

ARS Compliance Tip of the Month

May 25, 2010

EPA's "Tailoring Rule" to Regulate Greenhouse Gas Emissions

On May 13, 2010, the U.S. Environmental Protection Agency (EPA) released its long-awaited "tailoring rule" covering how the agency will regulate greenhouse gas (GHG) emissions through the federal air permitting program. GHG emissions covered by the new rule include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).



The program implements permitting for GHG emissions in phases. The initial phase becomes effective January 2, 2011, and covers GHG emissions from existing major sources that are subject to the Prevention of Significant Deterioration (PSD) and/or Title V operating permit programs due to emissions of non-GHG pollutants. For example, at an existing major source, any new major modification subject to the PSD permitting requirements that increased GHG emissions by at least the threshold amount (75,000 tons per year on a CO₂ equivalent basis) would need to include an assessment of Best Available Control Technology (BACT) for their GHG emissions. EPA has committed to providing guidance to assist regulated sources define appropriate BACT for GHG pollutants by later this year. This phase of the GHG permit program is likely to affect only a few ARS clients and only those clients who are planning to submit permit applications for PSD projects at existing facilities after January 2, 2011.

The second phase of the GHG permitting program will become effective July 1, 2011. In Phase 2, the GHG permitting program will apply to any new source with GHG emissions of 100,000 tons per year or more on a CO₂ equivalent basis. Under Phase 2, any new source with GHG emissions above the threshold would trigger the requirements to obtain a PSD permit. This would also include requirements to implement BACT for GHG emissions as described above.

Also, any existing source with emissions above the 100,000 tpy threshold will be subject to the Title V operating permits program in Phase 2. Normally, a source subject to Title V for the first time has up to 12 months to file its permit application, so an existing source that would trigger Title V solely due to its GHG emissions would need to file their Title V application no later than July 1, 2012.

Phase 3 would cover smaller emission sources, perhaps with emissions as low as 50,000 tons CO₂ equivalent. EPA says that Phase 3 permit requirements would not be applicable until at least April 30, 2016. EPA needs to undertake additional rulemaking to implement Phase 3, so these requirements are subject to change.

ARS clients likely to be affected by this rule include our customers in the biofuels industry and coal mining industry. Biofuels plants emit CO₂ from fuel combustion as well as the ethanol fermentation process. Coal mines emit methane (CH₄), which is naturally released during mining operations. For those clients emitting CH₄, the CO₂ equivalency factor is 21, meaning that CH₄ is believed to be 21 times more potent in contributing to global warming compared to CO₂. So, the major source threshold for coal mines and other sources whose GHG emissions are primarily CH₄ is really only 4,762 tpy of methane.

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Despite all the focus on GHG emissions, I believe that the real sleeper in the new tailoring rule is actually how the rule will impact permitting and emissions control for non-GHG pollutants at your facility, particularly for plants that have not previously been subject to PSD and/or Title V requirements, but are now defined as “major sources” because of the GHG tailoring rule. Once a facility gets classified as “major” based on its GHG emissions, the PSD applicability threshold for non-GHG pollutants drops significantly. So, capital projects previously permitted as “minor sources” could now be subject to “major source” permitting requirements under PSD. This can significantly lengthen the cost and timing for securing permits for new capital projects. If your facility is currently regulated as a “minor source”, but you would now be classified as “major” due to your GHG emissions, regulatory compliance is likely to become more difficult and costly and not just for your GHG emissions.

The first step is assessing how this new rule affects your plant is to quantify the GHG emissions. If you are already subject to the GHG reporting rule (see <http://www.air-resource.com/PDF/News/Compliance%20tip%20-%20GHG%20FEB10.pdf>), then you will already know your GHG emissions when reporting begins in 2011. However, please be aware that the current GHG reporting rule may not cover all GHG emissions at a particular facility, so sources should not rely on that data alone to quantify GHG emissions and the applicability of the GHG permitting rule.

The basics of the tailoring rule appear to be simple, but in reality, this rule will affect each client’s facility differently. The largest impact will be at those sources subject to PSD and Title V requirements for the first time due to their GHG emissions. For assistance in understanding the GHG tailoring rule, GHG emissions at your facility, and how to make compliance easier under the new GHG regulatory environment, please contact your ARS Project Manager or contact me at 970/484-7941 or hgebhart@air-resource.com.

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