₂ NAAQS, Implementation of the 1-hr. NO₂ Standard Poses Many Implementation Issues*

- 1-hour NO₂ modeling required for PSD facilities

- Attainment challenges exist for both coal-fired & natural gas-fired facilities
  - Short stacks & limited property rights may lead to modeled violations
  - Very time and resource intensive due to use of refined techniques accounting for NOₓ chemistry.
1-HR. NO₂ MODELING ISSUES

• NO₂ modeling is more complicated and expensive to conduct for the 1-hr NO₂ NAAQS
• Three-tiered approach in Section 5.2.4 of Guideline on Air Quality Models (Appendix W)
  – Tier 1: assumes full conversion of NO to NO₂
  – Tier 2: applies ambient ratio to Tier 1 result (80% of NOx is NO₂ is the default Tier 2 assumption for 1-hr NAAQS)
  – Tier 3: “detailed methods” on a case-by-case basis, including OLM (Ozone Limiting Method) and PVMRM (Plume Volume Molar Ratio Method) options implemented in AERMOD
1-HR. NO$_2$ MODELING ISSUES

- Applicability of three-tiered screening approach for 1-hour NO$_2$ modeling:
  - Tier 1 and Tier 2 can be used for 1-hour NAAQS modeling without additional justification
  - Tier 3: OLM and PVMRM are permitted on a case-by-case basis, but representativeness of background O$_3$ data and in-stack NO$_2$/NOx ratios are needed
  - OLM and PVMRM are available as non-regulatory-default options in AERMOD and require justification and approval from EPA Region III on case-by-case basis as alternative modeling techniques, in accordance with Section 3.2.2.e of Appendix W
ADDITIONAL DATA NEEDED

• Option to install on-site meteorological tower and ambient air quality measurements to evaluate AERMOD model performance

• Option to collect in-stack NO$_2$/NOX information for Tier 3 NO$_2$ modeling
  – NOX CEMS - systems could be set up to collect this information
  – Data can also be collected during NOX testing
GENERAL CONCERNS OF THE MODELING COMMUNITY

• Air dispersion models and procedures are not currently accurate enough to meet regulatory challenges

• Emerging models & techniques are needed to address the new standards
Recent NO$_2$/SO$_2$ PSD Modeling Guidance

• Applicability of Appendix W Modeling Guidance for the 1-hour NO$_2$ National Ambient Air Quality Standard, June 28, 2010

• Applicability of Appendix W Modeling Guidance for the 1-hour SO$_2$ National Ambient Air Quality Standard, August 23, 2010

• Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO$_2$ National Ambient Air Quality Standard, March 1, 2011

ADDITIONAL INFORMATION
• All memos available at [http://www.epa.gov/ttn/scram](http://www.epa.gov/ttn/scram)
MODELING RESOURCES

• Modeling webinars
  – 1-Hour NO₂
  www.epa.gov/ttn/scram/webinar/1-Hour_NO2/NO2_Webinar_16June2011.pdf
  – 1-Hour SO₂
  http://www.epa.gov/ttn/scram/webinar/1-Hour_SO2/so2_implementation_webinar_1019.pdf

• 10th Modeling Conference
  http://www.epa.gov/scram001/10thmodconf.htm

• 2012 R/S/L Modeling Workshop
  http://www.cleanairinfo.com/regionalstatelocalmodelingworkshop/index.htm

• DEQ Modeling Website
  http://www.deq.virginia.gov/Programs/Air/AirQualityAssessments.aspx
PM$_{2.5}$ NAAQS
PROPOSED PM$_{2.5}$ NAAQS

- Current Annual standard 15 µg/m$^3$
- 6/12 Proposal Would Lower Primary Annual Standard to range of 12-13 µg/m$^3$
  - Took comment on a 11 µg/m$^3$ standard
- Create New Secondary 24-hr Standard to Protect Urban Visibility (28-30 deciviews)
  - Proposed retention of current secondary PM standards
- Problematic Near-Road Monitoring Requirements and Implementation Issues Related to Proposed New Secondary 24 hr Standard
- Final Standard 12/14/12?
PM2.5 Design Value Trends, 2000 - 2011
3-year annual average

