# Sugar Cane Growers Cooperative of Florida
# Glades Sugar House

Facility ID No. 0990026
Palm Beach County

## Title V Air Operation Permit Revision

Permit No. 0990026-024-AV
Revision of Title V Air Operation Permit No. 0990026-022-AV)

**Permitting Authority:**

State of Florida
Department of Environmental Protection
Engineering/Permitting, South District

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# Title V Air Operation Permit Revision

Permit No. 0990026-024-AV

## Table of Contents

**Section** **Page Number**

I. Facility Information.
A. Facility Description. ..... 2
B. Summary of Emissions Units. ..... 2
C. Applicable Regulations. ..... 2

II. Facility-wide Conditions. ..... 4

III. Emissions Units and Conditions.
A. Emissions Unit 001 - Boiler No. 1.
Emissions Unit 002 - Boiler No. 2.
Emissions Unit 003 - Boiler No. 3.
Emissions Unit 004 - Boiler No. 4.
Emissions Unit 005 - Boiler No. 5. ..... 7
B. Emissions Unit 008 - Boiler No. 8. ..... 15
C. Emissions Unit 007 - Spray Booth. ..... 23

IV. Appendices. ..... 24
Appendix A, Glossary.
Appendix CAM, Compliance Assurance Monitoring Plan.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix NESHAP A, General Provisions.
Appendix NESHAP DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heater.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.
Appendix QIP, Quality Improvement Plan for CAM Plan

# *DRAFT/PROPOSED PERMIT*

(Revision 1)

**PERMITTEE:**
Sugar Cane Growers Cooperative of Florida
Post Office Box 666
Belle Glade, Florida 33430-0666

Permit No. 0990026-024-AV
Glades Sugar House
Facility Id No. 0990026
Title V Air Operation Permit Revision

The purpose of this permit is to revise the existing Title V operating permit No. 0990026-022-AV to incorporate selected changes made by air construction permits No. 0990026-019-AC and 0990026-020-AC. **This Title V operating permit revision only addresses the added natural gas burning in Boilers Nos. 1 and 2 and the replacement of waterwalls in Boiler No.1.**

The existing Glades Sugar House is located in Palm Beach County at 1500 West Sugar House Road, Belle Glade, Florida. UTM Coordinates are: Zone 17, 534.9 East and 2,953.3 North. Latitude is: 26/42/06 N; and, Longitude is: 80/38/57 W.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Effective Date: *(Draft/Proposed)*
Renewal Application Due Date: *(Draft/Proposed)*
Expiration Date: *(Draft/Proposed)*

*(Draft/Proposed)*

_____

Jon M. Iglehart
Director of
District Management

JMI/CBE/mf

## Subsection A. Facility Description.

This facility consists of a sugar mill and a boiler house. During crop season, harvested cane is crushed and the juice is extracted in the processing mill. The raw juice goes through a series of process units, which include heaters, clarifiers, evaporators, vacuum pans, crystallizers and centrifuges, to produce two products, sugar crystals and molasses. All of the 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 when the six boilers operate at rated capacity. The boilers are capable of burning carbonaceous fuel (bagasse and residue), fuel oil, small quantities of on-spec used oil and **Boilers Nos. 1, 2, 4, 5 and 8 are also authorized to burn natural gas.** The boilers are equipped with dust collectors and wet scrubbers to control particulate matter (PM) emissions. During the 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 insignificant emissions units and/or activities.

## Subsection B. Summary of Emissions Units.

| EU No. | Brief Description |
|---|---|
| *Regulated Emissions Units* | |
| 001 | Boiler No. 1 |
| 002 | Boiler No. 2 |
| 003 | Boiler No. 3 |
| 004 | Boiler No. 4 |
| 005 | Boiler No. 5 |
| 008 | Boiler No. 8 |
| 009 | Spray Booth |

## Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received January 12, 2011, this facility is a major source of hazardous air pollutants (HAP). The existing facility is a PSD major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table.

| Regulation | EU No(s). |
|---|---|
| 62-213.440 | 001, 002, 003, 004, 005, 008, 007 |
| 62-296.320 | 001, 002, 003, 004, 005, 008, 007 |
| 62-210.370 | 001, 002, 003, 004, 005, 008, 007 |
| 62.213.205 | 001, 002, 003, 004, 005, 008, 007 |
| 62-297.310 | 001, 002, 003, 004, 005, 008, 007 |
| 62-296.410 | 001, 002, 003, 004, 005, 008, 007 |
| 62-296.570 | 001, 002, 003, 004, 005, 008, 007 |
| 40 CFR 64 | 001, 002, 003, 004, 005, 008 |

**Applicable Regulations.** (Continued)

| | |
|---|---|
| 62-210.300 | 001, 002, 003, 004, 005, 008, 007 |
| 62-213.420 | 001, 002, 003, 004, 005, 008, 007 |
| 62-4.030 | 001, 002, 003, 004, 005, 008, 007 |
| 62-4.160 | 001, 002, 003, 004, 005, 008, 007 |
| 62-4.050 | 001, 002, 003, 004, 005, 008, 007 |
| 62-213.410 | 001, 002, 003, 004, 005, 008, 007 |
| 62-210.650 | 001, 002, 003, 004, 005, 008, 007 |
| 62-296.100 | 001, 002, 003, 004, 005, 008, 007 |
| 62-213.430 | 001, 002, 003, 004, 005, 008, 007 |
| 40 CFR 63 Subpart A | 001, 002, 003, 004, 005, 008 |
| 40 CFR 63 Subpart DDDDD | 001, 002, 003, 004, 005, 008 |

**The following conditions apply facility-wide to all emission units and activities:**

**FW1.** Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

**Emissions and Controls**

**FW2. Not federally Enforceable.** Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

**FW3.** General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

*{Permitting Note: Nothing is deemed necessary and ordered at this time.}*

**FW4.** General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

*{Permitting Note: The above emission limiting standard applies to emissions units of particulate matter not subject to a particulate emission limit or opacity limit set forth in or established this permit or in Rule 62-296, F.A.C.}*

**FW5.** Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

a. The use of covered conveyors on the bagasse fuel handling systems.
b. The use of enclosed material transfer points where feasible.
c. Minimization of the distance bagasse fuel is dropped during handling.
d. The use of windbreaks around the material handling equipment.
e. Daily removal of any dust forming material spilled within the area.
f. The use of water to control boiler ash dust during disposal.
g. Maintenance of paved areas as needed.
h. The use of baghouses (7) to control fugitive particulate matter emissions from the bagasse conveying system.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit revision application received April 19, 2013]

**Annual Reports and Fees**

See Appendix RR, Facility-wide Reporting Requirements for additional details.

**FW6** Annual Operating Report. The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. [Rule 62-210.370(3), F.A.C.]

**FW7** Annual Emissions Fee Form and Fee. The annual Title V emissions fees are due (postmarked) by April 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm. [Rule 62-213.205, F.A.C.]

