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# Greenhouse Gases, Tailoring Rule, Title V, and New Source Performance Standards

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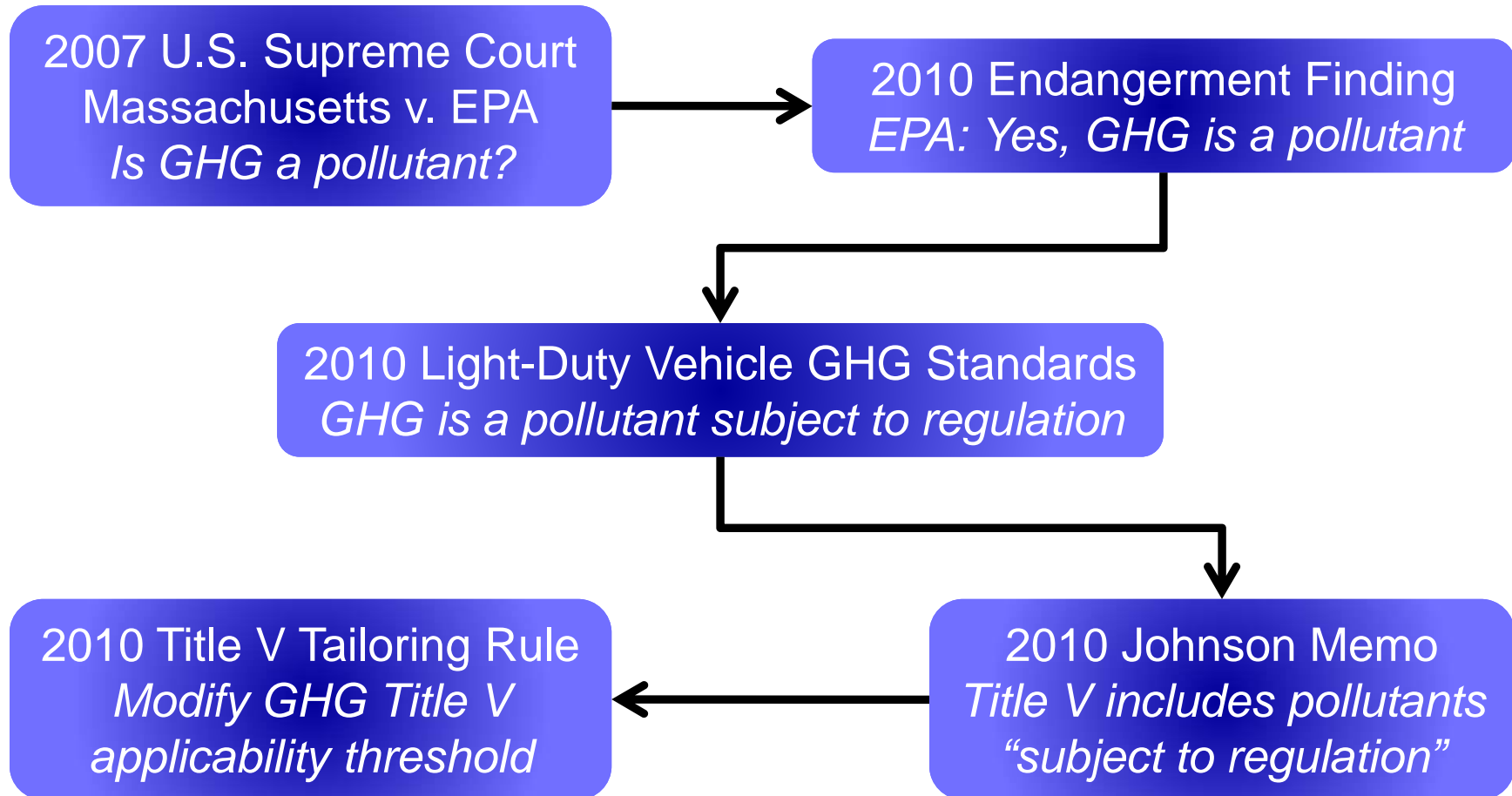
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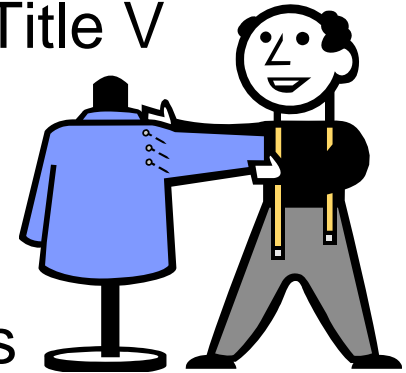
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# How Title V and Greenhouse Gases Met



