

Technical Bulletin

Implications for Municipal Solid Waste Landfills from the U.S. Appeals Court Overturning Biogenic Carbon Dioxide Deferral

On July 12, 2013, the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) vacated the Deferral Rule that had suspended regulation of “biogenic” greenhouse gas (GHG) emissions under the Clean Air Act (CAA). Biogenic GHG includes carbon dioxide produced from the combustion, decomposition, or processing of biologically-based materials, such as most of the organics contained in municipal solid waste (MSW).

The Deferral Rule was promulgated by the U.S. Environmental Protection Agency (EPA) on July 1, 2011, to enable EPA to consider the complicated science of biogenic carbon dioxide emissions before deciding whether to include such emissions in permitting requirements.

The D.C. Circuit found that because EPA included (or did not exclude) biogenic carbon dioxide in its 2009 Endangerment Finding for GHG (thus making them air pollutants under the CAA), the Agency cannot defer regulation of these pollutants unless it explains why such an approach would be fully compliant with the CAA.

For MSW landfills and waste-to-energy facilities, the practical effect of the DC Circuit’s opinion will be to increase the potential that these facilities will require permits under the CAA. On May 13, 2010, EPA finalized its “Tailoring Rule,” which explained how GHG emissions would be regulated under CAA Title V and Prevention of Significant Deterioration (PSD) provisions.

Tailoring Rule Summary

Under the Tailoring Rule, new facilities or modifications of existing minor facilities emit-

ting at least 100,000 tons per year (tpy) of carbon dioxide equivalents are covered by PSD requirements and modifications of existing major sources with emission increases greater than 75,000 tpy of carbon dioxide equivalents will be subject to PSD permitting requirements. Facilities are also required to obtain a Title V permit if they emit at least 100,000 tpy carbon dioxide equivalents, even if other pollutants do not exceed Title V permitting thresholds. Because of this rule, GHG alone can trigger PSD or Title V permitting requirements.

Biogenic Deferral

Under the Deferral Rule, biogenic carbon dioxide was not to be included in the PSD or Title V permitting requirements for three years while the EPA evaluated the impacts of biogenic carbon dioxide on global climate change. Biogenic carbon dioxide includes both the carbon dioxide in landfill gas (LFG) (including carbon dioxide passing through destruction devices) and the carbon dioxide from the combustion of the methane fraction of LFG.

On July 12, 2013 U.S. Court of Appeals issued a decision overturning the biogenic deferral.

MSW Landfill Applicability

The Tailoring Rule applies to municipal solid waste (MSW) landfills with a Title V permit when undergoing renewal or during permitting. Without the deferral, the carbon dioxide fraction of LFG as well as the carbon dioxide resulting from combustion of the methane fraction of LFG is included in determining if a landfill exceeds the 100,000 and 75,000 tpy

carbon dioxide equivalent thresholds, as applicable.

Anthropogenic sources of GHG from combustion of methane in LFG and/or fossil fuels are generally minor compared to the biogenic carbon dioxide fraction in LFG. The anthropogenic methane in LFG can easily be combusted through a landfill gas collection and control system, except in cases where fugitive emissions from methane must be counted.

Implications for Landfills

Without the biogenic deferral, biogenic sources of carbon dioxide, including the carbon dioxide emissions from LFG flares and engines, must be considered while undergoing Title V or PSD permitting. The inclusion of these sources will result in a significant number of landfills being considered major sources of GHG which had previously been considered minor sources of GHG.

Under PSD, once a facility is a major source for one pollutant, it is a major source for all pollutants. The inclusion of biogenic carbon dioxide will increase the number of sources considered major under PSD and require that the increases in other pollutants be included in the PSD evaluation. Major facilities must evaluate the Best Available Control Technology (BACT) and conduct air modeling for certain pollutants.

Issues to be Addressed

It is unclear how the EPA, states, and local districts will evaluate the timing of the overturning of the biogenic deferral. The EPA may take the approach of considering biogenic carbon dioxide as a new pollutant as of July 12, 2013. Under this approach, facilities which are minor for GHG will be required to evaluate their status as a major facility with biogenic GHG and determine if they must begin the Title V permit application process. At a minimum, Title V emission inventories may have to be redone to include biogenic carbon dioxide. Retroactive lia-

bility is not expected, but that issue is one the EPA must address.

It is likely that appeals to this court action could have implications on its overall timing, as will amending state rules concerning biogenic emissions, which would also require revision.

The EPA has proposed BACT guidance for landfills and GHG; however, that guidance is inconsistent with BACT for other sources. It remains to be seen how the EPA and local districts will implement GHG BACT for landfills.

The landfill industry will be working with EPA on these issues to develop a path forward for dealing with the loss of the biogenic deferral.

Resources

- i) [D.C. Circuit Court Deferral Ruling](#)
- ii) [EPA New Source Review Website](#)

How SCS Can Help

SCS can help your facility/facilities determine if they are subject to Title V and PSD rules based on GHG and other pollutants; and if so, how to best comply with these rules. SCS can help with MSW landfill permitting, permit modification, and meeting permit requirements.

Our LFG practice is among the largest in the world. SCS is an expert in air quality and GHG issues for landfills and developed one of the models used by EPA in its GHG rules. We would be pleased to put this experience to work for you.

For more information contact:

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Or contact your local SCS Engineers office.

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