

The Regulatory Landscape for Air

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Outline

- ▶ Improved Approach to Air Regulations
 - ▶ Sector Approach
 - ▶ Uniform Standards
 - ▶ Oil and Gas Standards
- ▶ Addressing Environmental Justice in Rulemakings
- ▶ Recent Risk and Technology Review (RTR) Regulations
- ▶ Greenhouse Gas Standards for Power Plants
- ▶ Revisions
 - ▶ Final Boiler and Solid Waste Incinerator
 - ▶ Proposed Reciprocating Internal Combustion Engine (RICE)
 - ▶ Final Chemical Manufacturing Area Source
 - ▶ Mercury and Air Toxics Standards (MATS)

Clean Air Act Requirements

▶ NESHAP

- ▶ Clean Air Act (CAA) requires regulation of 187 listed hazardous air pollutants (“air toxics”), on a source category basis
- ▶ EPA must set performance standards for air toxics emissions for major sources and also for smaller area sources contributing to urban risks
 - Have set initial performance standards for virtually all 174 major source and 68 area source categories
- ▶ Eight years after setting these standards, EPA must update the technology standards, if warranted, and, for maximum achievable control technology (MACT) standards, also assess whether stricter standards are needed to protect public health

▶ NSPS

- ▶ Clean Air Act requires EPA to list and set new source performance standards for source categories that "cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."
- ▶ Eight years after setting these standards, EPA must review and, if appropriate, revise the standards

Approach for Industrial Sources

- ▶ Group activities that are under common control, typically fall within a facility fenceline and are used to make a product or group of products
 - ▶ Activities comprise various equipment, control devices and air pollution sources
- ▶ Use groupings to align elements of the federal stationary source emission standards programs and set priorities
 - ▶ Synchronize and streamline rules, maximize environmental benefits and lower burden for industry

Types of activities:

- Boilers
- Heaters
- Storage tanks
- Vents
- Wastewater
- Engines
- Furnaces



Uniform Standards

What Are the Uniform Standards?

- ▶ Consistent emission source standards developed for use across sectors and source categories
- ▶ Existing rules address the same set of emission points and are amenable to similar levels of control, but are often inconsistently regulated
 - ▶ Rules developed in different time periods using different decision criteria
- ▶ A range of source categories will be able point to the Uniform Standards in the future

Uniform Standards

What Will the Uniform Standards Do?

- ▶ In March 2012, EPA proposed Uniform Standards for:
 - ▶ Equipment leaks
 - ▶ Storage vessels and transfer operations
 - ▶ Closed vent systems and control devices
- ▶ Establish a consistent set of requirements, considering technologies and costs
- ▶ Can be referenced by industry sector regulations
- ▶ Improve compliance and enforceability
- ▶ Streamline and reduce recordkeeping and reporting burden on affected facilities and regulators



Oil & Gas Final Rules

Requirements for Well Completions

- ▶ EPA issued final rules on April 26, 2012
- ▶ Rules will reduce pollution from natural gas wells that are hydraulically fractured, without slowing production
 - ▶ Rules phase in requirements for capturing natural gas
 - ▶ Industry leaders are already using green completions as a smart business practice
- ▶ Wells that are refractured will not be considered affected facilities if they use green completions and meet recordkeeping/reporting requirements as of the effective date of the rule
- ▶ Exploratory, delineation and low-pressure wells are exempt from green completion requirements; will have to flare
- ▶ EPA streamlined well completion notification and reporting requirements to reduce burden to industry and states, while ensuring transparency and accountability



*Example of Green Completion Equipment
(Source: Weatherford)*



A natural gas well site. EPA photo.

Oil & Gas Final Rules

Additional Requirements

EPA also set requirements for several types of equipment that may vent or leak VOCs or air toxics

- ▶ Storage tanks
- ▶ Centrifugal compressors
- ▶ Reciprocating compressors
- ▶ Pneumatic controllers
- ▶ Glycol dehydrators
- ▶ Leaks from valves at gas processing plants
- ▶ Sweetening units at natural gas processing plants