PM2.5 NAAQS

Arlington Co.
Chesterfield Co.
Bristol
Norfolk
NAAQS
MAJOR SOURCE BOILER MACT

- Major Source Boiler MACT – Promulgated March 21, 2011
- Reconsideration of certain provisions also issued March 21, 2011
- EPA published notice delaying the effective date of the Boiler MACT – May 18, 2011
- U.S. District Court for the DC Circuit vacated EPA’s Notice delaying the effective date – January 9, 2012
- EPA issued No Action Assurance Letter for enforcement discretion for certain notification deadlines – February 7, 2012
- EPA intends to issue the final reconsideration rule by the end of 2012
SIGNIFICANT CHANGES PROPOSED
MAJOR SOURCE BOILER MACT

• For existing units, reset compliance date to three years after the date of publication of the final reconsideration rule

• Added alternative TSM limits for each subcategory of units that combust solid fuels or Gas 2 fuels only (may elect to meet alternative PM limit) - TSM includes the following eight metals: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, and selenium

• Added work practice standards (annual tune-up) in place of numeric emission limits for dioxin/furan

• Added separate subcategory for boilers designed to combust kiln dried wood (biomass dry stokers) with separate emission limits for PM and CO

• Added a subcategory for hybrid suspension/grate boilers, including boilers designed to combust wet biomass (bagasse)
SIGNIFICANT CHANGES PROPOSED
MAJOR SOURCE BOILER MACT cont.

• Proposing to remove the PM CEMS requirement for biomass
• 30-day rolling average for parameter monitoring and demonstration of continuous compliance with operating limits (in lieu of 12 hour block averages)
• Proposing tune-up every 5 years, w/initial tune-up required by the compliance date and subsequent tune-ups at intervals no greater than 5 years from the previous tune-up for natural gas, refinery gas, other clean gas meeting fuel specification and light liquid-fired units ≤ 5 MMBtu/hr (previously required a biennial tune-up)
• Proposing compliance option allowing use of CO CEMS (in lieu of CO stack testing and oxygen monitoring)
AREA SOURCE BOILER MACT

• Promulgated - March 21, 2011
• Effective Date - May 20, 2011
• Area Source Boiler MACT Effective Date Not Delayed
• EPA Published Proposed Amendments to the Area Source Boiler MACT – December 23, 2011
• EPA issued No Action Assurance (NAA) Letter for Enforcement Discretion for Initial Tune-up Deadlines – March 13, 2012
• EPA extended NAA to Apply to the Deadline for Submitting the Notification of Compliance Status for Initial Tune-ups – July 18, 2012
• NAA Extended until Rule Promulgated and Effective or until December 31, 2012
SIGNIFICANT CHANGES PROPOSED
AREA SOURCE BOILER MACT

• Allow two years instead of one for initial tune-up (by March 21, 2013)
• For oil-fired boilers \( \leq 5 \) MMBtu/hr subsequent tune-ups changed to once every 5 years (instead of biennially)
• Remove requirement for new boilers to conduct initial tune-up at initial startup
• Clarify definition of “period of natural gas curtailment or supply interruption” and revise definition for “Hot water heater” to include hot water boilers \( < 1.6 \) MMBtu/hr
• Raise mercury and CO emission limits for coal fired boilers
  – Mercury limit changing from 4.8 lb/TBtu to 22 lb/TBtu
  – CO limit changing from 400 ppm to 420 ppm
• Allow sources subject to CO emission limit option to use CO and \( \text{O}_2 \) CEMS
MATS
A/K/A THE UTILITY MACT
UTILITY MACT

• Promulgated – February 16, 2012
• Effective Date – April 16, 2012
• Existing Source Notification of Applicability was due August 14, 2012
• EPA Issued Partial Stay of Effectiveness of Final Rule for New Sources until November 2, 2012 - August 2, 2012
• EPA Plans to Expedite Reconsideration and Complete Rulemaking by March 2013
FINAL UTILITY MACT

