



Joe - Madull
AB072

RECEIVED
APR 06 2012
DIVISION OF AIR
RESOURCE MANAGEMENT

April 4, 2012

Jeff Koerner, P.E.
Florida Department Environmental Protection
Division of Air Resource Management
Office of Permitting & Compliance
2600 Blair Stone Road, MS #5505
Tallahassee, FL 32399-2400

Facility No: 0990234-024-AC

Re: SUPERHEATER TUBES FOR NCRRF BOILERS (EU001 & EU002)

Dear Mr. Koerner:

The Solid Waste Authority of Palm Beach County (SWA) owns the North County Resource Recovery Facility (NCRRF), which operates under Title V permit No. 0990234-22-AV. The SWA intends to install additional tubes to the existing superheater pendants in the NCRRF's boilers (EU001 and EU002) because the existing superheater tubes are not generating steam at the design temperature.

Reasons for Project

Each boiler has a maximum heat input rate of 427.5 MMBtu/hr and a maximum steam production rate of 324,000 lbs/hour (4-hr block average). The design temperature of the steam outlet is 750 °F. However, the steam temperature currently being achieved is only approximately 680 - 700 °F. Operating at this lower steam temperature causes a variety of problems, including reduced efficiency and excessive wear on the NCRRF's turbine.

The superheaters are unable to achieve the design steam temperature for two reasons. First, fouling is decreasing the boilers' efficiency—i.e., the ability to transfer heat from the combustion air to the steam in the superheater tubes. Second, the temperature of the air in the boiler has been reduced by the NCRRF's new overfire air systems. The new overfire air systems enhance combustion in the boilers and thus reduce the NCRRF's emissions. The improved combustion has resulted in enhanced furnace heat absorption which has led to lower flue gas temperatures entering the superheater

section. The overfire air systems, fabric filter baghouses, and other new air pollution control systems were installed as part of the refurbishment project that was previously approved by the Department.

In any event, additional superheater tubes are needed in each boiler to increase the total surface area of the superheater tubes and, in turn, increase the temperature of the steam produced by the boilers. The SWA has evaluated other options (i.e. sootblower cleaning frequency, mechanical rapping, etc.), but none of the other options have eliminated the need to install additional superheater tubes.

Description of Project

The SWA intends to install approximately 12.5% more superheater tube surface area in each boiler. The length of the pendants will be increased in only 20 of the 39 pendants located in each boiler. The overall number of pendants will not change. The SWA estimates that the additional superheater tubes will be sufficient to increase the temperature of the steam from the current operating temperature range of 680 - 700 °F to the design temperature of 750 °F. The SWA plans to install the additional superheater tubes during the next outage for the NCRRF, which is tentatively scheduled to commence on April 30, 2012. If the desired temperature is still not achieved after this project, SWA plans to install additional superheater tubes to the other pendants at a later time.

The SWA is not requesting the Department to change any of the conditions in the PSD or Title V permits for the NCRRF. The installation of the additional superheater tubes will not change the amount of fuel burned at the NCRRF nor will it increase the heat input to the boilers. The installation of the additional superheater tubes will not increase the actual or potential air emissions from the boilers. The steam production rate of the boilers will also remain the same.

FDEP Regulations


In Rule 62-210.200(199), Florida Administrative Code (F.A.C.), "modification" is defined as *"any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the actual emissions of any air pollutant subject to regulation under the Act, including any not previously emitted, from any emissions unit or facility"*. The additional superheater tubes will not increase any actual or potential emissions from the boilers. Therefore, the proposed project is not a "modification". Since the installation of additional superheater tubes will not increase the NCRRF's permitted capacity or airborne emissions, the SWA has concluded that the SWA does not need a new permit or a permit modification before the SWA commences construction for this project.

Conclusion

Based on the information contained in this letter, the SWA respectfully requests the Department to confirm that the SWA can undertake this project without obtaining a new permit or revising any existing permit, pursuant to FDEP Rule 62-4.040(1)(b), F.A.C.

Thank you for your prompt consideration of this request. If you have any questions or need additional information, please contact Mary Beth Morrison at mmorrison@swa.org or (561) 640-4000 ext. 4613.

Sincerely,



Mark Hammond
Executive Director

cc: Lennon Anderson, (FDEP, SED)
Lee Heofert, (FDEP, SED)
Marc Bruner, SWA
Ray Schauer, SWA
Bob Worobel, SWA
Mary Beth Morrison, SWA
Tom Yonge, Golder Associates, Inc
David S. Dee, Esq.
Bill Arvan, PBRRC