

## Potential Major Source Applicability of Greenhouse Gases (GHGs)

On January 2, 2011, pursuant to actions taken by the USEPA, Greenhouse Gases (GHGs) became a regulated pollutant under the major NSR program. To avoid having unreasonably low applicability thresholds, EPA, on December 13, 2010, promulgated a Prevention of Significant Deterioration (PSD) rule revision (“[the Tailoring Rule](#)”) that sets unique major stationary source and major modification applicability thresholds for GHGs. The DAQ has revised (as of June 2011) our PSD Implementation Rule - [45CSR14](#) - to incorporate the provisions of the Tailoring Rule.

As of July 1, 2011, GHGs can alone trigger PSD review. DAQ is now analyzing new and modified sources for their potential applicability to PSD for GHG emissions. The threshold for new sources is 100,000 tons per year (TPY) of CO<sub>2</sub>e (a weighted aggregate of the six identified GHGs) and 75,000 TPY of CO<sub>2</sub>e for modified sources. Please see the applicability tables on the following page for a complete list of GHGs, the estimated Global Warming Potential of each, and relevant applicability thresholds. It is important to note that EPA has stated that if the actual construction of a project (new source or modification) commences after July 1, 2011, it must be evaluated under the applicability thresholds of that date even if the permit for that project was issued prior to July 1.

Also, as with other pollutants, where the potential-to-emit (PTE) of GHGs would naturally exceed the PSD applicability thresholds and applicants request it, we will be issuing GHG synthetic minor permits. These will be minor source (45CSR13) permits with enforceable GHG limits below major source applicability thresholds.

EPA has provided GHG permitting training and guidance on their website. It is strongly encouraged that all applicants with large sources of GHGs review this guidance prior to submitting a permit application. These include a large guidance [document](#), a series of presentation [slides](#), and a series of [web slides with narration](#).

To facilitate expedited permitting of your application, please include emissions estimates of GHGs and associated calculations for both your existing facility and associated with the proposed modification (if applicable, and based on the methodology as given under 45CSR14).

If you have any permitting questions concerning GHGs, please contact:

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### Greenhouse Gases and CO<sub>2</sub>e Calculation Values

Greenhouse Gases	Global Warming Potential
Carbon Dioxide (CO <sub>2</sub> )	1 Ton CO <sub>2</sub> = 1 Ton CO <sub>2</sub> e
Methane (CH <sub>4</sub> )	1 Ton CH <sub>4</sub> = 21 Tons CO <sub>2</sub> e
Nitrous Oxide (N <sub>2</sub> O)	1 Ton N <sub>2</sub> O = 310 Tons CO <sub>2</sub> e
Hydrofluorocarbons (HFCs)	1 Ton HFCs = 12 to 11,700 Tons CO <sub>2</sub> e <sup>(1)</sup>
Perfluorocarbons (PFCs)	1 Ton PFCs = 6,500 to 9,200 Tons CO <sub>2</sub> e <sup>(1)</sup>
Sulfur Hexafluoride (SF <sub>6</sub> )	1 Ton SF <sub>6</sub> = 23,900 Tons CO <sub>2</sub> e

(1) As determined by Table A-1 in 40 CFR 98, Subpart A.

**Table II-A. Summary of PSD Applicability Criteria for New Sources of GHGs**

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

**Table II-B. Summary PSD Applicability Criteria for Modified Sources of GHGs**

Permits issued from January 2, 2011, to June 30, 2011	Permits issued on or after July 1, 2011
<p><b>PSD Applies to GHGs, if:</b></p> <ul style="list-style-type: none"> <li>• 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"> <li>○ Equal to or greater than 75,000 TPY CO<sub>2</sub>e, and</li> <li>○ Greater than -0- TPY mass basis,</li> </ul> </li> </ul>	<p><b>PSD Applies to GHGs, if:</b></p> <ul style="list-style-type: none"> <li>• 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"> <li>○ Equal to or greater than 75,000 TPY CO<sub>2</sub>e, and</li> <li>○ Greater than -0- TPY mass basis</li> </ul> </li> </ul> <p><b>OR BOTH:</b></p> <ul style="list-style-type: none"> <li>• The existing source has a PTE equal to or greater than:               <ul style="list-style-type: none"> <li>○ 100,000 TPY CO<sub>2</sub>e and</li> <li>○ 100/250 TPY mass basis</li> </ul> </li> <li>• Modification has a GHG emissions increase and net emissions increase:               <ul style="list-style-type: none"> <li>○ Equal to or greater than 75,000 TPY CO<sub>2</sub>e, and</li> <li>○ Greater than -0- TPY mass basis</li> </ul> </li> </ul> <p><b>OR BOTH:</b></p> <ul style="list-style-type: none"> <li>• The source is an existing minor source for PSD, and</li> <li>• Modification alone has actual or potential GHG emissions equal to or greater than:               <ul style="list-style-type: none"> <li>○ 100,000 TPY CO<sub>2</sub>e, and</li> <li>○ 100/250 TPY mass basis</li> </ul> </li> </ul>