Only Minor Changes from Proposed Rule

– Some emissions limits are adjusted, including using filterable PM as a surrogate for the metal toxics limit
– Revised definition of coal subcategories
– Added subcategories for non-continental oil-fired units and limited use oil-fired units
– Improved monitoring provisions for clarity and consistency
– Provided an alternative compliance option for sources that plan to comply by averaging across multiple units

Boiler NSPS rules also amended
EFFECT OF NEW RULES ON UTILITY INDUSTRY AND COAL GENERATION

• Coal generation at following VA facilities may cease in next few years:
  – GenOn Potomac River (482 MW)
  – Dominion Yorktown (355 MW)
  – Dominion Chesapeake (636 MW)
  – Dominion Bremo Bluff (250 MW)
  – Dominion Alta Vista (63 Mw)
  – Dominion Hopewell (63 MW)
  – Dominion Southampton (63 MW)
  – AEP Glyn Lyn (335 MW)
  – AEP Clinch River (470 MW)

• Over 2700 megawatts
MACT
STARUP, SHUTDOWN & MALFUNCTION
AFFIRMATIVE DEFENSE
SSM EXEMPTION FOR MACT ELEMINATED

• 10/16/09 – Sierra Club v. EPA (D.C. Cir. ) issued mandate vacating SSM exemption provisions (40 CFR 63.6 (f)(1) & (h)(1)) based on “plain meaning” of CCA 302(k)’s definition of “emissions standard” requiring “continuous emission reduction”

• Replaced With Affirmative Defense
SSM AFFIRMATIVE DEFENSE

  – States automatic exemptions are grounds for SIP disapproval
  – Establishes criteria for determining Affirmative Defense
SSM AFFIRMATIVE DEFENSE

For Malfunctions, 9/20/99 EPA Memorandum Requires:

1. Cause to be sudden, unavoidable, and beyond the control of the owner or operator
2. Better foresight, planning, operation, and maintenance could not have prevented
3. Control equipment and processes maintained/operated consistent with good practice for minimizing emissions
4. Repairs made in an expeditious fashion
5. Amount and duration of the excess emissions minimized to the maximum extent practicable
6. All possible steps taken to minimize the impact on ambient air quality
7. All emission monitoring systems were kept in operation if at all possible
8. Source actions in response to the excess emissions properly documented
9. Not part of a recurring pattern indicative of inadequate design, operation, or maintenance
10. Proper and prompt notification
SSM AFFIRMATIVE DEFENSE

• For Startup/Shutdown, 9/20/99 EPA Memorandum Requires:

  1. Excess emissions short, infrequent, and not preventable through careful planning and design.
  2. Not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
  3. Bypass of control equipment unavoidable to prevent loss of life, personal injury, or severe property damage
  4. At all times facility operated consistent with good practice for minimizing emissions
  5. Frequency and duration of minimized to the maximum extent practicable
  6. All possible steps taken to minimize the impact on ambient air quality
  7. All emission monitoring systems were kept in operation if at all possible
  8. Source actions during the excess emissions properly documented
  9. Proper and prompt notification
SSM AFFIRMATIVE DEFENSE

• Affirmative Defense in MACTs
  – Newer MACTs Specifically define criteria establishing Affirmative Defense
  – Basis explained in preamble (e.g., MATS)
  – Use language very similar to 9/20/99 EPA memo
  – Trumps less restrictive Virginia regulations

• Virginia DEQ Must Follow the MACT Language When Enforcing Delegated MACTs
  – 3/12 Correspondence from EPA to DEQ stated Virginia could “...no longer allow sources to use the former SSM exemption from the General Provisions of 40CFR Part 63” due to 10/16/09 decision
SSM AFFIRMATIVE DEFENSE

