

**U.S. Department of Energy  
Office of Sustainability Support (HS-21)**



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Meeting**

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# Climate Change / Greenhouse Gases



# Executive Order 13514 Update

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# Greenhouse Gas Limits in Air Permits - I

**Horseshoe Bay, Texas** EPA Region 6 issued a Prevention of Significant Deterioration (PSD) Permit with GHG limits

- Texas lacks authority to issue GHG-PSD permits
  - Permit limits SF<sub>6</sub> from electrical equipment, fugitive CH<sub>4</sub> from piping, and CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> from turbines, fire pump, and emergency diesel generator
  - CO<sub>2</sub> continuous emissions monitoring system on turbines
  - Best Available Control Technology (BACT) identified as combustion efficiency, (from Russell City Energy Center)
  - DOE NETL cited in refutation of using CO<sub>2</sub> control technology
- [www.epa.gov/earth1r6/6pd/air/pd-r/ghg/lcra\\_final\\_permit.pdf](http://www.epa.gov/earth1r6/6pd/air/pd-r/ghg/lcra_final_permit.pdf)
- [yosemite.epa.gov/r6/apermit.nsf/airp](http://yosemite.epa.gov/r6/apermit.nsf/airp) (application)



# Greenhouse Gas Limits in Air Permits - II

## Issue 1: GHG Politics



- Some states lack the authority to issue PSD and/or Title V permits with GHG limits, (e.g. Texas, Louisville, Kentucky)
- State agency issues non-GHG PSD permit; EPA Regional Office issues “overlay” PSD permits including GHG limits

## Issue 2: BACT & GHG Control

- Three power plant PSD permits issued in 2011:
  - Include GHG limits and monitoring requirements
  - Do not require GHG control equipment
- Large GHG emissions from power plants increases costs of GHG controls, removing controls from consideration
- Will BACT include controls for smaller GHG emitters?





# PSD/Title V Tailoring Rule Step 3

## Step 1: Existing PSD / Title V Major Sources

- Title V renewal / modification applications after 1/2/11
- PSD applications pending issuance by 1/2/11

## Step 2: New PSD / Title V Major Sources

- Major sources of GHG emissions not already in Title V permit program as of 7/1/11
- Major modifications involving GHG emissions

## Step 3: Lower GHG Thresholds

- Evaluate costs and effectiveness of Step 1 & 2
- Lower GHG Title V & PSD applicability thresholds?
- Exclude sources from GHG Title V & PSD programs?
- RIN: 2060-AR10; Scheduled final rule: 7/1/12





# **National Emissions Standards for Hazardous Air Pollutants (NESHAP)**



# Boiler NESHAP Reconsideration-I

- EPA has proposed changes to Boiler NESHAP as part of 3/21/11 rule reconsideration
- Proposal also responds to court action
- EPA may have to issue stay for existing rule(s) due to upcoming compliance dates
- Since reconsideration is a proposed action, comments on proposed modifications can be submitted to EPA for consideration. Final rule may include further modifications and deadline changes





# Boiler NESHAP Reconsideration-II

## 1. Area Sources (proposed)

- **Compliance date:** March 21, 2013
- **Exemptions:** All area sources (including synthetic minor) exempted from Title V permitting
  - Proposed exemption for electric & temporary boilers
  - Revises “institutional” to include government sites
- **Emissions Limits:** Increase coal-fired CO limit to 420ppm vol dry @3% O<sub>2</sub>
- **Tune-ups:** Delay tune-up schedule for ≤5 MMBTU/hr. oil-fired; Delay initial tune-up for new sources
- **Miscellaneous:** Delay energy assessment compliance date; change assessment cycle





# Boiler NESHAP Reconsideration-III

## 2. Major Sources (proposed)

- **Compliance date:** Three years after final amendment
- **Exemptions:** Proposed exemptions for residential boilers and certain boilers used as control devices
- **Emission Limits:** Elimination of dioxin/furan limits; Total selected metals (TSM) limits added for certain boilers as an alternative to PM limits. Many emissions limits have changed, (both more and less stringent)
- **Tune-ups:** Reduce frequency for tune-ups for certain units; burner inspection delay in certain instances
- **Miscellaneous:** Clarify energy assessment