# Title V Tailoring Rule Overview

- “Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule”
- Effective August 2, 2010
- Two tier applicability deadline:
  - January 2, 2011 – Existing Title V facilities
  - July 1, 2011 – New Title V facilities
- Dual Title V applicability threshold for GHGs:
  - 100 tpy GHG (by weight); **AND**
  - 100,000 tpy of carbon dioxide equivalents (CO<sub>2</sub>e)
    - CO<sub>2</sub>e = GHG tpy × global warming potential (GWP)
    - GWP from 40 CFR, Part 98, Table A-1



# Title V Applicability Thresholds

**10 tons per year (tpy)†**

Any Hazardous Air Pollutant (HAP)

**25 tpy**

Total HAPs

**100 tpy**

Carbon Monoxide (CO)  
Lead (Pb)  
Nitrogen Oxides (NO<sub>x</sub>)  
Particulate Matter (PM)  
Sulfur Dioxide (SO<sub>2</sub>)  
Volatile Organic  
Compounds (VOC)

**100 tpy GHG & 100,000 tpy CO<sub>2</sub>e**

**Greenhouse Gas**

**GWP**

Carbon Dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	21
Nitrous Oxide (N <sub>2</sub> O)	310
Sulfur Hexafluoride (SF <sub>6</sub> )	23,900
Hydrofluorocarbons (HFC)	11-14,900
Perfluorocabrons (PFC)	6,500-17,340

*† All applicability thresholds actual or potential emissions*

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# Existing Title V & Tailoring Rule

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## Applicability

- Existing Title V applicants/permit holders on Jan. 2, 2011
- Actual or potential GHG emissions:
  - $\geq 100$  tpy GHG by weight; **AND**
  - $\geq 100,000$  tpy CO<sub>2</sub>e

## Requirements

If the Title V major source threshold for GHG emissions is exceeded, include facility-wide GHG emissions in any renewal or modification application after Jan. 2, 2011

*List all pollutants for which facility is major - §70.5(c)(3)(i)*

# Synthetic/Natural Minor & Tailoring Rule

## Applicability

- Existing Synthetic or Natural Minor Title V sources
- Actual or potential GHG emissions:
  - $\geq 100$  tpy GHG by weight; **AND**
  - $\geq 100,000$  tpy CO<sub>2</sub>e

## Options

- Submit a Title V permit application
  - Submit Title V permit application before **7/1/12**
- Submit a Synthetic Minor permit application with GHG emissions limitations (either GHG by weight or CO<sub>2</sub>e)
  - Final Synthetic Minor Permit **issued** before **7/1/12**
  - Submit permit application well before issue date

## Title V Permit: Now With GHG

- A Title V permit only includes existing regulations
  - There are no GHG emissions limitations, control requirements, record keeping requirements, etc.
  - The Mandatory GHG Reporting Rule should not be in a Title V permit; it is not an “applicable requirement”
- For facilities submitting a new Title V permit, all of the other air regulations will be included
  - Pay Title V fees
  - Subject to Title V reporting requirements
  - Increased inspection frequency
  - More federal involvement and scrutiny
  - *GHG made you Title V, but GHG is not in your permit*



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# New Source Performance Standards & GHG

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- EPA intends to issue new source performance standards (NSPS) to control GHG emissions from:
  - Fossil Fuel-Fired Electric Generating Utilities (EGU) - Subpart D
  - Petroleum Refineries - Subpart J
- EPA proposes NSPS issue dates of May 2012 (for Utilities) and Nov. 2012 (for Refineries)
- **Including GHG in any NSPS affects ALL Title V facilities!**



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## How NSPS Affects GHG & Title V

