Title V Air Operation Permit Renewal
Permit No. 0990026-016-AV

APPLICANT

The applicant for this project is Sugar Cane Growers Cooperative of Florida. The applicant's responsible official and mailing address are: Mr. Jose F. Alvarez, Executive VP Operations & General Manager, Sugar Cane Growers Cooperative of Florida, Sugar Cane Growers Cooperative of Florida, 1500 West Sugar House Road, Belle Glade, Florida 33430.

FACILITY DESCRIPTION

The applicant operates the Sugar Cane Growers Cooperative of Florida, which is located at 1500 West Sugar House Road, Belle Glade, Florida 33430.

This facility consists of a sugar mill and a boiling house. During crop season (November through March), harvested cane is crushed and the juice is extracted in the processing mill. The raw juice then goes through a series of process units, which include heaters, clarifiers, evaporators, vacuum pans, crystallizers and centrifuges, to produce two (2) products, which are sugar crystals and molasses. All of bagasse is delivered to either the boilers for fuel or to bagasse stockpiles.

The facility operates on steam produced from six boilers. The total steam generating capacity of the boilers is 1,181,854 lb/hr while the six boilers are operating at rated capacity. The boilers are capable of burning carbonaceous fuel (bagasse and residue), fuel oil, and small quantities of on-spec used oil. The boilers are equipped with dust collectors and wet scrubbers to control PM emissions. During off-season, operation of the boilers is restricted and limited to only Boilers 1, 2, 4, 5, and 8. There is a painting facility at the site. The facility has miscellaneous unregulated/insignificant emissions units and/or activities.

Emissions unit 001 is a boiler with a water cooled, pin-hole grate. The boiler is fired by bagasse, residue and fuel oil. The boiler produces steam for use in the production of raw sugar. Control equipment includes a multiple cyclone dust collector and an impingement type wet scrubber. The stack on the scrubber is 150 feet high, has an exit diameter of 7.0 feet, an exit temperature of 161 °F, an actual volumetric flow rate of 99,895 acfm and 32% water vapor.

Emissions unit 002 is a boiler with a water cooled, pin-hole grate. The boiler is fired by bagasse, residue and fuel oil. The boiler produces steam for use in the production of raw sugar. Control equipment includes a multiple cyclone dust collector and an impingement type wet scrubber. The stack on the scrubber is 150 feet high, has an exit diameter of 7.0 feet, an exit temperature of 151 °F, an actual volumetric flow rate of 111,160 acfm and 26% water vapor.

Emissions unit 003 is a boiler with a water cooled, pin-hole grate. The boiler is fired by bagasse, residue and fuel oil. The boiler produces steam for use in the production of raw sugar. Control equipment includes an impingement type wet scrubber. The stack on the scrubber is 180 feet high, has an exit diameter of 5.3 feet, an exit temperature of 150 °F, an actual volumetric flow rate of 81,844 acfm and 27% water vapor.

Emissions unit 004 is a boiler with a traveling grate. The boiler is fired by bagasse, residue and fuel oil. The boiler produces steam for use in the production of raw sugar. Control equipment includes a low efficiency dust collector and two (2) impingement type wet scrubbers. Both wet scrubbers exhaust to a single stack that is 180 feet high, has an exit diameter of 9.5 feet, an exit temperature of 171 °F, an actual volumetric flow rate of 214,618 acfm and 32% water vapor.

Emissions unit 005 is a boiler with a traveling grate. The boiler is fired by bagasse, residue and fuel oil. The boiler produces steam for use in the production of raw sugar. Control equipment include a multiple cyclone dust collector and two (2) impingement type wet scrubbers. Both wet scrubbers exhaust to a single stack that is 150 feet high, has an exit diameter of 7.0 feet, an exit temperature of 163 °F, an actual volumetric flow rate of 135,162 acfm and 26% water vapor.

