

GHG Permitting and Biogenic CO₂

An Update on EPA Air Rules Impacting the Landfill Industry

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GHG Permitting & Biogenic CO₂

- What is PSD and why is it a big deal?
- GHG permitting under PSD.
- The status of Biogenic CO₂ issues.
- How will GHG permitting and biogenic CO₂ issues shake out?
- What would happen if I have to count my Biogenic CO₂ emissions?

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HG Permitting

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What is Prevention of Significant Deterioration (PSD)?

- Modeling must account for your facility, plus other nearby facilities.
- Total modeled concentration + background can't exceed the NAAQS.

- Total impact on air quality can't exceed the allowable increment.
- Once the increment is consumed at a particular location, there is no more room for additional emissions.



PSD

- **Pre-construction permitting program for major sources and major modifications at existing major sources.**
- **Major source thresholds of 100/250 tons per year for traditional pollutants.**
- **Once a facility is a major source, future modifications are subject to PSD permitting at much lower thresholds.**

What is Prevention of Significant Deterioration (PSD)?

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Research Triangle Park, NC 27711
www.epa.gov/airquality/psd

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Requires the application of the best available control technology (BACT)

- Requires all facilities to maintain an operational level of control that is "as strict as necessary" to ensure that emissions do not exceed the NAAQS at any off-site receptor.



Additional requirements for PSD apply to facilities that are subject to PSD. For more information, visit www.epa.gov/airquality/psd.

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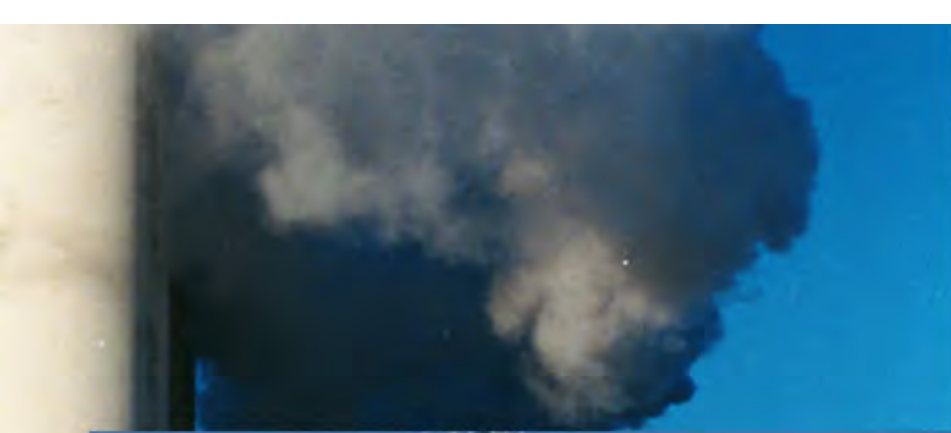
Requires the application of the best available control technology (BACT)



Requires air dispersion modeling to determine that the facility will not "exceed or contribute" to a violation of the NAAQS at any off-site location.



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**Requires the application
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Additional Requirements:
 - Demonstration of impacts to visibility, soil, and vegetation.
 - Public participation.

DND may factor into the evaluation. Buser: completing an already completed program.

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Additional Requirements:

- **Consideration of impacts to visibility, soil, and vegetation.**
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GHG now factor into the equation, further complicating an already complicated program.

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GHG Regulatory Timeline

2005

- Petition for rulemaking for GHG emissions from motor vehicles.
- EPA said no.
- DC Circuit upheld EPA's denial.

2006

- Supreme Court agrees to hear the case.

2007

- Mass. v. EPA
- EPA must go make an "endangerment finding"

2009

- EPA makes endangerment finding
- EPA must regulate GHG emissions from motor vehicles.

2010

- EPA interprets "air pollutant" under Title II of the CAA to mean "regulated NSR pollutant" under the PSD rules.
- EPA promulgates the "Tailoring Rule" to avoid absurd results of applying statutory thresholds to GHG.

2011

- PSD permitting requirements for GHG take effect.

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Biogenic CO₂ Regulatory Timeline

2011

- EPA promulgates the Deferral Rule, deferring regulation of biogenic CO₂ under PSD until July 21, 2014.
- EPA publishes a draft biogenic CO₂ accounting framework .

2012

- SAB comments on EPA's draft biogenic CO₂ accounting framework.

2013

- The Deferral Rule is vacated.
- Vacature is appealed by EPA.
- Supreme Court decides to hear UARG vs. EPA.
- Appeal period is extended until UARG vs. EPA is decided. Thus, the Deferral Rule is left intact.

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2014

(and beyond)

GHG Permitting, In General

- UARG vs. EPA will be decided in the coming weeks:
 - Question: Was it permissible for EPA to determine that regulation of GHG under Title II of the CAA (motor vehicles) required them to regulate GHG emissions under PSD?
- If UARG wins, GHG permitting under PSD will go away.
- If EPA wins, GHG permitting will continue under PSD (nail in the coffin).

