

AIR QUALITY PERMIT

Permit No.
4911-185-0107-E-01-0

Effective Date

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name: **Wiregrass Plant**

Mailing Address: 3500 Parkway Lane
Norcross, GA 30092

is issued a Permit for the following:

Construction and operation of a 45 MW (gross) biomass-fired power generation facility consisting of a 626 MMBtu/hr heat input capacity bubbling fluidized bed (BFB) boiler (B-1) firing woody biomass, sewage sludge and natural gas (during startup), a 150 hp diesel fired pump engine, a mechanical draft cooling tower, a hog tower for storing woody biomass and an ash silo for storing bottom ash and flyash from the boiler.

Facility Location: Inner Perimeter Road
Valdosta, Georgia 31603 (Lowndes County)

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 19407 dated December 16, 2009; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 15 pages.

Director
Environmental Protection Division

**State of Georgia
Department of Natural Resources
Environmental Protection Division**

**Permit No.
4911-185-0107-E-01-0**

Page 1 of 15

**ATTACHMENT A
Emission Units**

Emissions Units			Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	ID No.	Description
B-1	626 MMBtu/hr biomass wood-fired boiler (natural gas used for startup)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 60, Subparts A and Db	SCR SORB BAG1 COCAT	Selective Catalytic Reduction Sorbent Injection in Dry Scrubber Baghouse CO Oxidation Catalyst
FPUMP	150 HP fire pump fired with diesel fuel	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR Part 60, Subparts A and IIII	NA	NA
ASILO	Ash Silo	391-3-1-.02(2)(b) 391-3-1-.02(2)(n) 391-3-1-.02(2)(e)(1)	BAG2	Baghouse
COOL	Cooling Tower	391-3-1-.02(2)(b) 391-3-1-.02(2)(n) 391-3-1-.02(2)(e)(1)	DRIFT	Drift Eliminator
HOGT	Hog Tower	391-3-1-.02(2)(b) 391-3-1-.02(2)(n) 391-3-1-.02(2)(e)(1)	CYC	Cyclone

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 2 of 15

1. General Requirements

- 1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.
- 1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.
- 1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.
- 1.4 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and shall be retained for at least five (5) years following the date of entry.
- 1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.
- 1.6 The Permittee shall comply with all applicable provisions of the Acid Rain Program as found in 40 CFR Part 72 "Permit Regulations", 40 CFR Part 73 "Sulfur Dioxide Allowance System", 40 CFR Part 75 "Continuous Emissions Monitoring", and 40 CFR Part 77 "Excess Emissions" for operation of the biomass fired Boiler B-1.
[40 CFR Parts 72, 73, 75, and 77]

2. Allowable Emissions

- 2.1 The Permittee shall comply with all applicable provisions of the "New Source Performance Standards" as found in 40 CFR Part 60, Subpart A, "General Provisions" and 40 CFR 60, Subpart Db, "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units" for the operation of Boiler B-1.
[40 CFR 60, Subparts A and Db]

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 3 of 15

- 2.1 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler B-1 emissions that:
[40 CFR 60.43(f) and (h)(1); and 391-3-1-.02(2)(d) subsumed]
 - a. Contain particulate matter in excess of 0.03 pounds per million BTU heat input. This particulate matter standard shall apply at all times except periods of startup, shutdown, and malfunction.
 - b. Exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. This opacity standard shall apply at all times except periods of startup, shutdown, and malfunction.
- 2.3 The Permittee shall not discharge or cause the discharge into the atmosphere, from Boiler B-1, emissions of nitrogen oxides (NO_x), carbon monoxide (CO), or sulfur dioxides (SO₂) in an amount exceeding 249 tons of each pollutant during any twelve consecutive months.
[Avoidance of PSD]
- 2.4 The Permittee shall only fire clean woody biomass from forestry residue, mill residue, and clean urban wood waste; wastewater treatment plant sludge of approximately 0.5 percent of total heat input to the boiler and small quantities of natural gas during startup, shut down and bed stabilization in Boiler B-1. Any wood wastes that have been painted, pigment-stained, or pressure treated with compounds such as chromate copper arsenate, pentachlorophenol, and creosote are not considered biomass. Plywood, particleboard, oriented strand board, and other types of wood wastes, bound by glues and resins, are also not considered biomass. Natural gas usage in Boiler B-1 shall be limited to an annual capacity factor of 10 percent or less.
[391-3-1-.03(1)(c) and 40 CFR 60.44(d)]
- 2.5 The Permittee shall not burn fuel that contains more than 3 percent sulfur, by weight, in Boiler B-1.
[391-3-1-.02(2)(g)2]
- 2.6 The Permittee shall not discharge into or cause the discharge into the atmosphere from the fire pump (FPUMP), Ash Silo (ASILO), Hog Tower (HOGT) and the Cooling Tower (COOL) at the facility any visible emissions the opacity of which is equal to or greater than forty percent.
[391-3-1-.02(2)(b)1]
- 2.7 The Permittee shall comply with all applicable provisions of 40 CFR Part 60 New Source Performance Standards (NSPS), Subpart A "General Provisions" and Subpart IIII – "Standards for Stationary Compression Ignition Internal Combustion Engines", for the operation of the fire pump (FPUMP). The Permittee shall comply with emission standards for nitrogen oxides (NO_x), carbon monoxide (CO), and particulate matter (PM) specified below, per 40 CFR 89.112 and 40 CFR 89.113, during the useful life of the engine.
[40 CFR 60.4202(d); 40 CFR 60.4205(b), (c); and Tables 1 and 4 of 40 CFR 60 Subpart IIII]