A combustion device and storage tanks. EPA photo



*Glycol dehydrators at a well production pad.
EPA photo*

Oil & Gas Final Rules

Cost Savings and Emission Reductions

- ▶ EPA issued final rules on April 26, 2012
- ▶ Rules will yield a cost savings of \$11 to \$19 million in 2015 because the value of natural gas and condensate that will be recovered and sold will offset costs
- ▶ EPA estimates the following combined annual emission reductions when the rules are fully implemented:
 - VOCs: 190,000 to 290,000 tons
 - Air toxics: 12,000 to 20,000 tons
 - Methane: 1.0 to 1.7 million short tons (about 19 to 33 million tonnes of CO₂ equivalent (CO₂ e))

Environmental Justice

Definition and Executive Order

- ▶ EPA defines Environmental Justice (EJ) as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies”
- ▶ Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
 - ▶ calls for federal agencies “***to the greatest extent practicable and permitted by law, to identify... and address... as appropriate, disproportionately high and adverse human health or environmental effects of agency programs, policies and actions on minority populations and low income populations***”

Environmental Justice

Approach for Ensuring Environmental Justice

- ▶ Demographic analysis to identify vulnerable populations
 - ▶ Examines groups mentioned in Executive Order 12898, such as income, race and ethnicity
 - ▶ Assesses the area near facilities (generally a 3-mile radius) to identify areas and or sectors with a disproportionately high representation of vulnerable groups

- ▶ Meaningful public involvement
 - ▶ Webinars
 - ▶ Fact sheets
 - ▶ Maps
 - ▶ Community calls

Recent Final RTR Rules

Recent final rules include RTR NESHAP for:

- ▶ Primary Lead Smelting November 4, 2011
- ▶ Secondary Lead Smelting December 16, 2011
- ▶ Pulp and Paper July 31, 2012
- ▶ Chromium Electroplating August 15, 2012

Refinery Sector Rules



- ▶ Rules incorporate data from a comprehensive, industry-wide data collection effort completed in 2011
- ▶ NSPS final rule for refinery flares and process heaters published on September 12, 2012
- ▶ RTR rulemaking proposal is currently undergoing interagency review

Greenhouse Gas Standards for New Power Plants

- ▶ On March 27, 2012, EPA issued a proposed new source performance standard for carbon emissions from new power plants; the proposal was published on April 13, 2012
- ▶ Proposed rule would apply only to new fossil fuel-fired electric utility generating units (EGUs)
 - ▶ Would include fossil fuel-fired boilers, integrated gasification combined cycle (IGCC) units and stationary combined cycle turbine units that generate electricity for sale and are larger than 25 megawatts (MW)
- ▶ On May 24, 2012, EPA held public hearings in Chicago, IL and Washington, D.C.
- ▶ Comment period closed on June 25, 2012
- ▶ EPA received 2.3 million comments during the public comment period

Final Rule

Mercury and Air Toxics Standards (MATS)

- ▶ Final rules were published on February 16, 2012
- ▶ Final MATS establishes:
 - ▶ Numerical emission limits for mercury, PM and HCl for all existing and new coal-fired EGUs
 - ▶ Numerical emission limits for PM, HCl, and HF for existing and new oil-fired EGUs, the standards establish; alternative compliance option . for HCl and HF limits of limiting moisture content of the oil
 - ▶ Alternative numeric emission standards, including SO₂ (as an alternate to HCl), individual non-mercury metal air toxics (as an alternate to PM), and total non-mercury metal air toxics (as an alternate to PM) for certain subcategories
 - ▶ Work practices, instead of numerical limits, to limit emissions of organic air toxics, including dioxin/furan, from existing and new coal- and oil-fired power plants
 - ▶ With work practice standards, a required annual performance test program for each unit that includes inspection, adjustment, and/or maintenance and repairs to ensure optimal combustion
 - ▶ Work practices for limited-use oil-fired EGUs in the continental U.S.

