Florida Department of

Environmental Protection

Memorandum

TO: Rick Bradburn
THROUGH: Armando I. Sarasua, P.E.
FROM: Angelia Jackson
DATE: May 24, 2012
SUBJECT: Evaluation Summary for Florida State University, Central Utilities Plant; 0730010-006-AF; Leon County

We recommend issuing a permit revision to Florida State University to incorporate permit 0730010-005-AC into the existing federally enforceable state operating permit 0730010-004-AF, effective March 19, 2010. Florida State University was issued permit 0730010-005-AC, effective January 10, 2011 to replace EU 004 with a new 94.68 MMBtu/hr boiler. The identical existing 83.5 MMBtu/hr boilers No. 1 and No.3 were combined into a new emissions unit to preserve the history of the old emissions units and the hours of operation were reduced to avoid Title V. Construction was completed February 1, 2012. Emissions Units 002, 004 and 010 were inactivated and new Emissions Units 012 and 013were created.

Process Description.

The Central Utilities Plant facility contains three boilers and is located on the main campus of Florida State University. The facility produces 125 psig saturated steam for use as domestic hot water for dormitories, building heating systems and scientific research facilities. The boilers are fueled primarily with natural gas, but are also capable of burning oil as a standby fuel during periods of natural gas curtailment. Residual oil with 0.5% or less sulfur is authorized for periods of natural gas curtailment. Boilers No. 1 and No. 3 (EU 013) are manufactured by Cleaver Brooks, Model No. D94RH, and are water tube boilers with a maximum heat input rate of 83.5 MMBtu/hr. New Boiler No. 2 (EU 012) is manufactured by Babcock and Wilcox (Model No. FM 103-79) and is a water tube boiler with a maximum heat input rate of 94.68 MMBtu/hr.

Pollution Control Equipment. None. Boilers will primarily burn natural gas. Residual oil with max 0.5% sulfur can be combusted only during periods of natural gas curtailment.

Environmental Impact.

Airborne Contaminant Emitted	FAC Rule	Estimated Emissions		Allowable Emissions	
		lbs/hr	T/yr	lb/hr	T/yr
PM	N/A	N/A	6.9	N/A	N/A
SO2	N/A	N/A	6.7	N/A	N/A
VOC	N/A	N/A	4.9	N/A	N/A
NOx	N/A	N/A	90.8	N/A	N/A
CO	N/A	N/A	75.2	N/A	N/A
Objectionable Odors	62-296.320(2)	N/A	N/A	None allowed off plant property	
VE	62-296.406(1); 40 CFR 60.43c(c)	N/A	N/A	Not more than 20% opacity and 27% for up to 6-minutes per hour	

Applicable Rules & Regulations. All boilers are regulated in accordance with 40 CFR 60 subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units).

Compliance Monitoring. The total fuel oil that can be burned at the facility is reduced by this permit from 180,000 gallons per year to 172,900 gallons per year, and the existing Boilers Nos. 1 and 3 are restricted to a combined total of 11,400 hours per year of operation. Records are to be kept of fuels consumption and operating hours.

Compliance History. Compliance Inspections from 2012 – 2008 noted the facility as “In-Compliance."

Fee Summary. This is an AO2B ($1,000 fee) minor source with no stack test.

AMJ/c