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SLIDES: Details of the Regulatory Framework: Air Quality Regulation of Oil and Gas Development

Olivia D. Lucas

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Details of the Regulatory Framework

Air Quality Regulation of Oil and Gas Development

Olivia D. Lucas, Esq., Counsel

Outline

- ▶ Clean Air Act – General Framework
- ▶ Oil & Gas Specific Programs
- ▶ The Federal/State Relationship
- ▶ Enforcement

Clean Air Act – General Framework

- ▶ Pollutant Standards
 - ▶ Criteria Pollutants
 - ▶ NAAQS
 - ▶ Location: Attainment/Non-Attainment Areas

- ▶ Industry/Source Specific Standards
 - ▶ NSPS (criteria pollutants plus)
 - ▶ NESHAPs (Hazardous Air Pollutants)

- ▶ Permits
 - ▶ Types
 - ▶ Triggers

CAA General Framework – Pollutant Standards

- ▶ Criteria Pollutants
 - ▶ Ozone
 - ▶ Ozone precursors (VOC, NO_x)
 - ▶ Particulate Matter (PM)
 - ▶ PM₁₀, PM_{2.5}
 - ▶ Carbon Monoxide (CO)
 - ▶ Nitrogen Oxides (NO_x)
 - ▶ Sulfur Dioxide (SO₂)
 - ▶ Lead (Pb)

CAA General Framework – Pollutant Standard

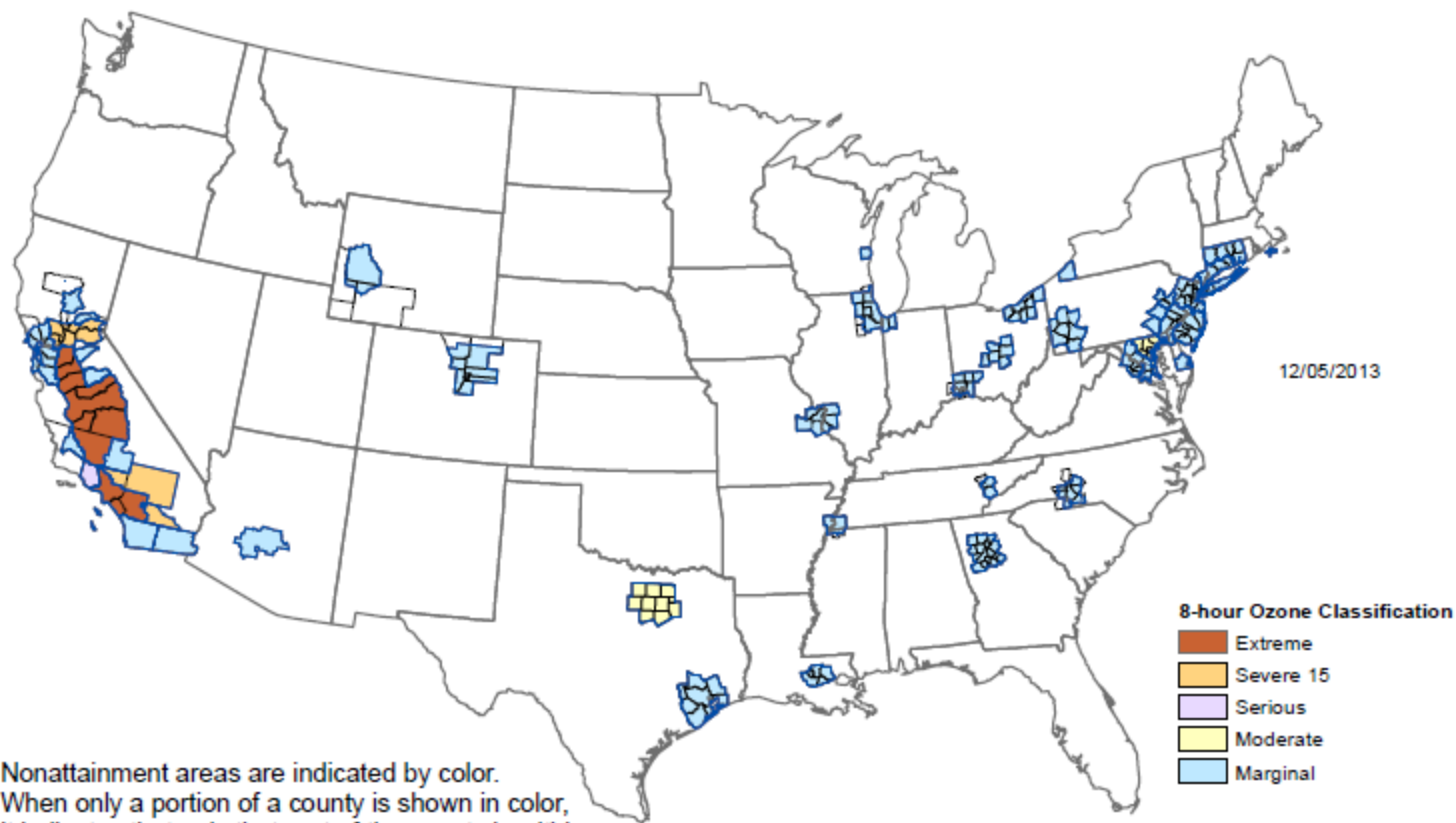
- ▶ National Ambient Air Quality Standards (NAAQS) (40 C.F.R. Part 50)
 - ▶ National numerical air quality standard for each criteria pollutant adequate to protect public health
 - ▶ Expressed in ppm, ppb, and $\mu\text{g}/\text{m}^3$, with various averaging times
 - ▶ E.g. 2008 Primary and Secondary NAAQS for Ozone is 0.075 ppm, averaged over 8 hours. The NAAQS is attained when the ambient air contains less than 0.075 ppm as determined by the annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years.
 - ▶ Reviewed every 5 years