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 4 of 15

Pollutant	g/kW-hr (g/HP-hr)		
	NOx	CO	PM
Emission Limits for FPUMP*	4.0 (3.0)	4.92 (3.7)	0.29 (0.22)

* Based on Tier 3 certification, emission standards for 2010 and later for nonroad diesel engines, NSPS Subpart IIII. For NOx, the limit also includes non-methane hydrocarbons (NMHC).

- 2.8 Any operation of the fire pump (FPUMP), other than emergency operation, maintenance checks and readiness testing, is prohibited. The accumulated non-emergency service (maintenance checks and readiness testing) time shall not exceed 100 hours per year.
 [40 CFR 60.4211(e)]
- 2.9 The Permittee shall operate the fire pump (FPUMP) with diesel fuel that meets the requirements of 40 CFR 80.510(a). Beginning October 1, 2010 the Permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b).
 [40 CFR 60.4207 and 391-3-1-.02(2)(g) subsumed]
- 2.10 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the storage silos (ASILO and HOGT) any gases that contain particulate matter in excess of the rate derived from the applicable equation below:
 [391-3-1-.02 (2)(e)(1)]
- a. For process input weight rate up to and including 30 tons per hour:
 $E = 4.1P^{0.67}$
- b. For process input weight rate above 30 tons per hour:
 $E = 55P^{0.11} - 40$
- Where E equals the allowable PM emission rate in pounds per hour and P equals the total dry process input weight rate in tons per hour.
- 2.11 The Permittee shall construct and operate the Service Water System Cooling Towers (Source Codes: SWS1 and SWS2) with a Drift Loss Rate of 0.005% or less. This limit shall apply during all times of operation, including startup, shutdown, and malfunction.
 [40 CFR 52.21(j) avoidance]
- 2.12 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler B-1, any single hazardous air pollutant, which is listed in Section 112 of the Clean Air Act, in an amount equal to or exceeding 10 tons during any twelve consecutive months, or any combination of such listed pollutants in an amount equal to or exceeding 25 tons during any twelve consecutive months.
 [Avoidance of 40 CFR 63 Major Source MACT]
- 2.13 Boiler B-1 shall comply with all applicable provisions of 40 CFR 61, Subpart E, the “National Emission Standard for Mercury”, when firing wastewater treatment plant sludge.
 [40 CFR 61 Subparts A and E]

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 5 of 15

- 2.13 The Permittee shall not discharge or cause the discharge into the atmosphere from Boiler B-1, emissions of mercury in excess of 7.1 pounds per 24-hour period.
[40 CFR 61.52(b)]

3. Fugitive Emissions

- 3.1 The Permittee shall take all reasonable precautions with any operation, process, handling, transportation, or storage facilities to prevent fugitive emissions of air contaminants.
[391-3-1-.02(2)(n)1]
- 3.2 The Permittee shall comply with Georgia Air Quality Control Rules 391-3-1-.02(2)(n), "Fugitive Dust", for the entire processing facility including all roadways and processing equipment not otherwise subject to any other rule or regulation governing fugitive visible emissions. Subject to this rule, the Permittee shall not cause, let, permit, suffer or allow visible emissions from any fugitive source to equal or exceed 20 percent opacity.
[391-3-1-.02(2)(n)2]

