

Greenhouse Gas Permitting

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Dallas, TX

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BASICS of GHG

- GHG is a single pollutant defined as an aggregate of six gases.
- The global warming potential (GWP) is a measure of the total energy that a gas absorbs over a particular period of time compared to carbon dioxide
 - Carbon Dioxide GWP = 1
 - Methane GWP = 21 (25)
 - Nitrous Oxide GWP = 300
 - Sulfur Hexafluoride GWP = 23,900
 - HFCs Vary
 - PFCs Vary

Sources of GHG

- Fuel combustion (Utilities, Refineries, Steel etc)
 - Carbon Dioxide
 - Nitrous Oxide
- Oil and gas production & Landfills
 - Methane
- Electrical transmission & Magnesium Production
 - Sulfur Hexafluoride (SF_6)
- Refrigerant , Semiconductor and Aluminum Industries
 - Hydrofluorocarbons
 - Fluorinated hydrocarbons

PSD Applicability Criteria for New Sources of GHGs

Permits issued from January 2, 2011, to June 30, 2011 (Step 1 of the Tailoring Rule)	Permits issued on or after July 1, 2011 (Step 2 of the Tailoring Rule)
<p>PSD applies to GHGs, if:</p> <ul style="list-style-type: none"> • The source is otherwise subject to PSD (for another regulated NSR pollutant), and • The source has a GHG PTE equal to or greater than: <ul style="list-style-type: none"> ○ 75,000 TPY CO₂e 	<p>PSD applies to GHGs, if:</p> <ul style="list-style-type: none"> • The source is otherwise subject to PSD (for another regulated NSR pollutant), and • The source has a GHG PTE equal to or greater than: <ul style="list-style-type: none"> ○ 75,000 TPY CO₂e <p>OR</p> <ul style="list-style-type: none"> • Source has a GHG PTE equal to or greater than: <ul style="list-style-type: none"> ○ 100,000 TPY CO₂e, and ○ 100/250 TPY mass basis

Note: **All thresholds are expressed in short tons (2,000 lbs)!**

Please refer to the *PSD and Title V Permitting Guidance for Greenhouse Gases* found at : <http://www.epa.gov/nsr/ghgdocs/ghgpermittingguidance.pdf>

PSD Applicability Criteria for Modified Sources of GHGs

Permits issued from January 2, 2011, to June 30, 2011 (Step 1 of the Tailoring Rule)	Permits issued on or after July 1, 2011 (Step 2 of the Tailoring Rule)
<p>PSD applies to GHGs, if:</p> <ul style="list-style-type: none"> • Modification is otherwise subject to PSD (for another regulated NSR pollutant), and has a GHG emissions increase and net emissions increase: <ul style="list-style-type: none"> ○ Equal to or greater than 75,000 TPY CO₂e, and ○ Greater than -0- TPY mass basis, 	<p>PSD applies to GHGs, if:</p> <ul style="list-style-type: none"> • Modification is otherwise subject to PSD (for another regulated NSR pollutant), and has a GHG emissions increase and net emissions increase: <ul style="list-style-type: none"> ○ Equal to or greater than 75,000 TPY CO₂e, and ○ Greater than -0- TPY mass basis <p>OR BOTH:</p> <ul style="list-style-type: none"> • The existing source has a PTE equal to or greater than: <ul style="list-style-type: none"> ○ 100,000 TPY CO₂e and ○ 100/250 TPY mass basis • Modification has a GHG emissions increase and net emissions increase: <ul style="list-style-type: none"> ○ Equal to or greater than 75,000 TPY CO₂e, and ○ Greater than -0- TPY mass basis <p>OR BOTH:</p> <ul style="list-style-type: none"> • The source is an existing minor source for PSD, and • Modification alone has actual or potential GHG emissions equal to or greater than: <ul style="list-style-type: none"> ○ 100,000 TPY CO₂e, and ○ 100/250 TPY mass basis

Please refer to the *PSD and Title V Permitting Guidance for Greenhouse Gases* found at :

<http://www.epa.gov/nsr/ghgdocs/ghgpermittingguidance.pdf>

Emission Estimations

- Use EPA GHG Reporting Rule Part 98
- LandGem
- Facility test data for landfill material
- GHG Permitting guidance -
<http://www.epa.gov/nsr/ghgpermitting.html>
- For Landfills :
<http://www.epa.gov/nsr/ghgdocs/landfills.pdf>

GHG Permits in Region 6

- Website address:
- <http://yosemite.epa.gov/r6/Apermit.nsf/AirP>
- All permit applications, draft and final permits are posted on the website

What are the elements of an EPA- PSD PERMIT

- General information on the process and emission units
- Applicability- Calculations for GHG emissions
 - CO₂equivalent
 - Mass basis
- BACT evaluation
- Additional Considerations
 - Endangered Species Act
 - National Historical Protection Act
 - Environmental Justice

Public Participation

- Public notice in newspaper
- 30 day public comment period
- EAB appeal

EPA Region 6 GHG Permits

- Applications in Texas should be sent to:
U.S. EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733
Attn: Air Permits Section (PD-R)

- Contacts:

Jeffrey Robinson

Melanie Magee

<http://yosemite1.epa.gov/r6/Apermit.nsf/AirP?OpenView#B>