- Virginia Regulations Are Generally Consistent With the Criteria in 9/20/99 EPA Memo
  - 9VAC5-10-20 defines “startup”, “shutdown”, and “malfuncton”
  - 9VAC5-20-180 requires specific notification for SSM events
  - 9VAC5-40 [and 50] – 20.E requires facilities to operate in a manner consistent with air pollution control practices for minimizing emissions

- However, Sources Must Now be Considered “Out of Compliance” w/MACT Limit Exceedances Even if They Meet the Defense
REVENGE OF THE LAWYERS, PART 1
THE CROSS STATE AIR POLLUTION RULE (CSAPR) & THE HOMER CITY DECISION
CROSS STATE AIR POLLUTION RULE

• CSAPR Finalized 7/6/11
• Supposed to Replace Clean Air Interstate Rule (CAIR) to Address Interstate Pollution of NO$_x$ and PM$_{2.5}$ Under CAA §110(a)(2)(D)
• 27 affected states, including Virginia
• Directed at interstate transport for
  – 1997 ozone standard (0.08 ppm 8 hour)
  – 1997 PM$_{2.5}$ standard (15.0 μg/m$^3$ annual)
  – 2006 PM$_{2.5}$ standard (35 μg/m$^3$ daily)
• Envisioned 72% reduction in SO$_2$ emissions and 53% reduction in NO$_x$ emissions from 2005 levels over the 27 states by 2014
HOLDING OF
EME Homer City Generation, L.P. v. EPA

• August 21 Decision Vacated CSAPR On Two Grounds:
  – It required reductions by some upwind states greater than their “significant contribution” to the nonattainment of downwind states in violation of CAA’s “Good Neighbor” provision, §110(a)(2)(D)
  – It imposed Federal Implementation Plans (FIPs) on upwind states before they had an opportunity to develop and submit SIPs to address their §110(a)(2)(D) “Good Neighbor” obligations in violation of the CAA’s federalism requirements

• Federalism Key Part of CAA
IMPACT OF
EME Homer City Generation, L.P. v. EPA

• NO Immediate Impact in Virginia
• CAIR Still in Place Until EPA “Expeditiously” Promulgates Replacement Rule
• EPA to Establish “Clear Targets” For Upwind States to Meet “Good Neighbor” Obligations
  – No more, no less than “significant contribution”
  – To what NAAQS will “significant contribution” apply?
• States Submit SIPs Committing to Measures to Achieve “Good Neighbor” emission Reduction Targets
  – Required w/in 18 months of EPA’s replacement rule?
• EPA to FIP States Not Submitting Approvable SIPs
• Role of §126 Petitions Uncertain
• Will Federalism Gain Greater Teeth?
EVALUATING SIGNIFICANT CONTRIBUTION
REVENGE OF THE LAWYERS, PART II
GREENHOUSE GASES
THE COALITION FOR RESPONSIBLE REGULATION DECISION & THE PROPOSED UTILITY NSPS
HOLDING OF
Coalition for Responsible Regulation v. EPA

• June 26th Decision Sweeping Win for EPA
• Held EPA’s GHG Endangerment Finding Was Not Arbitrary and Capricious
• Held EPA’s GHG Tailpipe Standards Were not Arbitrary and Capricious
• Held EPA’s Interpretation of Definition of “Any Air Pollutant” for Purposes of PSD Applicability Under CAA was “Unambiguously Correct “
• Held Petitioners Did Not Have Standing to Challenge the Tailoring Rule
Coalition for Responsible Regulation v. EPA

• CAA Title II, §202(a)(1) Sets Forth EPA Authority to Promulgate Motor Vehicle Tailpipe Standards

• §202(a)(2) states:
  Any regulation prescribed under paragraph (1) of the subsection ... shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance with that period

• Court Found §202(a)(2) Applies Only to Title II and Not to Downstream Effects on PSD Program
Coalition for Responsible Regulation v. EPA

The plain language of § 202(a)(1) of [the CAA] does not leave room for EPA to consider as part of its endangerment inquiry the stationary-source regulation triggered by an endangerment finding, even if the degree of regulation triggered might at a later stage be characterized as “absurd.” Slip Op. at 26.