**FW8** Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]

**FW9.** Prevention of Accidental Releases (Section 112(r) of CAA). If and when the facility becomes subject to 112(r), the permittee shall:

a. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.

b. Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

**FW10.** Actual Emissions Reporting: Permit Nos. 0990026-019-AC, 0990026-017-AC/PSD-FL-077B/PSD-FL-213A and 0990026-020-AC were based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

a. The **permittee shall monitor** the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, **for a period of 5 years [10 years for Boiler No. 8 (EU008)] following resumption of regular operations after the change**. **Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C**., which are provided in Appendix TV of this permit.

Note: If actual emissions in any five (5) years after date of this permit (0990026-024-AV) for Boilers Nos. 1 and 2 exceed the projected actual emissions, additional permitting action may be required to address PSD applicability. [0990026-020-AC and Rule 62-212.300(1)(e) and 62-210.370 F.A.C.]

b. **The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period [10 year period for Boiler No. 8 (EU008)]** setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

1) The name, address and telephone number of the owner or operator of the major stationary source;

2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix TV of this permit;

3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

4) Any other information that the owner or operator wishes to include in the report.

c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

**For the projects permitted in Permit Nos. 0990026-019-AC, 0990026-017-AC/PSD-FL-077B/PSD-FL-213A and 0990026-020-AC, the Department requires the annual reporting of actual PM/$PM_{10}$, $NO_X$, $SO_2$, CO, VOC and sulfuric acid mist (SAM) emissions for the following units: Boiler Nos. 1, 2, 3, 4, 5, and 8 (EU001, EU002, EU003, EU004, EU005 and EU008).** The Technical Evaluation and Preliminary Determination for air construction permit nos. 0990026-017-AC/PSD-FL-077B/PSD-FL-213A, 0990026-019-AC and 0990026-020-AC, provide the baseline actual emissions for these projects. The baselines are also identified in the table below. The Department shall use these baseline emissions for the comparison to the actual emission monitored, recorded and reported over the next ten years pursuant to this condition.

**Baseline Actual Emissions.**

Boiler Nos. 3, 4, 5 and 8 Baseline Actual Emissions (Tons/Year)

| **Project** | **EU ID** | **Pollutant Baseline Emissions (TPY)** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **$SO_2$** | **$NO_X$** | **CO** | **PM/PM10** | **VOC** | **SAM** |
| Permit No. 0990026-019-AC (Natural Gas Burner Addition) | EU003, EU004, EU005, EU008 | 216.0 | 531.5 | 6,568. | 250.1/232.4 | 354.8 | 9.55 |
| Permit No. 0990026-017-AC/PSD-FL-077B/PSD-FL-213A (Increase Permitted Capacity) | EU008 | 57.22 | 142.9 | 1732 | 78.0/72.5 | 83.6 | 2.5 |

[Permit Nos. 0990026-019-AC and 0990026-017-AC/PSD-FL-077B/PSD-FL-213A; and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.

Boiler No. 1 and Boiler No. 2 Baseline Actual Emissions (Tons/Year)

| **Project** | **EU ID** | **Pollutant Baseline Emissions (TPY)** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **$SO_2$** | **$NO_X$** | **CO** | **PM/PM10** | **VOC** | **SAM** |
| Permit No. 0990026-020-AC (waterwalls replaced with modern membrane style panels and multi-cyclone collectors replaced with low efficiency dust collectors) | EU001 | 37.3 | 52.9 | 893 | 32.4/30.1 | 26.5 | 1.66 |
| Permit No. 0990026-020-AC (waterwalls replaced with modern membrane style panels and multi-cyclone collectors replaced with low efficiency dust collectors) | EU002 | 33.4 | 45.0 | 846 | 33.6/31.3 | 16.3 | 1.49 |

[Permit No. 0990026-020-AC; and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

**The specific conditions in this section apply to the following emissions units:**

| EU No. | Brief Description |
|---|---|
| **001** | **Boiler No. 1** is a boiler with a water cooled, pin-hole grate. The boiler has two (2) oil burners rated at 39.6 MMBtu/hr each and two (2) natural gas burners rated at 60 MMBtu/hr each.The boiler produces steam for use in the production of raw sugar. Waterwalls were replaced with modern membrane style panels and multi-cyclone collectors were replaced with low efficiency dust collectors. The stack on the scrubber is 150 feet high, has an exit diameter of 7.0 feet and approximately 32% water vapor. (The boiler's existing tube and tile design waterwalls have been replaced with membrane style panels in accordance with air construction permit No. 0990026-020-AC. This includes side, front and roof panels). |
| **002** | **Boiler No. 2** is a boiler with a water cooled, pin-hole grate. This boiler has two (2) oil burners rated at 39.6 MMBtu/hr each, and two (2) natural gas burners rated at 60 MMBtu/hr each. The boiler produces steam for use in the production of raw sugar. Waterwalls were replaced with modern membrane style panels and multi-cyclone collectors were replaced with low efficiency dust collectors. The stack on the scrubber is 150 feet high, has an exit diameter of 7.0 feet and approximately 26% water vapor. |
| **003** | **Boiler No. 3** is a boiler with a water cooled, pin-hole grate. 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 and approximately 27% water vapor. |
| **004** | **Boiler No. 4** is a boiler with a traveling grate. This boiler has one oil burner rated at 108.6 each and two natural gas burners rated at 138 mmBtu/hr each. 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 and approximately 32% water vapor. |
| **005** | **Boiler No. 5** is a boiler with a traveling grate. This boiler has one oil burner rated at 65.6 and two natural gas burners rated at 83 mmBtu/hr each. 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. Both wet scrubbers exhaust to a single stack that is 150 feet high, has an exit diameter of 7.0 feet and approximately 26% water vapor. |

*{Permitting Note(s): These emissions units are 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); and Rule 62-296.410, F.A.C. (Carbonaceous Fuel Burning Equipment.), 40 CFR 64, (Compliance Assurance Monitoring), 40 CFR 63 Subpart A (General Provisions), 40 CFR 63 Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters). The boilers must comply with Subpart DDDDD regulations no later than January 31, 2016.}*

**Essential Potential to Emit (PTE) Parameters**

**A.1.** Permitted Capacity. The maximum permitted capacity for the operating steam production rate at 400 psig and 585 ºF (or thermodynamically equivalent) and which are to be used to establish a 100% load for testing purposes is as follows:

| EU No. | Steam Production Rate (lbs/hr) | Averaging Period |
|---|---|---|
| 001 | 139,700 | 24 hour |
| 002 | 138,154 | 24 hour |
| 003 | 110,000 | 8 hour |
| 004 | 300,000 | 24 hour |
| 005 | 230,000 | 24 hour |

[Rules 62-4.160(2), 62-204.800, 62-210.200(PTE), Permit No. 0990026-015-AC]

**A.2.** Methods of Operation.

a. The fuels that are allowed to be burned in these units are:

i. Carbonaceous fuel (bagasse and residue),
ii. No. 6 residual oil,
iii. Small quantities of on-specification used oil,
iv. Small quantities of non-hazardous waste contaminated soil that is generated on-site, and
**v. Natural gas is authorized for Boiler Nos. 1, 2, 4 and 5 [Rule 62-210.200(PTE), F.A.C., Permit Nos. 0990026-015-AC and 0990026-019-AC]**