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- Per §70.2, a “regulated air pollutant” includes any pollutant subject to an NSPS, (issued under the authority of Section 111 of the Clean Air Act)
- In May 2012, the EGU NSPS will control GHGs
  - Tailoring rule: GHG is “subject to regulation”
  - NSPS: GHG is a “regulated air pollutant”
- Emissions Unit: any activity that emits or has the potential to emit any regulated air pollutant
  - GHG emissions information must be added to **every emissions unit** in the Title V permit application
  - New emissions units emitting GHG must be included in the Title V permit application

# The Title V Application After A GHG NSPS

- Update existing emissions units to include GHG data
  - Review insignificant emissions units to determine if they still qualify as insignificant
  - Review trivial sources not in original application
- Add new emissions units not already in the application:
  - Estimate actual & potential GHG emissions rates
  - Fuel and/or raw material usage
  - Production rate
  - Operating schedule
  - Air pollution control equipment
  - Compliance monitoring devices (see 40 CFR, Part 98)
  - Additional data required by state air program



# Insignificant Units After A GHG NSPS

- Insignificant emissions units are listed by each air permitting authority, with U.S. EPA approval
- Two types of insignificant emissions units:
  1. Low emissions rate (<5 tpy, <10 lbs./day)
  2. Categorical definition (<10 mmBtu/hr, ink jet printers)
- Low emissions rate units may be affected by NSPS, especially in states with federal-only air programs that rely on the federal definition of regulated air pollutant
- Categorical definition should be unaffected by NSPS
  - Although boiler GHG emissions are higher than other pollutants, the category is defined as <10 mmBtu/hour



# GHG Tailoring Rule vs. GHG NSPS

**Tailoring Rule**

*If Title V Major for GHG, include facility-wide GHG emissions*

**NSPS**

*All Title V sources: Reclassify insignificant emission units, Identify new GHG emissions units, and Include GHG emissions*

**Required Information for Title V Permit  
(not to scale)**

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## Unanswered Questions

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- What is the potential-to-emit for a hermetically sealed electrical device containing SF<sub>6</sub>?
- Are the exemption thresholds for insignificant emissions units for GHG emissions by total weight or CO<sub>2</sub>e emissions?
- Assume all refrigerants are lost to ambient air?
- Emissions rate for leaking equipment?
- Will state-only, non-Title V permit (minor) programs include GHG emissions?
- 1993 Redux: what information is required for a Title V permit application?

## Will Congress Get Involved?

- President Obama indicated he would allow preempting EPA authority to regulate GHGs in exchange for a scaled-back bipartisan agreement to address climate change by encouraging clean energy development
- Sen. Jay Rockefeller has proposed to block EPA from regulating GHGs from stationary sources. Additional options include exempting GHGs from pending permits and precluding GHG from being subject to prevention of significant deterioration
- Congress can disapprove EPA's GHG regulations in a joint resolution under the Congressional Review Act, but President Obama can veto such a resolution

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## Helpful Links

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- **PSD/Title V/Greenhouse Gases Permitting Guidance**  
<http://www.regulations.gov/search/Regs/home.html#documentDetail?R=0900006480b8662b>
  - **GHG Tailoring Rule for Title V and PSD**  
<http://www.gpo.gov/fdsys/pkg/FR-2010-06-03/pdf/2010-11974.pdf#page=1>
  - **40 CFR, Part 70**  
[http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=00798402d8a2fd3d5524675701ae4c5b&tpl=/ecfrbrowse/Title40/40cfr70\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=00798402d8a2fd3d5524675701ae4c5b&tpl=/ecfrbrowse/Title40/40cfr70_main_02.tpl)
  - **Federal GHG Mandatory Reporting Rule**  
<http://www.epa.gov/climatechange/emissions/subpart.html>
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## For More Information

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- For more information on GHG, Title V, and NSPS regulations, visit the EPA website at:  
<http://www.epa.gov/climatechange/initiatives/index.html>
- The Title V / Greenhouse Gas Tailoring Rule Information Brief emailed by Larry on December 27, 2010 also details this process
- I shall update the CAWG on this issue as the rules unfold.