Reconsideration

Mercury and Air Toxics Standards (MATS)

- ▶ EPA received 24 petitions on the final MATS
- ▶ Industry filed petitions in the D.C. Circuit for review of the NESHAP and petitioned the Court for expedited review of the NESHAP new source standards
- ▶ The Court granted new source petitioners' motion for expedited review
- ▶ On July 20, EPA sent a letter to petitioners stating that the Agency is granting reconsideration of certain new source issues and would complete the reconsideration process by March 2013
- ▶ On the same day, EPA filed a motion to hold the new source petitioners' case in abeyance while the agency completes the reconsideration of the new source standards
- ▶ On September 12, the Court granted EPA's motion to hold the case in abeyance pending the outcome of the reconsideration
 - ▶ EPA is required to update the Court every 30 days, starting October 12

Reconsideration

Final Boiler and CISWI Reconsideration

- ▶ Final Boiler MACT and CISWI rules were published on March 21, 2011
- ▶ Reconsideration proposal was published on December 23, 2011
- ▶ EPA granted reconsideration of these rules in order to:
 - ▶ Incorporate additional data provided after the final rules were published
 - ▶ Conduct additional analyses
 - ▶ Provide additional opportunity for public review and comment
 - ▶ Make clarifications and corrections
- ▶ Public comment period closed on February 21, 2012
- ▶ Final reconsideration rules submitted to OMB for review on May 16, 2012

Reconsideration

Portland Cement Reconsideration

- ▶ Proposed on June 22, 2012
- ▶ Proposed amendments would:
 - ▶ adjust the way cement kilns continuously monitor particulate matter emissions
 - ▶ adjust PM emission limits and extend the compliance deadline for existing kilns
 - ▶ retain several key air toxics emission limits in the 2010 final rules, including limits for mercury, hydrochloric acid and total hydrocarbons
 - ▶ revise the open clinker pile standards by allowing facilities to choose from a list of work practices to control fugitive emissions
- ▶ Public hearing on the proposed reconsideration rule was held on August 16, 2012, in Arlington, Texas
- ▶ EPA is currently evaluating comments submitted during the public comment period and the hearing

Reconsideration

Reciprocating Internal Combustion Engines (RICE)

- ▶ Proposal was published in the *Federal Register* on June 7, 2012
- ▶ Proposed revisions include:
 - ▶ Tier 1/Tier 2/Tier 3 Compression Ignition (CI) requirements and clarifications
 - ▶ Allowance for Emergency Demand Response & Peak Shaving
 - ▶ Area Source Spark Ignition (SI) Engine requirements
 - ▶ Total Hydrocarbon Compliance option
 - ▶ Expansion of “remote” Alaska definition
- ▶ Public hearing was held on July 10, 2012 in Washington, D.C.
- ▶ Comment period closed August 9, 2012
- ▶ Per a settlement agreement, we plan to issue the final rule by December 14, 2012

Reconsideration

Chemical Manufacturing Area Source NESHAP

- ▶ EPA issued standards on October 29, 2009
- ▶ On February 12, 2010, EPA received a petition for reconsideration from ACC and SOCMA
- ▶ On January 30, 2012, EPA issued a reconsideration proposal
- ▶ Final reconsideration rule currently undergoing inter-agency review

For More Information

- ▶ Uniform Standards Proposal (77 FR 17897-18050)
 - ▶ <http://www.gpo.gov/fdsys/pkg/FR-2012-03-26/pdf/2012-5760.pdf>
- ▶ Oil and Gas Rules (77 FR 49490-49600)
 - ▶ <http://www.gpo.gov/fdsys/pkg/FR-2012-08-16/pdf/2012-16806.pdf>
 - ▶ EPA website: <http://www.epa.gov/airquality/oilandgas/>
- ▶ Boiler and CISWI Rules
 - ▶ <http://epa.gov/airquality/combustion/actions.html>
- ▶ Chemical Manufacturing Area Source Reconsideration Proposal
 - ▶ <http://www.epa.gov/ttn/atw/area/fr30ja12.pdf>
- ▶ Rice Reconsideration Proposal (77 FR 33812)
 - ▶ <http://www.gpo.gov/fdsys/pkg/FR-2012-06-07/pdf/2012-13193.pdf>
- ▶ MATS Rules (77 FR 9304-9513)
 - ▶ <http://www.gpo.gov/fdsys/pkg/FR-2012-02-16/pdf/2012-806.pdf>
 - ▶ EPA website: <http://www.epa.gov/airquality/powerplanttoxics/actions.html>
- ▶ Carbon Pollution Standard for New Power Plants Proposal (77 FR 22392)
 - ▶ <http://epa.gov/carbonpollutionstandard/>
- ▶ Area Source Standards
 - ▶ <http://www.epa.gov/ttn/atw/area/arearules.html#final>