*{Permitting Note: On-specification used oil is as defined in 40 CFR 279.11, Subpart B.* ****Note:*** *Used oil containing more than 1,000 ppm but less than 4,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b)(1). Such oil shall not be burned unless the owner or operator demonstrates through the use of DEP approved analytical methods that the used oil does not constitute a hazardous waste.}*

**A.3.** Hours of Operation.

a. *Annual Hours*. The hours of operation for each emissions unit shall not exceed 7296 hours/year.
b. *Operation Limitation*. From 16 April through 12 October plant operations shall be restricted to no more than three (3) boilers of EU Nos. 1, 2, 4, 5, or 8 and to no more than 120 days. During this period of restricted operation, steam production shall not exceed a maximum daily average of 450,000 pounds per hour.
c. *Notification of Boiler 3 Operation Outside of Crop Season*. The Department shall be notified if Boiler No. 3 is operated between April 16 and October 12. The notification shall include the justification for operating the boiler.
[Permit Nos. AC50-42467/PSD-FL-077 and 0990026-011-AC]

**A.4**. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

**A.5** Water Meters. The owner or operator shall maintain water flow meters just prior to each individual scrubber associated with Boilers No. 4 and No. 5. Each of the two (2) scrubbers for Boiler 4 and each of the two (2) scrubbers for Boiler 5 shall be equipped with its own water flow meter. The water flow rate to each individual scrubber shall be continuously measured. [Permit No. 0990026-015-AC]

*{Permitting Note: Boilers No. 1, No. 2 and No. 3 each have only one scrubber that is equipped with a continuously measuring water flow meter.}*

Unless otherwise specified, the averaging times for Specific Conditions **A.6.-A.10**. are based on the specified averaging time of the applicable test method.

**A.6.** Visible Emissions (VE). VE from each boiler shall not exceed Number 1.5 on the Ringelmann Chart (30% opacity) except that a density of Ringelmann Number 2 (40 percent opacity) is permissible for not more than two minutes in any one hour. [Rule 62-296.410(1)(b)1., F.A.C.; Permit No. 0990026-011-AC]

**A.7.** Nitrogen Oxides ($NO_X$) Emissions. $NO_x$ emissions from each boiler shall not exceed 0.45 lbs/mmBtu heat input when burning bagasse. $NO_X$ emissions from each boiler shall not exceed 0.65 lbs/mmBtu heat input when burning residue. [Permit No. 0990026-015-AC]

**A.8.** Particulate Matter (PM) Emissions.

a. *EU001, EU002, EU003, EU005*. PM emissions from each boiler (EU001, EU002, EU003, EU005) shall not exceed 0.25 lbs/mmBtu heat input of carbonaceous fuel plus 0.1 lbs/mmBtu heat input of fossil fuel for each boiler. [Permit No. AC50-42476\PSD-FL-077]

b. *EU004*. PM emissions from EU004 shall not exceed 0.20 lbs/mmBtu of heat input of carbonaceous fuel plus 0.1 lbs/mmBtu heat input of fossil fuel for each boiler. [Permit Nos. AO50-2334 and 0990026-015-AC]

**A.9.** Volatile Organic Compounds (VOC) Emissions. VOC emissions from each boiler shall not exceed 0.7 lbs/mmBtu heat input. [Permit No. 0990026-015-AC]

**A.10**. Sulfur Dioxide ($SO_2$). The total $SO_2$ emissions for all boilers combined (EU001, EU002, EU003, EU004, EU005 and EU008) shall not exceed 14 tons per day (TPD). [Permit Nos. AC50-42476/PSD-FL-077 and 0990026-011-AC]

**A.11.** Fuel Oil Limitation and Fuel Oil Sulfur Content Limitations and Calculations. The permittee shall meter daily fuel oil consumption by Boiler No. 8 individually. The total quantity of fuel oil consumed on a daily basis by Boiler No. 8 shall be replaced by the addition to the system of an equal or greater amount of 1% or less sulfur fuel oil within 72 hours (excluding weekends). Records shall be retained for five (5) years. The balance of the oil in the system should not exceed 2.4% sulfur. For the purpose of simplicity, the fuel purchase scheme above will be in compliance when the total plant wide fuel oil consumption that does not exceed 31,500* gallons per day. In the event that the daily consumption of oil exceeds 31,500 gallons, the permittee must demonstrate compliance with the 14 ton per day limit by providing the amounts of bagasse, residue, and oil combusted, and the sulfur content of the oil for each such day. The demonstration of compliance shall be based on the same assumptions used to derive the threshold oil consumption figure except that the actual sulfur content of the oil for each day shall be substituted for the 1.15% value.

{*This threshold oil consumption figure is based upon the assumptions that the bagasse, residue and oil sulfur contents are 0.2%, 0.5% and 1.15%, respectively, and also $SO_2$ emissions from bagasse and residue are 40% below the amounts calculated stoichiometrically and all sulfur in fuel oil is emitted as $SO_2$. If further tests show that the foregoing assumptions are significantly incorrect, the 31,500 gallons per day shall be adjusted accordingly.}
[Permit Nos. AC50-42476\PSD-FL-077 and 0990026-011-AC]

**Excess Emissions**

*Rule 62-210.700 (Excess Emissions), F.A.C. cannot vary any requirement of an NSPS, NESHAP or Acid Rain program provision.*

**A.12**. Excess Emissions Allowed. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two (2) hours in any 24 hour period unless specifically authorized by the

Department for longer duration. [Rule 62-210.700(1), F.A.C. and Permit Nos. 0990026-015-AC and 0990026-019-AC]

**A.13**. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C. and Permit Nos. 0990026-015-AC and 0990026-019-AC]

**A.14**. Reporting of Excess Emissions. In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C. and Permit Nos. 0990026-015-AC and 0990026-019-AC]

**Monitoring of Operations**

**A.15.** Fuel Monitoring. Instruments shall be installed and maintained to continuously measure the total amount of fuel oil used by Boiler Nos. 1 through 5, the total amount of residue and natural gas used in all boilers. Bagasse consumption shall be calculated from steam consumption. [Permit Nos. AC 50-42476/PSD-FL-077 and 0990026-020-AC].