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Biogenic CO2 and PSD

- Regardless of the outcome of EPA's appeal, the Deferral will sunset on July 21, 2014 (additional rulemaking notwithstanding). Biogenic CO2 becomes subject to regulation under PSD.
- The EPA's biogenic CO2 accounting framework will become final on _____ ??? It will inform us on how biogenic CO2 emissions are to be counted towards PSD thresholds.
- Draft framework suggests landfills should have a BAF = 0 (no biogenic CO2 counted towards PSD thresholds). The SAB didn't have too many issues with this assumption.



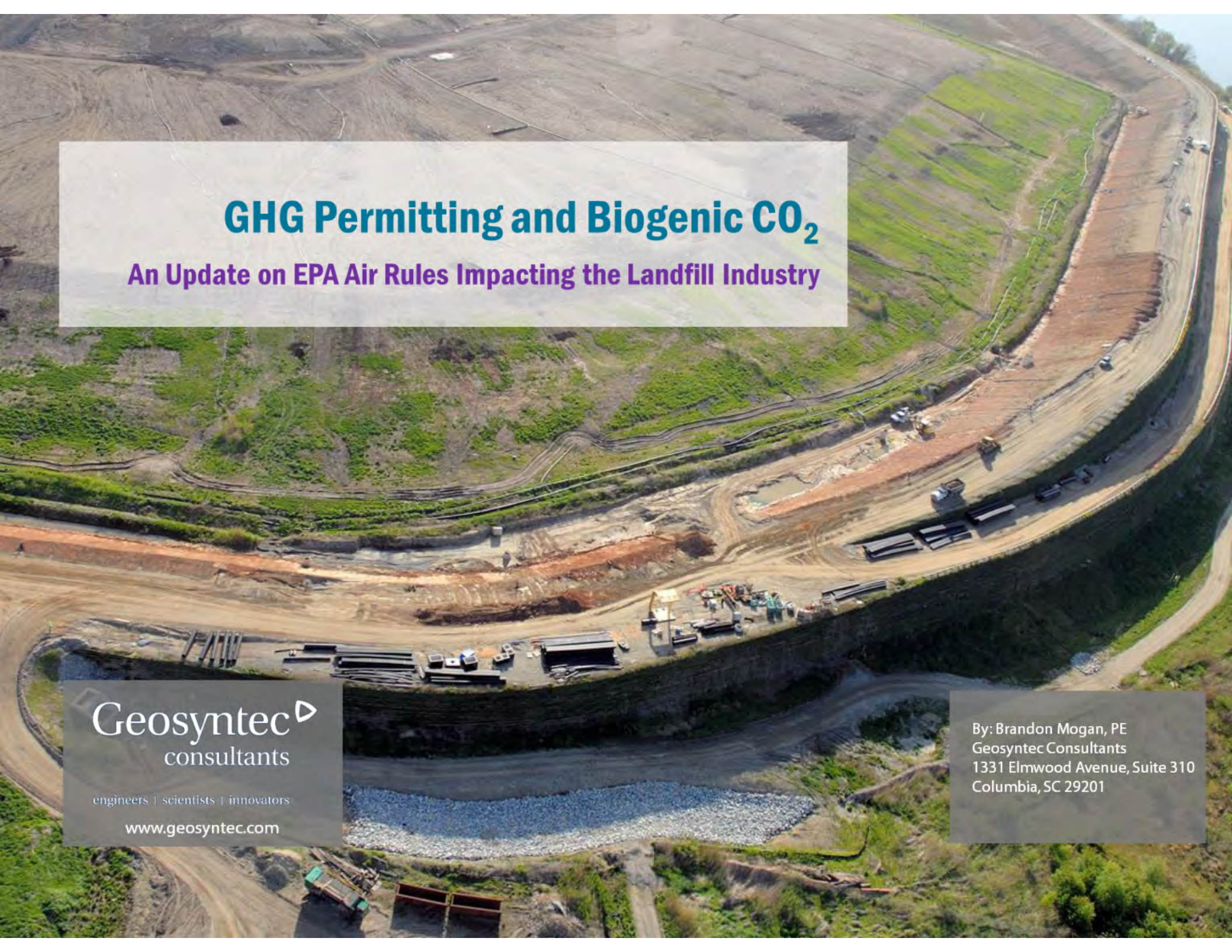
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Example Landfill

- 16 MM ton (capacity)
- Two 2,500 scfm flares
- Currently not a major source under PSD for GHG (<100,000 tpy CO₂e) or traditional NSR pollutants (<250 tpy).
- Biogenic CO₂ becomes "subject to regulation" on July 21, 2014, the landfill is now a major source under PSD for GHG (>100,000 tpy CO₂e).
- Future projects that may require PSD permitting:
 - Addition of one 2,500 scfm flare (major modification for CO and GHG).
 - Addition of one 2,500 hp LFG-fired engine (major for CO).



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