C.f. Slip Op. at 56 where court upheld EPA’s definition of “any regulated air pollutant” for PSD purposes to be faithful interpretation of CAA §169’s “any air pollutant” because “it is absurd to think that Congress intended to subject stationary sources to PSD ... due to emissions of substances that do not ‘endanger public health or welfare.’”
IMPACT OF
Coalition for Responsible Regulation v. EPA

• No Effect on Virginia’s Air Regulations or Program
  – Tailoring Rule already in place
• Court’s Holding and Analysis Will Make it Difficult for Future Administration or EPA to Undo Present GHG PSD Permit Requirements Without substantial Revisions to CAA
• Could Tailoring Rule Still be Subject to Challenge?
  – Court failed to address merits
  – Appeared to understand Tailoring Rule as temporary
  – Absurd results irrelevant?
PROPOSED UTILITY GHG NSPS APPLICABILITY

- Proposed on April 13, 2012
- Applies to **New** Fossil-Fuel-Fired EGUs Only
  - Fossil-fuel-fired boilers, integrated gasification combined cycle (IGCC) units, and natural gas combined cycle (NGCC) units
  - Generate electricity for sale and more than 25 MW net electric output
EXEMPTIONS

• Simple cycle turbines
• Modification or reconstruction of existing EGU
• “Transitional” units
  – Already permitted new EGUs that start construction by April 12, 2013
  – New EGUs looking to renew permits that are part of DOE demonstration project and will start construction by April 12, 2013
• New EGUs that do not burn fossil fuels (e.g. biomass only)
• New EGUs located in non-continental areas (Hawaii and the territories)
PROPOSED STANDARDS

• Electricity-output-based emission rate of 1,000 pounds of CO\textsubscript{2} per MWh of electricity generated on a gross basis.

• New natural gas combined cycle power plants could meet the standard without add-on controls.

• New coal or petroleum coke power plants would need to incorporate carbon capture and storage technology (CCS).
Alternative 30-year compliance for New Coal or Petroleum Coke Power Plants

• Option to use a 30-year average of CO$_2$ emissions to meet the proposed standard, rather than meeting the annual standard each year. This allows incorporation of CCS at a later date within 10 years.

• For example, a new power plant could emit more CO$_2$ for the first 10 years (maximum 1800 lb CO$_2$/MWh gross on 12-month annual average basis) and then emit less for the next 20 years (maximum 600 lb CO$_2$/MWh gross on 12-month annual average basis).
DEQ COMMENTS

CCS for coal-fired units

• Disagree with EPA’s approach to treat natural gas combined cycle units and coal-fired units same when establishing NSPS.

• Need separate analysis and justification of “best system of emission reduction”.

• Premature assumption that CCS will become economically and technically feasible in the next 10 years.

• DEQ recommends withdrawal of emission standard that would require use of CCS.
NSPS Implication on PSD and Title V permitting

• Requested EPA to take necessary steps to assure that the major source threshold of 100,000 tpy CO$_2$e established under Tailoring Rule is not rendered moot by promulgation of this NSPS.
  – Under CFR 51.166, pollutants subject to NSPS become regulated pollutant for purposes of PSD permitting and Title V permitting.
  – CAA established major source threshold for PSD is 100/250 tpy and Title V is 100 tpy.
THE FUTURE
THE FUTURE

• CAA Has Been Successful But is Obsolete in Many Ways
  – It doesn’t address transport issues well
  – It doesn’t address GHGs well
  – PSD program unmanageable
  – SIP process extremely cumbersome
  – NAAQS setting process needs reevaluation as adverse health effects are found near, at or below naturally occurring background concentrations
THE FUTURE

• Pressure Building on “Right” and “Left” to reopen CAA
  – GHG decision
  – SIP reform
  – Costs (prospective <60ppb O3 standard)
  – CSAPR decision

• Whitfield Forums

• November
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QUESTIONS?

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