**A.16.** Scrubber Monitoring Equipment. Each scrubber control system shall be equipped with instrumentation to monitor total pressure drop of the flue gas stream across each scrubber and the total water flow to each scrubber. Such instrumentation shall be properly maintained so as to be functional at all times. [Permit No. 0990026-015-AC]

*{Permitting Note: Pressure drop and total water flow monitoring required for Compliance Assurance Monitoring Plan. See CAM Plan in Appendix CAM for monitoring requirements.}*

**A.17.** CAM Plan. The permittee shall comply with the following CAM plan for these emissions units. In addition, the permittee shall comply with the general Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C.

| | **Indicator No. 1** | **Indicator No. 2** |
|---|---|---|
| **Indicator** | Average pressure drop across the scrubber. | Water flow rate through the scrubber. |
| **Measurement Approach** | Measured using a pressure transducer. | Measured using an orifice meter. |
| **Indicator Range** | An excursion is defined as any individual pressure drop<br>**Boiler No. 1**<br>< 2.9 or > 9.0 inches of $H_2O$.<br>**Boiler No. 2**<br>< 3.1 or > 7.9 inches of $H_2O$ | An excursion is defined as any individual water flow rate<br>**Boiler No. 1**<br>< 112 gpm or > 180 gpm<br>**Boiler No. 2**<br>< 122 or > 176 gpm. |

| | | |
|---|---|---|
| | **Boiler No. 3**<br>< 3.9 or > 8.8 inches of $H_2O$.<br>**Boiler No. 4**<br>North Scrubber:<br>< 3.6 or > 10.5 inches of $H_2O$<br>South Scrubber:<br><3.6 or > 8.8 inches $H_2O$<br>**Boiler No. 5**<br>North Scrubber:<br>< 4.1 or > 10.9 inches of $H_2O$<br>South Scrubber:<br><3.6 or > 10.2 inches $H_2O$.<br>Excursions trigger an inspection, corrective action and a recordkeeping and reporting requirement. | **Boiler No. 3**<br><113 or > 183 gpm<br>**Boiler No. 4**<br>North Scrubber;<br>< 141 or > 173 gpm<br>South Scrubber:<br>< 141 or > 173 gpm.<br>**Boiler No. 5**<br>North Scrubber:<br>< 124 or > 190 gpm<br>South Scrubber:<br>< 125 or > 190 gpm.<br>Excursions trigger an inspection, corrective action and a recordkeeping and reporting requirement. |
| **Data Representativeness** | The monitoring system consists of a pressure transducer, which measures the pressure drop across the scrubber. The minimum accuracy of the pressure transducer is ± 0.075%. | The scrubber water orifice meter is located on the scrubber liquid supply line. The minimum accuracy of the orifice meter is 0.5%. |
| **Verification of Operational Status** | Readout in boiler control room of instantaneous pressure drop, as well as the average for the current eight hour block. | Readout in boiler control room of instantaneous water flow rate, as well s the average for the current eight hour block. |
| **QA/QC Practices and Criteria** | The pressure transducer is maintained in accordance with the manufacturer's recommendations and calibrated annually or more frequently as needed. | The orifice meter is maintained in accordance with the manufacturer's recommendations and calibrated annually or more frequently as needed. |
| **Monitoring Frequency** | Continuously. | Continuously. |

| | | |
|---|---|---|
| **Data Collection Procedures** | Reading taken approximately every five seconds and recorded in the data historian.<br>Data recorded during startup, shutdown, emission unit malfunction, monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used. A malfunction is any unavoidable mechanical and/or electrical failure resulting in abnormal or unusual manner. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Malfunctions and monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. | Reading taken approximately every five seconds and recorded in the data historian.<br>Data recorded during startup, shutdown, emission unit malfunction, monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used. A malfunction is any unavoidable mechanical and/or electrical failure resulting in abnormal or unusual manner. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Malfunctions and monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. |
| **Averaging Period** | Eight hour block average determined from the continuous readings. | Eight hour block average determined from the continuous readings. |

[40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

**A.18**. Quality Improvement Plan (QIP). The owner or operator shall implement the Quality Improvement Plan (QIP) as submitted to the Department on April 19, 2013. The owner or operator shall maintain a detailed written QIP on site and have it available for inspection. The plan shall include detailed procedures for actions to evaluate the control performance problems. The owner or operator shall maintain documentation and records for all excursions, the cause of the excursions, correction action taken, when the excursion occurred and when operations were returned to normal. Documentation and records shall be maintained for all QIP procedures and actions. The QIP actions submitted by the permitted are identified in Appendix QIP. Based on the results of the evaluation procedures for these actions, the owner or operator shall modify the plan. [40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

**Test Methods and Procedures**

**A.19.** Test Methods. Required tests shall be performed in accordance with the following reference methods:

| Method | Description of Method and Comments |
|---|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content |
| 5 | Determination of Particulate Emissions from Stationary Sources |
| 7 | Determination of Nitrogen Oxide Emissions from Stationary Sources |
| 7E | Determination of Nitrogen Oxide Emissions from Stationary Sources |
| 9 | Visual Determination of the Opacity of Emissions from Stationary Sources |
| 10 | Determination of Carbon Monoxide Emissions from Stationary Sources (Continuous Sampling) |
| 18 | Measurement of Gaseous Organic Compound Emissions by Gas Chromatography |
| 25 | Determination of Total Gaseous Non-methane Organic Emissions as Carbon |
| 25A | Method for Determining Gaseous Organic Concentrations (Flame Ionization) |

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-297.401, F.A.C.]

**A.20.** Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

**A.21.** Initial Performance Tests; Upon completion of each individual boiler's construction, the boiler shall be tested for carbon monoxide (**CO**) during the crop season immediately following the completion of the specific boiler's authorized construction, [Rules 62-4.070(3) and 62-297.310(7)(a)1. F.A.C. and Permit No. 0990026-020-AC]

**A.22.** Testing for NSPS Applicability Determination: In accordance with the methods and procedures specified in Appendix C of 40 CFR 60, each boiler shall be tested to determine whether or not a change resulted in the hourly emission rates of particulate matter (**PM**), nitrogen oxides (**$NO_X$**), and volatile organic compounds (**VOC**). Tests shall be conducted at permitted capacity and performed in accordance with the methods and procedures specified in the current Title V operation permit. Rule 62-297.310(2)(b), F.A.C. defines *permitted capacity* as "90 to 100 percent of the maximum operation rate allowed by the permit." Tests shall be conducted during the crop season immediately following the completion of the specific boiler's authorized construction. A summary of the tests conducted and the results shall be provided with 45 days of completing

the tests. These test reports and determination shall be submitted to the South District's Permitting and Engineering Section for review.

**A.23.** Annual Compliance Tests Required: During each federal fiscal year (October 1st to September 30th), these emissions units (EU001, EU002, EU002, EU003, EU004, and EU005) shall be tested to demonstrate compliance with the emissions standards for **VE, PM, $NO_X$, VOC**. and **CO**. The permitted hourly steam production rates and heat input rates shall not be exceeded during annual testing. Operating rate during testing shall comply with Rule 62-297.310(2), F.A.C. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rules 62-297.310(2) and 62-297.310(7), F.A.C and Permit Nos. 0990026-011-AC, 0990026-019-AC and 0990026-020-AC]

**A.24.** Compliance Tests Prior To Renewal. Compliance tests shall be performed for **VE, PM, $NO_X$, VOC** and **CO** once every 5 years. The tests shall occur prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in Specific Conditions **A.6. – A.9.** [Rules 62-210.300(2)(a) and 62-297.310(7)(a), F.A.C.]

