

This memo has been replaced by the clarification titled “Is a Wood Waste Gasification Project at Norbord South Carolina, Inc. a Fuel Conversion Plant, Part 2”, June 4, 2007.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

June 14, 2005

4APT-APB

Ms. E.A. Veronica Barringer  
Bureau of Air Quality  
South Carolina Department of Health  
and Environmental Services  
2600 Bull Street  
Columbia, South Carolina 29201

Dear Ms. Barringer:

Thank you for your letter dated May 4, 2005, in which you request an opinion from the U.S. Environmental Protection Agency (EPA) concerning prevention of significant deterioration (PSD) regulations. You specifically requested if wood waste (biomass) gasification projects at a Norbord South Carolina, Inc. (Norbord) oriented strandboard manufacturing facility and a University of South Carolina (USC) facility should be viewed as fuel conversion plants under PSD rules. The PSD rules applicable to both facilities are South Carolina's rules in Regulation 61-62.5, Standard No. 7.

We respond to your request based on how we believe such a request would be resolved under the federal PSD rules in Title 40 Code of Federal Regulations and under EPA policies. Our response does not represent how you must interpret the PSD requirements that EPA has approved into South Carolina's state implementation plan, nor does it represent final agency action. Instead, this letter provides guidance for you to consider in your role as the PSD reviewing authority. Our opinion, as more fully explained below, is that both gasification projects should be considered fuel conversion plants for PSD regulatory applicability purposes.

## **Background**

PSD rules contain a list of 28 source categories for which the major source emissions threshold is 100 tons per year (tpy) of any individual NSR regulated pollutant. One of these 28 source categories is "fuel conversion plants."

The owners of two facilities in South Carolina either have or are proposing biomass gasification operations, raising the question of whether these operations should be considered fuel conversion plants. Based solely on the descriptions in your letter, we understand these operations to consist of the following:

Norbord – Norbord operates three rotary gasifier/burner oxidizer systems at its oriented strandboard facility. Each system includes a rotary kiln gasifier generating a synthetic gas from gasification of wood wastes. The synthetic gas is burned in a secondary

combustion chamber producing hot exhaust gases used to produce steam and (in one system) hot oil for manufacturing process needs.

University of South Carolina – USC proposes to install and operate three gasifiers using wood waste to produce a synthetic gas. The synthetic gas would then be burned in an oxidizer to produce hot exhaust gases for generation of steam in a boiler. The generated steam in turn would be used for heating needs and for electricity production.

## **Opinion**

Although EPA has never defined the meaning of “fuel conversion plant” explicitly, we have issued related opinions. A relevant opinion is a memo dated May 26, 1992, from EPA’s Permits Program Branch concerning a Cleveland Electric plant. At this plant Cleveland Electric proposed to produce fuel gas by means of gasifying municipal waste. EPA concluded that this production process qualified as a fuel conversion plant and made the following statement: “Fuel conversion plants obviously include those plants which accomplish a change in state (e.g., solid to liquid to gas) for a fuel. This definition includes conversion of the following fuels: fossil (e.g., coal or oil shale); biomass (e.g., wood or peat); and anthropogenic (e.g., municipal waste derived fuel and inorganic fuel). The majority of such sources are likely to accomplish these changes through either gasification, liquefaction, or solidification.” [Emphasis added.]

Consistent with the statement in the Cleveland Electric memo quoted above, we conclude that the gasification operations at Norbord and USC should be classified as fuel conversion plants. This does not mean that the entire Norbord and USC facilities are fuel conversion plants. Rather, just the operations (and emissions units) associated directly with waste wood (biomass) gasification constitute a fuel conversion plant for these facilities. Therefore, depending on the nature of the total Norbord and USC facilities, it might be possible for the PSD major source threshold of 100 tpy to apply to gasification operations and the major source threshold of 250 tpy to apply to the entire facility (including emissions from the gasification operations).

If you have any questions concerning the comments in this letter, please call Jim Little at 404-562-9118.

Sincerely,

/s/

Gregg M. Worley  
Chief  
Air Permits Section