CAA General Framework – Pollutant Standard

- ▶ NAAQS Attainment Designations
 - ▶ Attainment: These are places where air pollution levels do not exceed NAAQS standards for any criteria pollutants.
 - ▶ Non-Attainment area: Geographic regions where levels of air pollution exceed permissible levels for one or more pollutants. Many major cities are nonattainment areas for at least one criteria pollutant.
- ▶ Designation has import for permitted entities seeking to modify existing sources or build new sources
 - ▶ More stringent emission limits in permits
 - ▶ Control technologies

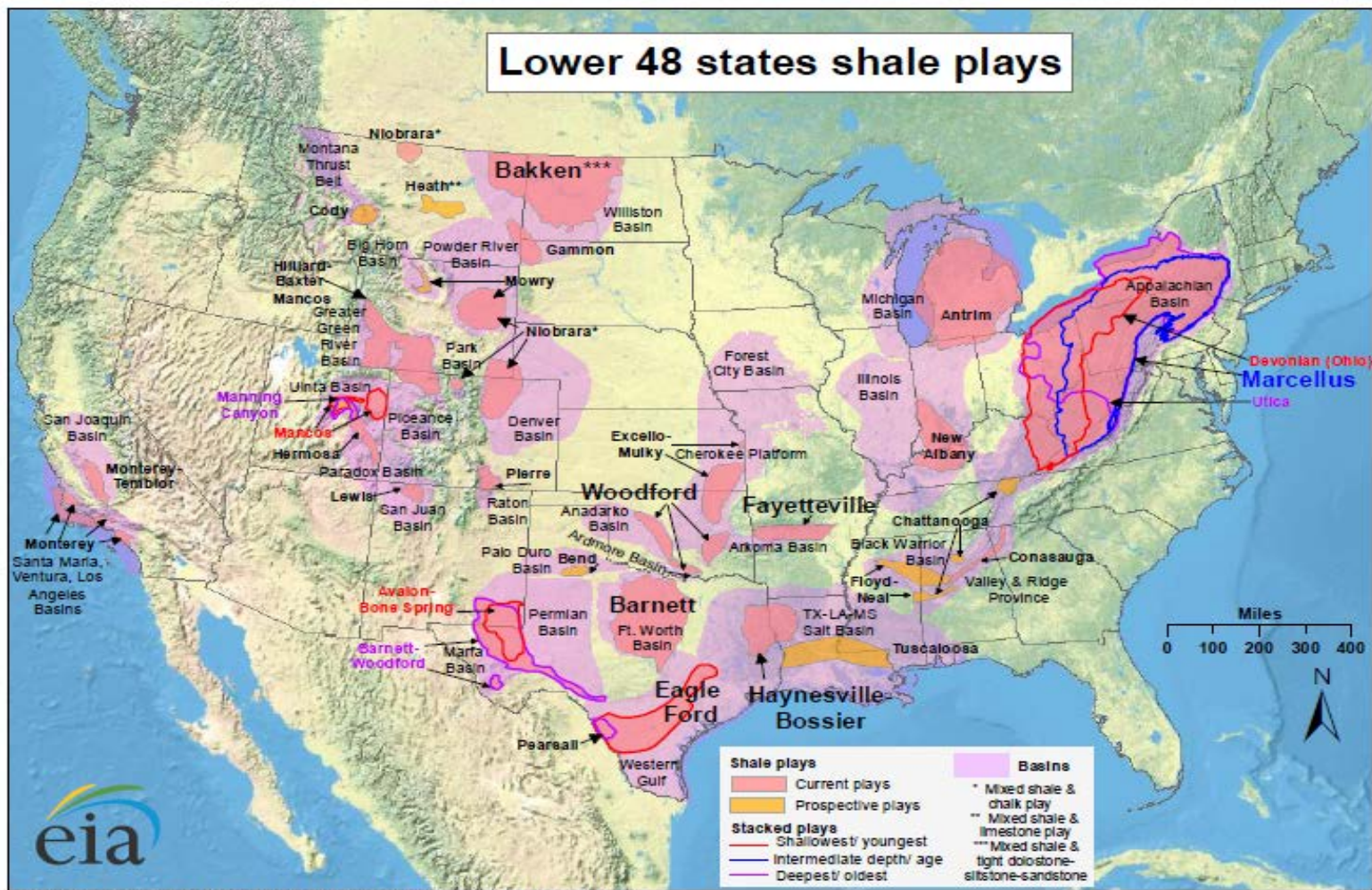
CAA General Framework – Ozone Nonattainment Map