**A.25.** VOC Testing. The test method for VOC shall be EPA Method 25 or EPA Method 25A modified to incorporate a sample dilution system as approved by the Department under the provisions of Rule 62-297.620, F.A.C. If EPA Method 25A is employed, EPA Method 18 may be used to quantify and subtract the methane fraction in the exhaust gases. Each test run shall be conducted in accordance with 40 CFR 60 Appendix A using the method specified. [Permit No. 0990026-011-AC]

**A.26.** $NO_X$ Test Method. The test method for $NO_X$ shall be EPA Method 7 or 7E. Each test run shall be conducted in accordance with 40 CFR 60 Appendix A using the method specified. [Permit No. 0990026-011-AC]

**A.27.** Carbon Monoxide: CO emissions testing shall be conducted in accordance with EPA Method 10 as published in 40 CFR-60, Appendix TR, or State approved equivalent method. [Permit No. 0990026-020-AC].

**A.28.** PM Test Methods. Compliance for PM emissions shall be determined using EPA Methods 1, 2, 3, 4, and 5 in accordance with 40 CFR 60, Appendix A. Emissions units incorporating a scrubber for control of particulate matter shall use an acetone wash. [Permit No. 0990026-011-AC]

**A.29.** Computing Emissions Limits to Determine Compliance. Compliance with the Specific Conditions **A.7, A.8, and A.9** ($NO_X$, PM and VOC emission limits) shall be determined by computing the heat input from the steam output (lb/hr) and the net steam enthalpy. Thermal efficiency while burning bagasse shall be assumed to be 55 percent. Thermal efficiency while burning residue or fuel oil shall be assumed to be 62.5 percent. [Permit No. 0990026-011-AC]

**A.30.** VE Test Methods. All visible emissions tests performed pursuant to the requirements of this subsection shall comply with the following provisions:

a. *Test Method*. The test method for visible emissions shall be EPA Method 9.
b. *Test Procedures*. The test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
c. *Test Period*. The required minimum period of observation for an EPA Method 9 compliance test shall be sixty (60) minutes. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.
[Permit No. 0990026-015-AC]

**A.31.** Fuel Oil Sulfur Content Compliance Demonstration. Compliance with fuel oil sulfur limits may be determined based on either:

a. *Vendor Certification.* Certification from the fuel supplier, where the fuel supplier certification shall include the following information:

(i) The name of the oil supplier; and

(ii)A statement from the oil supplier listing the actual sulfur content of the oil and the place where the sample was collected, or

b. *Fuel Analysis*. Based on analysis by one of the following methods: ASTM Method D129-91, D1552, D2622-94, D4294-90, or comparable Department approved method.

[Permit No. 0990026-011-AC]

**A.32.** Combined Plumes, Alternate Method for Stack Opacity. It is possible that combined plumes from adjacent boilers will prevent a reliable determination of compliance with the opacity standard. If the permittee is unable to perform the scheduled annual visible emissions test because of combined plumes, the permittee shall record the scrubber pressure drop and the water flow rate during each test run for particulate matter (PM) at 15-minute intervals. The test report shall note the attempt to perform the annual visible emissions test, the reason for not being able to complete the test and shall identify scrubber pressure drops and water flow rates recorded during each test run for particulate matter (PM). [Rules 62-4.070(3), 62-297.310(7)(a)(4), 62-213.440(1)(b), F.A.C.; Permit No. 0990026-015-AC

**Recordkeeping and Reporting Requirements**

**A.33.** Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

**A.34.** Fuel Sulfur Content Recordkeeping. Records of the percent (%) sulfur content of all fuel oil burned and the quantities of fuel oil burned shall be kept. The basis of these records of sulfur content shall be either as-shipped analysis from the vendor, analysis of shipments by the permittee, or in the case of on-site blending, analysis of a fuel sample from the fuel storage tanks each time a shipment of fuel is received.
[Permit No. 0990026-011-AC]

**A.35.** Steam Flow Recordkeeping. A record shall be kept of each boilers' hours of operation and the steam flow to determine the heat input for the purpose of compliance with the emission limits in Specific Conditions **A.7., A.8., and A.9**. ($NO_X$, PM and VOC). **[**Permit No. 0990026-011-AC**]**

**A.36.** Fuel Recordkeeping. The records of fuel oil, residue, on-spec used oil and bagasse shall be kept by the owner or operator, available for Department inspection for five years. [Permit Nos. AC 50-42476/PSD-FL-077 and 0990026-011-AC]

**A.37.** CAM Recordkeeping and Reporting. For these emissions units, the owner or operator shall record, maintain and reporting all monitoring, other activities and reporting in accordance with the requirements in Appendix CAM, Appendix QIP and 40 CFR 64 (Compliance Assurance Monitoring). [Rule 62-4.070(3), F.A.C., 40 CFR 64]

**A.38.** Test Reports. Submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements). **For each test report, the report shall also indicate heat input calculations, enthalpy calculations, emission calculations and the actual (metered) amount of fuel or natural gas used during testing.** [Rule 62-297.310(8), F.A.C. and Permit No. 0990026-020-AC]

**Other Requirements**

**A.39.** Federal Rule Requirements. In addition to the specific conditions listed above, these emissions units are also subject to the requirements contained in 40 CFR 64 – Compliance Assurance Monitoring and 40 CFR 63, Subpart A – General Provisions and 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, and all subsequent final revisions of these subparts. [Rule 62-213.440, F.A.C.]

## Subsection B. Emissions Unit 008

**The specific conditions in this section apply to the following emissions unit:**

| EU No. | Brief Description |
|---|---|
| **008** | **Boiler No. 8** is a boiler with a traveling grate. The boiler has two oil burners rated at 97.2 each and one natural gas burner rated at 138 mmBtu/hr. The boiler produces steam for use in the production of raw sugar. Control equipment includes a multiple cyclone dust collector and two impingement type wet scrubbers. The stack on the scrubber is 155 feet high, has an exit diameter of 9.5 feet and approximately 24% water vapor. |

*{Permitting Note(s): This emission unit 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) and Best Achievable Control Technology (BACT)], 40 CFR 63 Subpart A (General Provisions), 40 CFR 63 Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters). The boilers must comply with Subpart DDDDD regulations no later than January 31, 2016.}*

**Essential Potential to Emit (PTE) Parameters**

**B.1.** The allowable operation parameters for Boiler No. 8 are summarized in the following table:

| Steam Pressure (psig) | Steam Temperature (°F) | Fuel Burned | Steam Production (lb/hr) | Heat Input (MMBtu/hr) | Amount of Fuel Consumed (lb/hr) |
|---|---|---|---|---|---|
| 400 | 585 | Bagasse | 290,000 | 553.6(a) | 69,200 (a) |
| | | Residue | 290,000 | 487.2(b) | 54,742 (b) |
| 600 | 740 | Bagasse | 265,943 | 553.6(a) | 69,200 (a) |
| | | Residue | 265,943 | 487.2(b) | 54,742 (b) |
| 400 | 740 | Bagasse | 263,636 | 553.6(a) | 69,200 (a) |
| | | Residue | 263636 | 487.2(b) | 54,742 (b) |

(a) Based upon 55% thermal efficiency and 8,000 Btu/lb (dry) while burning bagasse.
(b) Based upon 62.5% thermal efficiency and 8,900 Btu/lb while burning bagasse residue.
[Permit No. 0990026-017-AC/PSD-FL-077B/PSD-FL-213A, BACT]

**B.2.** Methods of Operation. The fuels that are allowed to be burned in these units are:

a. Carbonaceous fuel (bagasse and residue),
b. No. 6 residual oil,
c. Small quantities of on-spec used oil,
d. Small quantities of non-hazardous waste contaminated soil that is generated on-site, and
e. Natural Gas.

