

Green House Gas Permitting Issues and Answers

1. Inclusion of GHG emissions in permit application and public notices

For types of permitting actions, the applicant must address the applicability of GHG to the particular action in the section designated for that purpose.

For NSR minor source applications and minor modifications to major sources, GHG emissions will not be included in the application tables or in the public notice done by either the applicant or the Department because GHG are not regulated air contaminants for the facility. GHG are only regulated for a facility if an increase of GHG is ‘major’ as defined in 20.2.70 and 20.2.74 NMAC.

For PSD applications, GHG emissions will be listed in the application tables and in the public notice if the action [new source or modification] is major for GHG.

For Title V applications, GHG emissions will not be included in the application tables or in the public notice because GHG are not regulated air pollutants for the facility, unless emitted in major quantities [100 TPY mass and 100,000 TPY CO₂e].

2. PSD rule [20.2.74 NMAC] requirements that may be ignored for GHG emissions

Section 303, Ambient Impact Requirements: The section is not applicable because there are no ambient standards for GHG.

Section 304, Additional Impact Requirements: In the preamble to the Tailoring rule [page 31520] EPA stated that the requirements to analyze impacts on visibility, soil, and vegetation are not applicable because there are no ambient standards for GHG. In the November 2010 EPA permitting guidance for GHG, EPA addresses these requirements on pages 48 and 49, saying that compliance with BACT is the best technique to satisfy the additional impacts analysis. Also, the NAAQS has secondary standards that set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings, but there are no such standards for GHG. Visibility impairment is associated with SO₂ and TSP.

Section 305, Ambient Air Quality Modeling: The section is not applicable because there are no ambient standards for GHG.

Section 306, Monitoring Requirements: The section is not applicable, per sub-paragraph B because there are no ambient standards for GHG.

Section 403, Additional Requirements for Sources Impacting Class 1 Federal Areas: The application materials will be sent to the federal land managers if the PSD permitting action is subject to this section, but no comments are expected on Air Quality Related Values since GHG has no affect.

From page 31520 of the pre-amble to the Tailoring rule:

In addition to performing BACT, the source must analyze impacts on ambient air quality to assure that no violation of any NAAQS or PSD increments will result, and must analyze impacts on soil, vegetation, and visibility. In addition, sources or modifications that would impact Class I areas (*e.g.* national parks) may be subject to additional requirements to protect air quality related values (AQRVs) that have been identified for such areas. Under PSD, if a source's proposed project may impact a Class I area, the Federal Land Manager is notified and is responsible for evaluating a source's projected impact on the AQRVs and recommending either approval or disapproval of the source's permit application based on anticipated impacts. There are currently no NAAQS or PSD increments established for GHGs, and therefore these PSD requirements would not apply for GHGs, even when PSD is triggered for GHGs. However, if PSD is triggered for a GHG emissions source, all regulated NSR pollutants which the new source emits in significant amounts would be subject to PSD requirements. Therefore, if a facility triggers review for regulated NSR pollutants that are non-GHG pollutants for which there are established NAAQS or increments, the air quality, additional impacts, and Class I requirements would apply to those pollutants.

3. What chemical components constitute GHG

A. AQB Planning Section provided this perspective:

“The common definition of a PFC is a compound that contains ONLY carbon and fluorine; *e.g.*, perfluoromethane (CF₄), perfluoroethane (C₂F₆), perfluorocyclobutane (c-C₄F₈) and so on. PFCs are released during the production of primary aluminum and semiconductor manufacturing, and may be present in some refrigerant blends.

The common definition of an HFC is a compound that contains ONLY hydrogen, fluorine, and carbon. HFCs are not ozone depleting, but some have a high global warming potential (GWP).

For permitting purposes, one must refer to Table A-1 of 40 CFR Part 98 to calculate the GWP of aggregate GHGs. Compounds with an HFC or PFC nomenclature, such as HFC-23 or PFC-4-1-12, need to be considered. Just because a compound listed in this table may not be included in the scope of the tailoring rule as one of the six well-mixed GHGs does not mean anything except it is not subject to permitting requirements.”

Therefore, in table A-1 of 40 CFR 98 only the 19 items with HFC in the name and the 8 items with PFC in the name, plus perfluorocyclobutane are included in GHG.”

B. Definitions in 20.2.2 NMAC:

M. "Greenhouse gas" means any of the following: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride.

O. "Hydrofluorocarbons" means gaseous chemical compounds containing only hydrogen, carbon, and fluorine atoms.

AA. "Perfluorocarbons" means gaseous chemical compounds containing only carbon and fluorine atoms.

C. Definitions in 20.2.70 and 20.2.74 NMAC:

"Greenhouse gas" for the purpose of this part is defined as the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.