

## **BACT Determination for Auxiliary Steam Boiler – Emissions Unit 003**

### **Best Available Control Technology (BACT) Determination GRU Energy Center South Alachua County**

The applicant has submitted a construction permit application for construction permit for a 41.4 MMBtu/hour Auxiliary Steam Boiler. The boiler is fired primarily with natural gas with distillate fuel oil as backup fuel.

This BACT determination is required for the source as set forth in Rules 62-204.400(7), F.A.C., - Specific Emission Limiting and Performance Standards and 62-296.406, F.A.C., - Fossil Fuel Steam Generators with less than 250 Million Btu per hour Heat Input, New and Existing Sources.

#### **BACT Determination Requested by Applicant:**

Particulate matter and sulfur dioxide emissions are to be controlled by the firing of natural gas as the primary fuel. The boiler is allowed to combust low sulfur distillate fuel oil for no more than 500 hours per year as the backup fuel.

**Date of Receipt of BACT Application:** April 4, 2007

#### **BACT Determination by (DEP Northeast District):**

The amount of particulate matter and sulfur dioxide emissions from the boilers shall be limited by the firing of natural gas as the primary fuel. The boiler is allowed to combust low sulfur distillate fuel oil for no more than 500 hours per year as backup fuel. The sulfur content of the distillate fuel oil shall not exceed 0.05 %, by weight.

#### **BACT Determination Rationale:**

Sulfur in fuel is a primary air pollution concern since most of the fuel sulfur becomes sulfur dioxide. Also, particulate matter emissions from fuel burning are related to the sulfur content. The BACT for the boiler is

1. The firing of natural gas as primary fuel.
2. The limitation on the combustion of distillate fuel oil for no more than 500 hours per year.
3. The maximum sulfur content of distillate fuel oil is limited to 0.05 %, by weight.

This decision is consistent with previous BACT determinations for similar units and with 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

**Details of the Analysis May be Obtained by Contacting:**

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Florida Department of Environmental Protection  
7825 Baymeadows Way, Suite B200  
Jacksonville, FL-32256-7590

**Recommended by:**

A handwritten signature in black ink, appearing to read 'MengChiu Lim'.

MengChiu Lim  
Air Permitting Program

July 23, 2007  
Date

**Approved by:**

A handwritten signature in black ink, appearing to read 'Christopher L. Kirts'.

Christopher L. Kirts, P.E.  
District Air Program Administrator

July 25, 2007  
Date