[Rule 62-210.200(PTE), F.A.C., Permit No. 0990026-019-AC]

*{Permitting Note: On-specification used oil is as defined in 40 CFR 279.11, Subpart B. ***Note:** Used oil containing more than 1,000 ppm but less than 4,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b)(1). Such oil shall not be burned unless the owner or operator demonstrates through the use of DEP approved analytical methods that the used oil does not constitute a hazardous waste.}*

**B.3.** Oxygen Level Alarm. The permittee shall maintain and operate an alarm system on Boiler No. 8 that will be triggered whenever the boiler oxygen level drops below 4 percent. The time the boiler operates with less than 4 percent oxygen shall be logged and may be used as a basis to modify the operation and maintenance plan. The permittee shall use the operation and maintenance plan for carbon monoxide control for Boiler 8. [Permit Nos. AC50-250421/PSD-FL-213 and BACT dated June 3, 1996 and 0990026-015-AC]

**{***Permitting Note: An operation and maintenance plan shall be maintained and kept up-to-date onsite by the owner or operator.}*

**B.4.** Hours of Operation.

a. *Annual Hours*. The hours of operation for this emissions unit shall not exceed 7296 hours/year.

b. *Operation Limitation*. From 16 April through 12 October plant operations (off-season) shall be restricted to no more than three (3) boilers of unit numbers 1, 2, 4, 5, or 8 and to no more than 120 days. During this period of restricted operation, steam production shall not exceed a combined maximum daily average of 450,000 pounds per hour. Crop season operation may last a maximum of 184 days.

[Permit No. AC50-42467/PSD-FL-077 and BACT dated 10/28/1981; Permit No. AC50-250421/PSD-FL-213 and BACT dated June 3, 1996]

**B.5.** Fuel Oil Limitation and Fuel Oil Sulfur Content Limitations and Calculations. The permittee shall meter daily fuel oil consumption by Boiler No. 8 individually. The total quantity of fuel oil consumed on a daily basis by Boiler No. 8 shall be replaced by the addition to the system of an equal or greater amount of 1% or less sulfur fuel oil within 72 hours (excluding weekends). Records shall be retained for five (5) years. The balance of the oil in the system should not exceed 2.4% sulfur. For the purpose of simplicity, the fuel purchase scheme above will be in compliance when the total plant wide fuel oil consumption does not exceed 31,500* gallons per day. In the event that the daily consumption of oil exceeds 31,500 gallons, the permittee must demonstrate compliance with the 14 ton per day limit by providing the amounts of bagasse, residue, and oil combusted, and the sulfur content of the oil for each such day. The demonstration of compliance shall be based on the same assumptions used to derive the threshold oil consumption figure except that the actual sulfur content of the oil for each day shall be substituted for the 1.15% value.

{*This threshold oil consumption figure is based upon the assumptions that the bagasse, residue and oil sulfur contents are 0.2%, 0.5% and 1.15%, respectively, and also $SO_2$ emissions from bagasse and residue are 40% below the amounts calculated stoichiometrically and all sulfur in fuel oil is emitted as $SO_2$. If further tests show that the foregoing assumptions are significantly incorrect, the 31,500 gallons per day shall be adjusted accordingly.}

[Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981]

**B.6.** Maximum Fuel Oil Consumption. The maximum fuel oil consumption of the boiler is limited to the quantity equivalent to 250 mmBtu/hr (1,667 gallons per hour, if the heating value of the fuel oil is 18,500 Btu/lb. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981, Permit No. 0990026-015-AC]

**B.7.** Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

**B.8.** Scrubber Monitoring Equipment. Each scrubber control system shall be equipped with a manometer or equivalent instrument to measure the total pressure drop of the flue gas stream across each scrubber and with a flow meter or equivalent device (weir) to measure the total quantity of water flow to each scrubber. Data from these instruments shall be recorded each shift (every 8 hours) and shall be available for regulatory agencies inspection for five years. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981; Permit No. 0990026-015-AC/PSD-FL-077A]

*{Permitting Note: Boiler No. 8 has two scrubbers that are each equipped with continuously measuring water flow meters.}*

**Emission Limitations and Standards**

Unless otherwise specified, the averaging times for Specific Conditions **B.9.-B.15**. are based on the specified averaging time of the applicable test method.

**B.9.** This emissions unit's (EU008) maximum emission rates shall not exceed the emissions limits listed below.

| | Maximum Allowable Emissions | | | |
|---|---|---|---|---|
| **Pollutant** | **Lb/MMBtu** | **Lb/hr** | **Ton/day** | **Ton/year** |
| PM | 0.137 for carbonaceous fuel<br>0.10 for fossil fuel | 75.6 (95.0)* | ---------- | 276 (326)* |
| $SO_2$ | ---------- | ---------- | 14.0 + | ---------- |
| CO | 5.01 | 2,772 | ---------- | 10,112 |
| VOC | ---------- | 140 | ---------- | 511 |
| $NO_X$ | ---------- | 123 | ---------- | 449 |

Visible emissions: 30% opacity except for 40% no more than two minutes per hour.

*The air quality impact analysis was conducted on the basis of the emissions contained in parentheses. The numbers not contained in parentheses are based upon the BACT determination of 0.15 lb/$10^6$ Btu input limit. In project 0990026-017-AC/PSD-FL-077B, in order to maintain the 75.6 lb/hr PM limit (determined by BACT) at the increased heat input rate of 553.6 MMBtu/hr, a lower lb/MMBtu PM emission limit of 0.137 lb/MMBtu is required. Any revision of the BACT emission limit cannot exceed the 0.20 lb/$10^6$ Btu input Florida new source limit, nor will the allowable lb/hr and ton/yr emissions be allowed to exceed the numbers contained in parentheses.

+ $SO_2$ emissions for all boilers from Unit 1 through 8.