4. Process & Control Equipment

- 4.1 Routine maintenance shall be performed on all air pollution control equipment. Maintenance records shall be recorded in a permanent form, suitable and available for inspection by the Division.
- 4.2 The fire pump (FPUMP) shall be operated and maintained according to the manufacturer's written specifications/instructions, or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine.
[40 CFR 60.4211(a)]
- 4.3 In order to comply with Permit Conditions 2.3 and 2.12, the Permittee shall operate the selective catalytic reduction system (SCR), dry scrubber injection system (SORB), catalytic oxidation system (COCAT) and the baghouse (BAG1) at all times that Boiler B-1 is in operation except during periods of startup, shutdown, and malfunction.
- 4.4 The Permittee shall maintain a 3-hour average sorbent injection rate that equals or exceeds the operating limit established during the most recent hydrogen chloride (HCl) performance test.
- a. If the Permittee carries out a test at only one boiler heat input rate, this test shall be done at the highest heat input rate that the boiler will operate. From then on, the Permittee shall maintain the injection rate, in pounds per hour, at or above the average injection rate occurring during the test. Also, the Permittee shall not operate the boiler at a heat input rate more than 10% higher than the average heat input rate during this test. Any 3-hour average sorbent injection rate that is less than 80% of the sorbent injection rate established during the most recent HCl performance test is a reportable excursion.

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 6 of 15

- b. The Permittee may establish an allowable sorbent injection rate that varies according to the boiler heat input rate. To do so, additional testing must be carried out, at an average boiler heat input rate that is not more than 30% of the maximum boiler heat input rate below the average heat input rate during the test done to comply with paragraph a of this condition. The Permittee can use the results of the two tests to determine an injection rate that is based on heat input (i.e., lb scrubant per MMBtu). This variable injection rate shall only be used in the range of boiler heat input that was used to establish the variable rate, plus or minus 5% of the maximum boiler heat input rate. At heat input rates lower than that, the Permittee shall maintain the injection rate at or above the injection rate determined for 5% below the average boiler heat input rate of the low heat input test. As with paragraph a of this condition, the Permittee shall not operate the boiler at more than 10% higher than the average heat input rate during the test.
 - c. The Permittee is allowed to establish a wider range of variable sorbent injection rates by carrying out additional testing in accordance with paragraph b of this condition.
 - d. Prior to the initial test, the sorbent injection rate shall be set in accordance with the manufacturer's recommendation.
 - e. Along with the test results, the Permittee shall submit the minimum sorbent injection rate(s) determined in accordance with this condition, along with any calculations done to set the injection rate(s), to the Division for review and approval.
- 4.5 The Permittee shall maintain a pressure drop across the baghouse within the range established during the most recent HCl performance test. Prior to the initial performance test, the acceptable pressure drop range shall be that which is recommended by the baghouse manufacturer.
- 4.6 To comply with Permit Condition 2.6, the Permittee shall install drift eliminators on the cooling tower (COOL). The Permittee shall operate the drift eliminators at all times the cooling tower is operated, including startup, shutdown, and malfunction.
[Avoidance of 40 CFR 52.21(j)]
- 4.7 To comply with Permit Conditions 2.6 and 2.10, the Permittee shall install and operate a baghouse (BAG2) on the ash silo (ASILO) and a cyclone (CYC) on the hog tower (HOGT). The Permittee shall operate these control devices at all times the ash silo and hog tower are operated.

5. Monitoring

- 5.1 Any continuous monitoring system or device required by the Division and installed by the Permittee shall be in continuous operation except during calibration checks, zero and span adjustments or period of repair. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 7 of 15

- 5.2 The Permittee shall install, calibrate, maintain, and operate a non-resettable continuous monitoring system (or device) for the fire pump (FPUMP) to track the hours of operation. The Permittee shall maintain documentation that demonstrates the reason the fire pump was in operation, emergency service or non-emergency service (maintenance and/or testing), for each period of operation. The system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)11(i)]
- 5.3 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the Boiler B-1 scrubber sorbent injection rate.
[Avoidance of 40 CFR 52.21]
- 5.4 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated pollutants on the following equipment. Each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
- a. Carbon monoxide (CO) from Boiler- B-1
 - b. Sulfur dioxide (SO₂) from Boiler- B-1
 - c. Nitrogen oxides (NO_x) from Boiler- B-1
 - d. Visible emissions from Boiler- B-1

