Best Available Control Technology Determination

Dixie Waste Services, LLC
Dixie County Facility

This Best Available Control Technology Determination (BACT) Determination is required for the source as set forth in Rule 62-296.400, Florida Administrative Code (F.A.C.) - Specific emission Limiting and Performance Standards, and Rule 62-296.406, F.A.C. - Fossil Fuel Steam Generators with less than 250 MMBtu per Hour Heat Input, New and Existing Sources.

The applicant has applied for a permit for municipal solid waste gasification plant. Part of the project is the construction of a Heat Recovery Steam Boiler (HRSB) to recover heat and generate steam for powering an electric generating turbine. The HRSB may also burn fossil fuel to supply additional heat if the gasification plant is unable to supply adequate heat for steam generation. The HRSB is designed to process approximately 60 MM Btu per hour of heat input. Up to 17.06 MM Btu per hour of the total heat input may be obtained from the combusting of fossil fuel. This BACT Determination is only for the boiler if it is firing fossil fuel.

BACT Determination Requested by the Applicant

Particulate Matter (PM) and Sulfur Dioxide (SO_2) emissions shall be controlled by the use of natural gas or propane.

Date of Receipt of BACT Application

May 28, 2011, additional information received October 5, 2011

BACT Determination by the Department

PM and SO_2 emissions shall be controlled by the firing of natural gas or propane.

BACT Determination Rationale

Sulfur in fuel is a primary air pollution concern since most of the fuel sulfur becomes SO_2. PM emissions are also related to the sulfur content of the fuel.

This determination is consistent with other recent BACT Determinations for small boilers (i.e. less than 250 MMBtu per hour heat input) and is more stringent than 40 CFR 60, Subpart Dc, New Source Performance Standards requirements for very low sulfur fuel oil (i.e., 0.5% sulfur content by weight).

Details of the analysis may be obtained by contacting:

Jerry Woosley, Environmental Specialist
Department of Environmental Protection
Northeast District Office
Air Resources Section
7825 Baymeadows Way, Suite 200B
Jacksonville, FL 32256

Approved by:

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Christopher Kirts, P.E., Air Administrator Date

Northeast District Office