[Permit No. 0990026-017-AC/PSD-FL-077B/PSD-FL-213A, BACT]

**B.10.** Visible Emissions (VE). Visible emissions from the bagasse handling system shall not exceed 10 percent opacity over any six minute period as measured by EPA Method 9. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981]

**B.11.** Visible Emissions (VE). VE shall not exceed Number 1.5 on the Ringelmann Chart (30% opacity) except that a density of Ringelmann Number 2 (40 percent opacity) is permissible for not more than two minutes in any one hour. [Rule 62-296.410(1)(b)1., F.A.C.; Permit No. AC50-42476\PSD-FL-077]

**B.12.** CO Emissions. CO emissions shall not exceed 5.01 lbs/mmBtu heat input (assuming a boiler has a thermal efficiency of 55% when burning bagasse), 2,772 lb/hr (average of three runs of a minimum of 1 hour per run by EPA Method 10 as described in 40 CFR 60, Appendix A), and 10,112 TPY based on a maximum of 7,296 hours per year operation. Emissions of CO shall be maintained at the lowest possible level through good combustion control. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981; Permit No. AC50-250421/PSD-FL-213 and BACT dated June 3, 1996; Permit No. 0990026-017-AC/PSD-FL-077B/PSD-FL-213A]

**B.13**. VOC Emissions. VOC emissions shall be maintained at the lowest possible level through good combustion control. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981]

**B.14.** Particulate Matter (PM) Emissions. PM emissions shall not exceed 0.137 lbs/mmBtu of heat input of carbonaceous fuel plus 0.1 lbs/mmBtu heat input of fossil fuel. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981]

**B.15.** Sulfur Dioxide ($SO_2$). The total $SO_2$ emissions for all boilers combined (EU001, EU002, EU003, EU004, EU005 and EU008) shall not exceed 14 TPD. [Permit No. AC50-42476/PSD-FL-77 and BACT dated 10/28/81]

**Excess Emissions**

*Rule 62-210.700 (Excess Emissions), F.A.C. cannot vary any requirement of an NSPS, NESHAP or Acid Rain program provision.*

**B.16**. Excess Emissions Allowed. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C. and Permit No. 0990026-019-AC]

**B.17**. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C. and Permit No. 0990026-019-AC]

**B.18**. Reporting of Excess Emissions. In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C. and Permit No. 0990026-019-AC]

**Monitoring of Operations**

**B.19.** Fuel Monitoring. Instruments shall be installed and maintained to continuously measure the amount of fuel oil used individually by Boiler No. 8, the total amount of fuel oil used by boilers 1 through 5, and the total amount of residue and natural gas used in all boilers. Bagasse consumption shall be calculated from steam consumption. The records of fuel oil, natural gas, residue, and bagasse usage will be kept by the company, available for regulatory agency inspection for five years. [Permit No. 0990026-017-AC/PSD-FL-077B/PSD-FL-213A, BACT]

**B.20.** Flue Gas Oxygen or $CO_2$ Monitor. This emissions unit shall be equipped with an operational flue gas oxygen or $CO_2$ monitor. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981; Permit No. AC50-250421/PSD-FL-213 and BACT dated June 3, 1996]

**B.21.** CAM Plan. The permittee shall comply with the following CAM plans for these emissions units. In addition, the permittee shall comply with the general Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. [40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

| | **Indicator No. 1** | **Indicator No. 2** |
|---|---|---|
| **Indicator** | Average pressure drop across the scrubber. | Water flow rate through the scrubber. |
| **Measurement Approach** | Measured using a pressure transducer. | Measured using an orifice meter. |
| **Indicator Range** | An excursion is defined as any individual pressure drop<br>**Boiler No. 8**<br>North Scrubber:<br><5.0 or > 10.0 inches of $H_2O$<br>South Scrubber:<br><5.0 or > 10.0 inches $H_2O$.<br>Excursions trigger an inspection, corrective action and a recordkeeping and reporting requirement. | An excursion is defined as any individual water flow rate<br>**Boiler No. 8**<br>North Scrubber:<br>< 136 or > 181 gpm<br>South Scrubber:<br>< 129 or > 186 gpm.<br>Excursions trigger an inspection, corrective action and a recordkeeping and reporting requirement. |

| | | |
|---|---|---|
| **Data Representativeness** | The monitoring system consists of a pressure transducer, which measures the pressure drop across the scrubber. The minimum accuracy of the pressure transducer is ± 0.075%. | The scrubber water orifice meter is located on the scrubber liquid supply line. The minimum accuracy of the orifice meter is 0.5%. |
| **Verification of Operational Status** | Readout in boiler control room of instantaneous pressure drop, as well as the average for the current eight hour block. | Readout in boiler control room of instantaneous water flow rate, as well s the average for the current eight hour block. |
| **QA/QC Practices and Criteria** | The pressure transducer is maintained in accordance with the manufacturer's recommendations and calibrated annually or more frequently as needed. | The orifice meter is maintained in accordance with the manufacturer's recommendations and calibrated annually or more frequently as needed. |
| **Monitoring Frequency** | Continuously. | Continuously. |
| **Data Collection Procedures** | Reading taken approximately every five seconds and recorded in the data historian.<br>Data recorded during startup, shutdown, emission unit malfunction, monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used. A malfunction is any unavoidable mechanical and/or electrical failure resulting in abnormal or unusual manner. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Malfunctions and monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. | Reading taken approximately every five seconds and recorded in the data historian.<br>Data recorded during startup, shutdown, emission unit malfunction, monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used. A malfunction is any unavoidable mechanical and/or electrical failure resulting in abnormal or unusual manner. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Malfunctions and monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. |
| **Averaging Period** | Eight hour block average determined from the continuous readings. | Eight hour block average determined from the continuous readings. |

**B.22.** Quality Improvement Plan (QIP). The owner or operator shall implement the Quality Improvement Plan (QIP) as submitted to the Department on April 19, 2013. The owner or operator shall maintain a detailed written QIP on site and have it available for inspection. The plan shall include detailed procedures for actions to evaluate the control performance problems. The owner or operator shall maintain documentation and records for all excursions, the cause of the excursions, correction action taken, when the excursion occurred and when operations were returned to normal. Documentation and records shall be maintained for all QIP procedures and actions. The QIP actions submitted by the permitted are identified in Appendix QIP. Based on the results of the evaluation procedures for these actions, the owner or operator shall modify the plan. [40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

**Test Methods and Procedures**

**B.23.** Test Methods. Required tests shall be performed in accordance with the following reference methods:

| Method | Description of Method and Comments |
|---|---|
| 1-4 | Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content |

| Method | Description of Method and Comments |
|---|---|
| 5 | Determination of Particulate Emissions from Stationary Sources |
| 7 | Determination of Nitrogen Oxide Emissions from Stationary Sources |
| 7E | Determination of Nitrogen Oxide Emissions from Stationary Sources |
| 9 | Visual Determination of the Opacity of Emissions from Stationary Sources |
| 10 | Determination of Carbon Monoxide Emissions from Stationary Sources |
| 18 | Measurement of Gaseous Organic Compound Emissions by Gas Chromatography |
| 25 | Determination of Total Gaseous Non-methane Organic Emissions as Carbon |
| 25A | Method for Determining Gaseous Organic Concentrations (Flame Ionization) |

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-297.401, F.A.C.; Permit No. AC50-250421/PSD-FL-213; BACT dated June 3, 1996,]

**B.24.** Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

**B.25.** Annual Compliance Tests Required: During each federal fiscal year (October 1st to September 30th), this emissions unit shall be tested to demonstrate compliance with the emissions standards for **VE, PM, $NO_X$, CO,** and **VOC**. The permitted hourly steam production rates and heat input rates shall not be exceeded during annual testing. Operating rate during testing shall comply with Rule 62-297.310(2), F.A.C. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rules 62-297.310(2) and 62-297.310(7), F.A.C and Permit No. 0990026-019-AC]

**B.26** Compliance Tests Prior To Renewal. Compliance tests shall be performed for **VE, PM, $NO_X$, CO** and **VOC** once every 5 years. The tests shall occur prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in Specific Conditions **B.9. – B.14.** [Rules 62-210.300(2)(a) and 62-297.310(7)(a), F.A.C.]