8-Hour Ozone Nonattainment Areas (2008 Standard)



Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.

Many Shale Plays in Ozone Nonattainment Areas



Source: Energy Information Administration based on data from various published studies.
Updated: May 9, 2011

CAA General Framework – Source Specific Standards

- ▶ New Source Performance Standards (CAA Section 111; 40 CFR Part 60)
 - ▶ Federal emission standards promulgated by EPA for new or modified sources
 - ▶ Address criteria pollutants and other non-criteria pollutants such as fluorides, sulfuric acid mist, opacity
 - ▶ Applied on a categorical basis (i.e. by type of source), irrespective of existing ambient air quality
 - ▶ Standard may be a numerical emission limit, or a design, equipment, or work practice standard
 - ▶ As of 2011, EPA had adopted NSPS for approximately 82 source categories
 - ▶ E.g., industrial boilers, Portland cement plants, beverage can surface coating, natural gas processing plants, crude oil and natural gas production, petroleum refineries

CAA General Framework – Source Specific Standards

- ▶ Hazardous Air Pollutants (HAPs) (CAA Section 112)
 - ▶ Other air pollutants that “may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible or incapacitating reversible illness”
 - ▶ 188 compounds designated by Congress for EPA to control
 - ▶ Majority of HAPs are volatile organic compounds (VOCs)

CAA General Framework – Source Specific Standards

- ▶ National Emission Standards for Hazardous Air Pollutants (NESHAPs)
 - ▶ Regulate specific categories of stationary sources that emit (or have the potential to emit) one or more HAP in particular amounts
 - ▶ Source category list revised at least once every 8 years
 - ▶ Maximum Achievable Control Technology (MACT) standards
 - ▶ Major sources must meet MACT standards
 - ▶ Area sources – MACT or GACT
 - ▶ Generally prescribe work practices or control technology, and reporting
 - ▶ Example: NESHAP for Oil and Natural Gas Production Facilities– 40 CFR Part 63 Subpart HH. Sets standards for glycol dehydrators, storage vessels, equipment in VOC service, compressors, etc.