The emissions of CO, SO₂ and NO_x shall be reported as parts per million and pounds per million BTU.
[Avoidance of 40 CFR 52.21]

- 5.5 During Boiler B-1 startup, the Permittee shall measure and record the natural gas firing rate in Boiler B-1. The Permittee shall also monitor and record the amount and type of fuel combusted in the boiler, including biomass and wastewater treatment plant sludge. The Permittee shall monitor and record the amount and type combusted daily in Boiler B-1.
[Avoidance of 40 CFR 52.21]
- 5.6 The Permittee shall monitor mercury emissions annually using Method 105 of appendix B of 40 CFR 61 or procedures specified in 40 CFR 61.539d)(2) and (4), if mercury emissions from Boiler B-1 exceed 3.5 lb per 24-hour period. Monitoring results shall be reported and retained according to 40 CFR 61.53(d) (5) and (6); or 40 CFR 61.54 (f) and (g).
[40 CFR 61.55]

6. Performance Testing

- 6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 8 of 15

- a. All tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants.
 - b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.
 - c. The Permittee shall provide the Division thirty (30) days prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.
 - d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.
- 6.2 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Section 2 which pertain to the emission units listed in Attachment A are as follows:
- a. Method 1 for the determination of sample point locations.
 - b. Method 2 for the determination of stack gas flow rate.
 - c. Method 3 or 3A for the determination of stack gas molecular weight.
 - d. Method 3B for the determination of the emission rate correction factor or excess air; Method 3A may be used as an alternate.
 - e. Method 4 for the determination of stack gas moisture.
 - f. Method 5 and Method 202 for the determination of Particulate Matter emissions.
 - g. Method 6 or 6C for the determination of Sulfur Dioxide emissions.
 - h. Method 7 or 7E for the determination of Nitrogen Oxides emissions.
 - i. Method 9 for the determination of Opacity. Data from the COMS required by Permit Condition 5.5 may be used in lieu of Method 9 if the performance evaluation of the COMS has been completed and the results approved by the Division.

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 9 of 15

- j. Method 10 or 10b for the determination of Carbon Monoxide emissions.
 - k. Method 19 shall be used to convert ppmv to lbs/MMBtu.
 - l. Method 26A for the determination of hydrochloric acid (HCl) emissions.
 - m. Method 101A of 40 CFR 61 appendix B shall be used to determine mercury emissions from Boiler B-1 due to incineration of wastewater treatment plant sludge in the boiler. As an alternative, Method 105 can be used instead of Method 101A.
- 6.3 Within 180 days after initial startup of Boiler B-1, the Permittee shall conduct performance evaluations of the continuous emissions monitoring systems (CEMS) for NO_x, SO₂ and CO, and the continuous opacity monitoring system (COMS), which are required by Permit Conditions 5.4 and 5.5. Performance Specification 1 in 40 CFR 60 Appendix B shall be used for the COMS, Performance Specification 2 in 40 CFR 60 Appendix B shall be used evaluate the performance of the NO_x and SO₂ CEMS, and Performance Specification 4 in 40 CFR 60 Appendix B shall be used to evaluate the performance of the CO CEMS.
[40 CFR 60.13(c) and 60.48b(a)]
- 6.4 Within 60 days after achieving maximum operating rate, but no more than 180 days after initial startup, the Permittee shall conduct a performance test for particulate matter (PM) emissions and opacity from Boiler B-1. The facility shall monitor and record the pressure drop of the baghouse during PM testing.
[40 CFR 60.8(a) and 60.46b(d)]
- 6.5 Within 180 days after the initial startup of Boiler B-1, the Permittee shall conduct initial performance testing for HCl emissions for the boiler operating at the maximum load, using the test method specified in Permit Condition 6.2, at the inlet and outlet of the dry scrubber. During testing, the pressure drop across the baghouse and the sorbent injection rate shall be monitored continuously and recorded at least every 15 minutes. Based on data collected through the performance testing, the Permittee shall report these parameters and the scrubber efficiency. The scrubber control efficiency, and calculations done to determine it, shall be submitted to the Division, along with the information required by Permit Condition 6.7. HCl performance tests are required annually thereafter. The HCl emission rates shall be expressed as pounds per million BTU.
[391-3-1-.02(6)(b)1]
- 6.6 Within 180 days after initial startup of Boiler B-1, the Permittee shall conduct an initial performance test for sulfur dioxide (SO₂), nitrogen oxides (NO_x) and carbon monoxide (CO) emissions from Boiler B-1 using the test methods specified in Permit Condition 6.2. The emission rates shall be reported as pounds per million BTU.
[Avoidance of 40 CFR 52.21]
- 6.7 The Permittee shall submit in writing to the Division the results of the initial performance test required by Permit Conditions 6.4, 6.5 and 6.6 within 60 days following completion of each test. For HCl performance tests, the test report shall identify the sorbent used and the sorbent

