Best Available Control Technology Determination

Renessenz, LLC
Jacksonville Facility
Duval County
Boiler No. 1

This 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 a derating of the Boiler No. 1 to 99 MMBtu per hour heat input at the existing Jacksonville Facility Chemical Manufacturing Plant. Boiler No. 1 (which was issued a BACT Determination in December 2010) currently is rated at a nominal 140 MMBtu per hour heat input firing natural gas, No. 2 fuel oil and process derived fuel [PDF] (formerly known as Glidfuel). PDF originates from crude sulfate turpentine which is the primary raw material at the manufacturing plant. PDF is not part of this BACT Determination since it is not a fossil fuel.

Original BACT Determination Requested by the Applicant

Particulate matter (PM) and Sulfur Dioxide (SO_2) emissions shall be controlled by the use of natural gas and/or ultra low sulfur No. 2 fuel oil (maximum of 0.05% sulfur content by weight).

Original and Updated Date of Receipt of BACT Application

Originally Received: February 5, 2010, additional information received April 27, 2010 and August 5, 2010.
Updated received: June 5, 2013

Original and Updated BACT Determination by the Department

PM and SO_2 emissions shall be controlled by the use of natural gas and/or ultra low sulfur No. 2 fuel oil (maximum of 0.05% sulfur content by weight).

Original 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 oil.

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 Db, New Source Performance Standards requirements for very low sulfur fuel oil (i.e., 0.5% sulfur content by weight).

Updated 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 oil.

This determination is consistent with other recent BACT Determinations for small boilers (i.e. less than 100 MMBtu per hour heat input) and is more stringent than 40 CFR 60, Subpart Dc, New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units 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
Waste and Air Resource Management Program
8800 Baymeadows Way West, Suite 100
Jacksonville, FL 32256

Approved by:

DRAFT

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Richard S. Rachal III, P.G. Date
Program Administrator
Waste and Air Resource Management