**B.27.** General Testing Requirements. Compliance with the applicable emission limits shall be determined by performance tests. The performance tests shall be conducted in accordance with EPA Methods (40 CFR 60 Appendix A) and the provisions of 40 CFR 60.8 and 40 CFR 60.46. [Permit No. AC50-42476/PSD-FL-077 and BACT dated 10/28/1981].

**B.28** PM Test Methods. Compliance with PM emissions limits shall be determined using EPA Methods 1, 2, 3, 4, and 5 in accordance with 40 CFR 60, Appendix A. Emissions units incorporating a scrubber for control of particulate matter shall use an acetone wash. PM emissions tests shall be made while burning bagasse with the minimal amount of oil necessary to reach test capacity. [Permit No. AC50-42476/PSD-FL-77 and BACT dated 10/28/1981 and Permit No. 0990026-011-AC]

**B.29.** VOC Test Method. The test method for VOC shall be EPA Method 25 or EPA Method 25A modified to incorporate a sample dilution system as approved by the Department under the provisions of Rule 62-297.620, F.A.C. If EPA Method 25A is employed, EPA Method 18 may be used to quantify and subtract the methane fraction in the exhaust gases. Each test run shall be conducted in accordance with 40 CFR 60 Appendix A using the method specified. [Permit No. 0990026-015-AC/PSD-FL-077A]

**B.30.** Stack Sampling Requirements. The stack sampling configuration of the boiler shall comply with the minimum of 2D downstream and 0.5D upstream distances to the sampling ports required to use EPA

Method 2. [Permit No. AC50-42476/PSD-FL-077 and BACT dated 10/28/1981]

**B.31.** CO Test Method. CO emissions shall be determined using by EPA Method 10 as described in 40 CFR 60 Appendix A. [Permit No. AC50-250421/PSD-FL-213; BACT dated June 3, 1996]

**B.32.** $NO_X$ Test Methods. Compliance with $NO_X$ emissions limits shall be determined using EPA Method 7 or 7E as described in 40 CFR 60, Appendix A. [Permit No. 0990026-011-AC]

**B.33.** VE Test Methods. Compliance with VE emissions limit shall be demonstrated using EPA Method 9. [Permit No. AC50-42476\PSD-FL-077 and BACT dated 10/28/1981]

**B.34.** Combined Plumes, Alternate Method for Stack Opacity. It is possible that combined plumes from adjacent boilers will prevent a reliable determination of compliance with the opacity standard. If the permittee is unable to perform the scheduled annual visible emissions test because of combined plumes, the permittee shall record the scrubber pressure drop and the water flow rate during each test run for particulate matter at 15-minute intervals. The test report shall note the attempt to perform the annual visible emissions test, the reason for not being able to complete the test and shall identify scrubber pressure drops and water flow rates recorded during each test run for particulate matter. [Rules 62-4.070(3), 62-297.310(7)(a)(4), 62-213.440(1)(b), F.A.C.; Permit No. 0990026-015-AC]

**B.35** Operation and Maintenance Plan. The OMP for CO control shall include current permitted conditions for flue gas oxygen content levels and oxygen analyzer. [Permit No. 0990026-017-AC/PSD-FL-077B/PSD-FL-213A]

**Recordkeeping and Reporting**

**B.36.** Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

**B.37.** Fuel Recordkeeping. The records of fuel oil, residue, on-spec used oil, bagasse, and natural gas shall be kept by the owner or operator, available for Department inspection for five years. [Permit No. AC 50-42476/PSD-FL-077 and BACT dated 10/28/1981]

**B.38.** Fuel Sulfur Content Recordkeeping. Records of the percent sulfur content of all fuel oil burned and the quantities of fuel oil burned shall be kept. The basis of these records of sulfur content shall be either as-shipped analysis from the vendor, analysis of shipments by the permittee, or in the case of on-site blending, analysis of a fuel sample from the fuel storage tank(s) each time a shipment of fuel is received. [Permit No. 0990026-011-AC]

**B.39.** Steam Flow Recordkeeping. A record shall be kept of each boilers' hours of operation and the steam flow to determine the heat input for the purpose of compliance with the emission limits specified in this subsection. **[**Permit No. 0990026-011-AC**]**

**B.40.** CAM Recordkeeping and Reporting. For this emissions unit, the owner or operator shall record, maintain and reporting all monitoring, other activities and reporting in accordance with the requirements in Appendix CAM, Appendix QIP and 40 CFR 64 (Compliance Assurance Monitoring). [Rule 62-4.070(3), F.A.C., 40 CFR 64]

**Other Requirements**

**B.41.** Federal Rule Requirements. In addition to the specific conditions listed above, these emissions units are also subject to the requirements contained in 40 CFR 64 – Compliance Assurance Monitoring and 40 CFR 63, Subpart A – General Provisions and 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous

Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, and all subsequent final revisions of these subparts. [Rule 62-213.440, F.A.C.]

**The specific conditions in this section apply to the following emissions unit:**

| EU No. | Brief Description |
|---|---|
| 007 | Paint house is an open frame structure where sugar cane trailers and sugar cane wagons can be maneuvered to allow the application of a petroleum based protective coating with an airless sprayer to all exposed surfaces of the trailers and wagons. |

**Essential Potential to Emit (PTE) Parameters**

**C.1.** Hours of Operation. The hours of operation for this emissions unit shall not exceed 10 hours per day, 5 days per week and 32 weeks per year (1,600 hours/year). [Rules 62-4.160(2) and 62-210.200 (PTE), F.A.C. and Permit No. 0990026-011-AC]

**Emission Limitations and Standards**

**C.2.** During any consecutive twelve month period the facility shall not emit more than 24 tons/year volatile organic compounds (VOCs). [Permit No. 0990026-015-AC]

{*Permitting Note: This emissions unit emits insignificant amounts of HAP.*}

**Record Keeping and Reporting Requirements**

**C.3.** Recordkeeping Requirements. The facility shall keep a log with the following information:

a. The number of hours the spray booth (EU007) is in use (actual on a daily basis);
b. The dates of operation;
c. A monthly inventory of the VOC and HAP containing materials, solvents and HAP containing materials used in the spray booth (EU007). The monthly inventory shall utilize the mass balance approach. The permittee shall calculate the VOCs emitted on a monthly basis by assuming that all VOCs and HAP in the coatings and cleanup solvents are evaporated. The mass fraction of VOCs and HAP from each coating material (and cleanup solvents) shall be determined from the MSDS supplied from the vendors. The monthly inventory recordkeeping shall include the identification of all VOC and HAP containing material, the amount of material used, the percent or by weight composition of VOC or HAP in each material from the MSDS, and the monthly total amount of VOC and HAP emitted.

[Permit No. 0990026-015-AC]

Appendix A, Glossary.
Appendix CAM, Compliance Assurance Monitoring Plan.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix NESHAP –A, 40 CFR 63 Subpart A, General Provisions.
Appendix DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heater.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.
Appendix QIP, Quality Improvement Plan for CAM Plan.