CAA General Framework - Permits

▶ Types

- ▶ New Source Review
- ▶ Title V
- ▶ Minor Source Permits

▶ Triggers

- ▶ Quantity of potential emissions
- ▶ Type of emissions units (e.g. subject to NSPS)

Oil & Gas Specific Programs

▶ NSPS

- ▶ 40 CFR 60 Subpart OOOO - Well completions, Compressors, Pneumatic devices, storage tanks
- ▶ 40 CFR 60 Subpart KKK - Equipment leaks from onshore natural gas processing plants
- ▶ 40 CFR 60 subpart LLL - Onshore natural gas processing- SO₂
- ▶ 40 CFR 60 subpart JJJJ - Stationary spark ignition internal combustion engines
- ▶ 40 CFR 60 Subpart IIII - Compression Ignition internal combustion engines
- ▶ 40 CFR subpart KKKK - Stationary combustion turbines

Oil & Gas Specific Programs

▶ NESHAPS

- ▶ 40 CFR 63 subpart HH - oil and natural gas production facilities
- ▶ 40 CFR 63 subpart HHH – oil and natural gas production and natural gas transmission and storage
- ▶ 40 CFR 63 Subpart ZZZZ - RICE

Oil & Gas Specific Programs

- ▶ Greenhouse Gases
 - ▶ Must report GHG emissions if emit above certain threshold
 - ▶ No federal emissions limitations yet
 - ▶ Voluntary Natural Gas STAR program to encourage partners to reduce methane emissions from oil production and all parts of natural gas cycle
 - ▶ Tailoring Rule requires incorporation into new and renewed Title V permits and PSD permits Encompassed in new Title V and PSD permits

The Federal/State Relationship- Cooperative Federalism

▶ EPA role

- ▶ Emission standards
- ▶ Implementation and enforcement on federal lands and in non-delegated states
- ▶ Oversight/auditing of state programs
- ▶ Retained enforcement authority

▶ State role

- ▶ Most states have been delegated implementation and enforcement authority

The Federal/State Relationship – NAAQS and SIP

- ▶ State Implementation Plans (SIPs) for compliance with NAAQS
 - ▶ EPA approval
 - ▶ State Plans must comply with Section 110, including effective permitting
 - ▶ EPA can impose a Federal Implementation Plan
 - ▶ Enforceable emission limitations, control measures, and schedules for compliance
 - ▶ Prohibits sources from contributing to nonattainment or interfering with maintenance of NAAQS
 - ▶ Source emission monitoring and reporting
 - ▶ SIPs revised periodically
 - ▶ Extensive rulemaking/stakeholder involvement at state level
 - ▶ EPA approval/disapproval

The Federal/State Relationship – State Regulations

- ▶ The CAA allows states to adopt state-only statute and regulations at least as stringent as EPA's requirement (42 § 7416)
- ▶ States power to regulate more stringently varies by state
 - ▶ Some states do not allow more stringent laws
 - ▶ E.g., Arizona, Idaho, Missouri, New Mexico, South Dakota, and Wyoming
 - ▶ Other states have to justify why more stringent standards are necessary
 - ▶ E.g., Colorado, Florida, Indiana, Maine, North Dakota, Ohio, Pennsylvania, Utah and Wisconsin.

Enforcement

- ▶ EPA/State enforcement
 - ▶ EPA stated enforcement initiatives for 2014-2016 includes “Assuring Energy Extraction Sector Compliance with Environmental Laws”
- ▶ Citizen Involvement
 - ▶ CAA Citizens Suits
 - ▶ APA Challenges to Final Agency Action

Enforcement – EPA/State Enforcement

- ▶ EPA/State
 - ▶ Information gathering
 - ▶ Entry
 - ▶ Requests for Information
 - ▶ Informal Response
 - ▶ Warning letters
 - ▶ NOVs
 - ▶ Orders
 - ▶ Administrative Penalties
 - ▶ Federal = up to \$37,500 per violation per day
 - ▶ Civil Judicial Action
 - ▶ Federal = up to \$37,500 per violation per day (after 2009)
 - ▶ Criminal actions

Enforcement – Citizen Involvement

- ▶ CAA Citizens Suits - 40 USC § 7604
 - ▶ Enforce compliance with emissions standards or permits – agency and/or source
 - ▶ Require agency to act on nondiscretionary duty
 - ▶ 60-day notice of intent to sue individual party or agency
 - ▶ Can be barred if agency already diligently prosecuting issue
- ▶ APA lawsuits – Appeal of Final Agency Action
 - ▶ Federal permitting action
 - ▶ Federal rulemaking

Questions?

Olivia Lucas

Email: olivia.lucas@faegrebd.com

Tel: 303-607-3686