Emissions unit 008 is a boiler with a traveling grate. The boiler is fired by bagasse, residue and fuel oil. The boiler produces steam for use in the production of raw sugar. Control equipment includes a multiple cyclone dust collector and two (2) impingement type wet scrubbers. The stack on the scrubber is 155 feet high, has an exit diameter of 9.5 feet, an exit temperature of 150 °F, an actual volumetric flow rate of 201,588 acfm and 24% water vapor.

Boilers 1 thru 5 are subject to Rule 62-296.570, F.A.C. (Reasonably Available Control Technology for NO_x and VOC; and Rule 62-296.410, F.A.C. (Carbonaceous Fuel Burning Equipment.). PM emissions were limited through PSD FL-077. Stricter PM limits were required in PSD-FL-077. The applicant requested stricter NO_X and VOC limits than RACT. The stricter PM and NO_X limits were permitted in permits AO50-191721, AO50-191731, AO50-191733, AO50-191735, AO50-191737. Stricter VOC limits were permited in 0990026-005-AC.

Emissions unit 008 is regulated under Rule 62-210.200, F.A.C. (Potential to Emit); Rule 62-213.440(1)(b), F.A.C. (Periodic Monitoring); Rule 62-296.570, F.A.C. (Reasonably Available Control Technology for NO_x and VOC; Rule 62-296.410, F.A.C. (Carbonaceous Fuel Burning Equipment.) and Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD). Boiler 8 is subject to, and emissions limited by, PSD and BACT. Boiler 8 was permitted under PSD-FL-077 and PSD-FL-213.

Boiler 4, 5 and 8 shall be equipped with water meters just prior to each individual scrubbers to monitor the water flow to each scrubbers. The scrubbers on these boilers exhaust to a single stack. Due to reported multiple excursions in the renewal application, the Department is requiring the meters installed. Additionally, the Department does not have reasonable assurance, including with CAM, that each scrubber in a scrubber system is operating as intended if the water flow is being measured to both scrubber and not to each individual scrubber. The owner or operator shall install and maintain water flow meters just prior to each individual scrubber associated with Boilers No. 4, and No.5. Each of the two (2) scrubbers shall be equipped with its own water flow meter. The water flow rate to each scrubber shall be continuously monitored. The water meters shall be installed before the beginning of the 2012 crop season or before October 12, 2012, whichever comes first.

PROJECT DESCRIPTION

The purpose of this permitting project is to renew the Title V permit for the above referenced facility.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Renewed Title V Air Operation Permit issued **September 22, 2006**
Additional Information Request dated **February 25, 2011**
Additional Information Response received **May 27, 2011**

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility does not operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does not operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

Siting: No emissions units were originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does apply to Units 001, 002, 003, 004, 005, and 008. These emissions units require CAM because they have federally enforceable PM emission limits, use a control device to comply with the PM emission limit and uncontrolled PM emissions are greater than 100 TPY.

PROJECT REVIEW

Changes that were made as part of this renewal were reformatting, replacement of TV-6 with new Appendix TV and streamlining of EU sections by moving common conditions to the new appendices and consolidating emissions units subsections with common conditions. This renewal incorporates AC conditions and PSD conditions that were not in the previous Title V operating permit. This renewal permit incorporates 0990026-015-AC/PSD-FL-077A which revised Permit No. 0990026-011-AC to remove specific conditions that are only applicable for Title V permits and not for air construction permits. Some of the removed specific conditions are "living" requirements, such as the CAM plan and monitoring, and therefore subject to review and revision during renewal of the Title V operating permit. The revision of 0990026-011-AC also removed conditions that did not have an AC basis but were added to the Title V operating permit. Permit No. 0990026-015-AC/PSD-FL-077A. revised PSD-FL-077 to decrease required monitoring imposed by condition # 9 and added alternative test methods for VOC testing required by condition # 6.

CONCLUSION

This project renews Title V air operation permit No. 0990026-012-AV, which was issued on September 22, 2006. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.