



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

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OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Mr. Chris Hornback  
Senior Director, Regulatory Affairs  
National Association of Clean Water Agencies  
1816 Jefferson Place, NW  
Washington, DC 20036

Dear Mr. Hornback:

We appreciated the opportunity to discuss with you concerns related to EPA's final rule entitled, *Identification of Non-Hazardous Secondary Materials (NHSM) That Are Solid Waste*. 76 FR 15456 (March 21, 2011). We understand that responses in the *Response to Comments Document for the Identification of Non-Hazardous Secondary Materials that are Solid Waste* (February 2011) final rule have raised questions as to whether the Environmental Protection Agency (EPA) has changed its interpretation of what constitutes a "contained gaseous material." Specifically, questions were raised as to how that interpretation relates to biogas generated by the anaerobic digestion of wastewater treatment sludge that is burned for energy recovery.

First, we would note that this letter only addresses wastewater treatment sludges that are processed in anaerobic digesters to produce biogas and does not apply to other situations where these sludges are used as a fuel. For example, see 76 FR 15513-15515 for a discussion of the incineration of sewage sludge.

As you are aware, representatives from other industry sectors also have raised concerns about the contained gas language in the Response to Comments Document. In a letter to Mr. Tim Hunt dated May 13, 2011, a copy of which is enclosed, we clarified that EPA was not changing any of its previous positions regarding what constitutes a "contained gaseous material" for purposes of defining the term "solid waste" under the Resource Conservation and Recovery Act (RCRA) and that the Agency's previous statements and interpretations remain in place. The letter specifically stated that "burning of gaseous materials, such as in fume incinerators (as well as other combustion units, including air pollution control devices that may combust gaseous material) does not involve treatment or other management of a solid waste (as defined in RCRA section 1004(27))." Further, in an August 5, 2011, letter to Ms. Sue Briggum (also enclosed), we clarified that the Agency is not changing any of its previous statements and interpretations concerning landfill gas. Finally, in the recent *Commercial and Industrial Solid Waste Incineration Units (CISWI) Reconsideration and Proposed Amendments*, the Agency reiterated that it did not intend to create ambiguity by removing the definition of "contained



gaseous material" from the 2000 CISWI rule. Accordingly, the proposed CISWI reconsideration rule includes the same definition of "contained gaseous material" that was removed from the final CISWI rule. See 76 FR 80463.

As you described in a September 19, 2011 email to George Faison of my staff, anaerobic digestion is a widely used solids processing technology at wastewater treatment plants. Digestion includes production of biogas through the decomposition of the biodegradable portion of the volatile solids by microorganisms in the absence of oxygen, producing biogas. You also indicated that the use of biogas as a fuel requires cleaning and purification to remove contaminants. EPA considers the anaerobic digestion of wastewater treatment sludge to produce biogas as meeting the definition of processing pursuant to 40 CFR 241.2.

The biogas is primarily composed of methane (60-65 percent) and CO<sub>2</sub> (35-40 percent) and has been used to heat the digesters and, at many treatment facilities, to generate power. The biogas can be collected and burned as fuel to produce electricity using onsite power generation equipment, such as internal combustion engines, turbines, micro turbines, or fuel cells. Additionally, heat can be recovered from the power generation units in the form of hot water or steam (combustion turbines only) to heat the digesters, facility buildings, or other processes that require heat.

Thus, as stated in previous letters, the Agency is not changing any previous positions of what constitutes a "contained gaseous material" for purposes of defining the term solid waste as it relates to biogas generated by the anaerobic digestion of wastewater treatment sludge and used for energy recovery. Therefore, we would consider biogas from anaerobic digestion to be a commodity fuel processed from waste materials, and not a traditional fuel. Also, as indicated in the August 5 letter, biogases that qualify for the Gas 1 (natural gas and refinery gas) subcategory would be subject to the work practice standards under the Boiler MACT. See 76 FR 15668-9 (section 63.7521(f)-(i) and Table 6) for specific regulatory requirements.

Your email also provided information on California's renewable energy program. Although we do not consider biogas from anaerobic digestion to be a traditional fuel under 40 CFR Part 241, you requested confirmation that this determination is narrow and only applicable to the Commercial and Industrial Solid Waste Incinerator (CISWI) standards, and would not impact the status of biogas as a renewable fuel for purposes of state or future federal renewable energy programs. The purpose of the NHSM rule is to identify those materials which could be considered solid wastes under RCRA when used as a fuel or ingredient in combustion units.

Thank you for your continued interest in protecting the environment. If you have further questions, please contact George Faison at [faison.george@epa.gov](mailto:faison.george@epa.gov) or (703) 305-7652.

Sincerely,

A handwritten signature in cursive script, appearing to read "Suzanne Rudzinski".

Suzanne Rudzinski, Director  
Office of Resource Conservation and Recovery

Enclosures