# National Ambient Air Quality Standards (NAAQS)



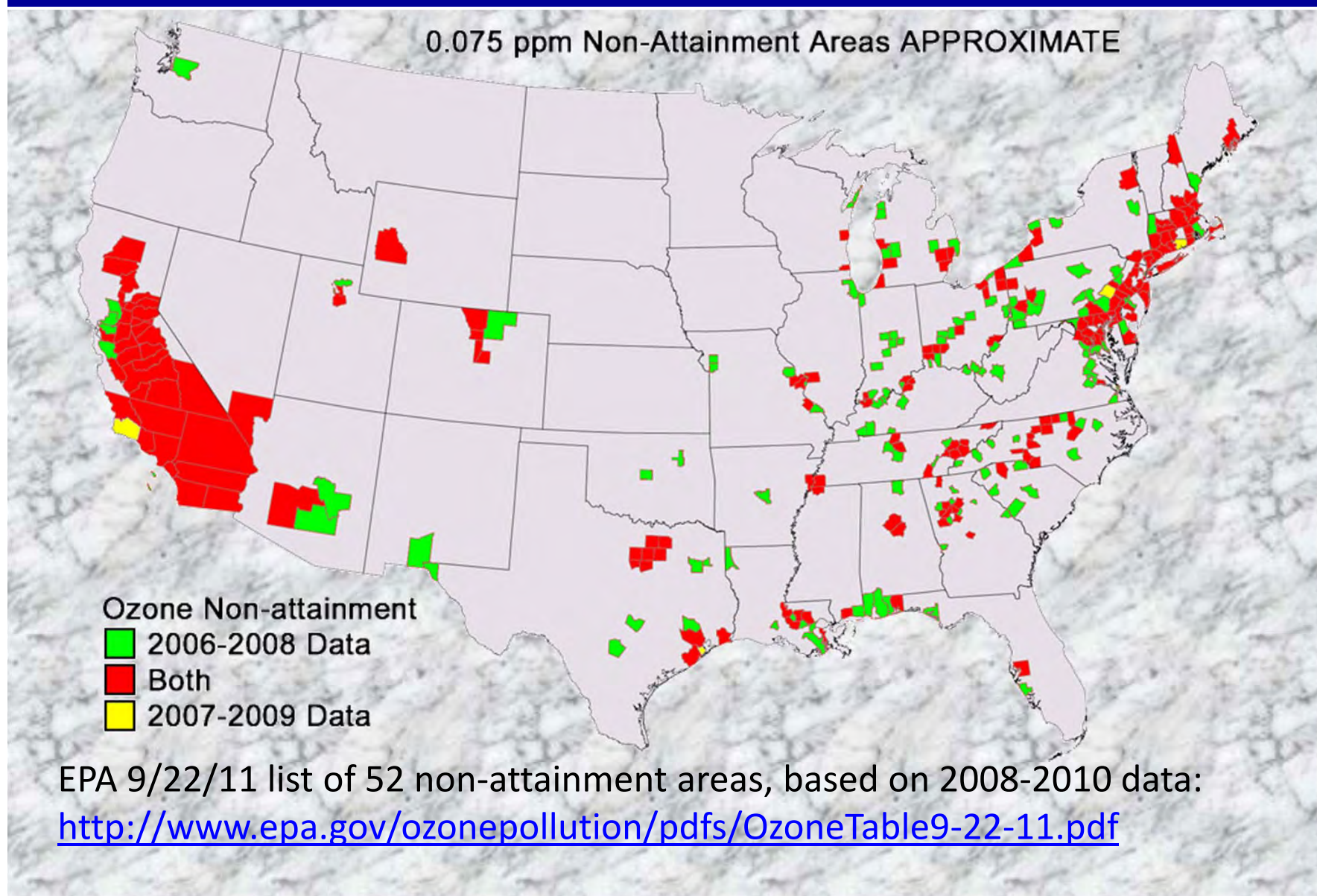
# 2008 Ozone Standard

- EPA decided not to pursue the 2008 Ozone (O<sub>3</sub>) standard reconsideration; O<sub>3</sub> standard up for 5-year review in 2013
- EPA will confirm non-attainment area designations using 2006-2008 O<sub>3</sub> data, scheduled for 12/15/11
- States can re-designate using 2008-2010 O<sub>3</sub> monitor data
- EPA issues final determination in Federal Register, scheduled for 4/30/12
- States would have three years (April 2015), to develop plans to attain O<sub>3</sub> NAAQS
- Some areas are only slightly non-attainment (“marginal”) and will reach attainment due to federal regulations already in place





# Possible Non-Attainment Areas





# Anti-idling Draft Language

- The Ozone Transport Commission (OTC) is a multi-state organization responsible for advising EPA on transport issues and for developing and implementing regional O<sub>3</sub> solutions in the Northeast and Mid-Atlantic regions
- OTC is working on final anti-idling model rules for non-road diesel equipment
- States in the OTC may (or may not) adopt a model rule
- States could use OTC model rule to reduce O<sub>3</sub> in non-attainment areas
- <http://www.otcair.org/document.asp?fview=meeting>





The background of the slide is a close-up image of marbled paper, featuring a complex, organic pattern of swirling, interconnected lines in shades of light beige, tan, and off-white. The pattern resembles natural stone or biological cell structures.

## Other Air Regulations



# Environmental Radiation Protection

- EPA plans to publish in December an Advanced Notice of Proposed Rulemaking (ANPRM) for 40 CFR 190
- EPA will be soliciting comments on public safety approaches and demonstrations, new science, and rule updates
- The rule provides dosage requirements for the public and environment from uranium fuel cycle operations
- The rule remains unchanged from 1977
- ANPRM RIN: 2060-AR12





# Air Pollution Training

- Training is near completion
- Review by DOE personnel completed – THANK YOU!
- Next step is to finalize the online training
- First Training Module has two parts:
  1. History of Air Pollution
  2. Air Pollution Regulations
- Initial training will be a platform for further discussion of topics approved by CAWG





A microscopic image showing a complex, interconnected network of fibers or filaments, likely representing a material structure. The network consists of numerous small, interconnected nodes and branches, creating a dense, porous appearance. The color is a mix of light beige and greyish tones.

**Anything else?**