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 10 of 15

injection flow rate that resulted in demonstrating compliance with the HCl emission limit. Results of NO_x, SO₂ and CO CEMS and COMS evaluations shall also be submitted to the Division within 60 days following completion of the evaluations.

- 6.8 The Permittee shall determine the heat content of the fuel (Fuel F factor) during the initial performance test and annually thereafter. The heat content (Fuel F factor) shall be determined again if there is a change in the fuels fired in the boiler.
- 6.9 The Permittee shall test emissions of mercury from Boiler B-1 in accordance with the procedures set forth in 40 CFR 61.53(d) or in 40 CFR 61.54, unless an emission testing waiver is obtained as per 40 CFR 61.13.
- 6.10 If the mercury emission rate from Boiler B-1 is less than 3.5 pounds per day, then the Permittee shall perform the tests in Permit Condition 6.9 unless they seek and obtain a testing waiver from the Division per 40 CFR 61.13.

7. Notification, Reporting and Record Keeping Requirements

- 7.1 In addition to any other reporting requirements of this Permit, the Permittee shall report to the Division in writing, within seven (7) days, any deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning, or emissions control equipment for a period of four hours or more which results in excessive emissions. The Permittee shall submit a written report which shall contain the probable cause of the deviation(s), duration of the deviation(s), and any corrective actions or preventive measures taken.
- 7.2 The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative.
- 7.3 The Permittee shall provide all notifications as required per 40 CFR 60.7 and 40 CFR 63.9 by the dates specified. Specifically, the Permittee shall provide notifications of:
 - a. The actual date of initial startup of Boiler B-1, postmarked within 15 day after such date, and identification of the fuels to be combusted in the boiler.
 - b. The anticipated date of any performance testing, including NO_x, SO₂ and CO CEMS and COMS performance evaluations, at least 30 days before the performance test is scheduled to begin.
 - c. A copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels fired in Boiler B-1 under 40 CFR 60.44b(d), as specified in Permit Condition 2.4; and

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 11 of 15

- d. The annual capacity factor at which the Permittee anticipates operating Boiler B-1, based on all fuels fired and based on each individual fuel fired.
- 7.4 The Permittee shall submit a written report for each quarterly period ending March 31, June 30, September 30, and December 31 of each year that contains the following:
- a. A summary of opacity exceedances and COMS downtime during the reporting period. For the purposes of this condition, an opacity exceedance is defined as any 6-minute average opacity that exceeds the limits set forth in Permit Condition 2.2.b.
 - b. Total boiler operating time for the calendar month and the total cumulative operating hours during the last twelve consecutive months for each month in the reporting period.
 - c. The date and time of the commencement and completion of each time period of the occurrence of each opacity exceedance.
 - d. Specific identification of each period of such exceedances occurring during startup, shutdown, or malfunction of the boiler. Include the nature and cause of any malfunction (if known), the corrective action taken, and/or preventive measures adopted.
 - e. The date and time identifying each period during which the COMS was inoperative (including periods of malfunction), except for zero and span checks, and the nature of the repairs, adjustments, or replacement. When the COMS has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - f. The type and amount of fuel burned each month during the reporting period.

All quarterly reports shall be submitted in a manner suitable to the Division and postmarked by the 30th day following the end of each reporting period, April 30, July 30, October 30, and January 30, respectively.

- 7.5 The Permittee shall submit a written report for each quarterly period ending March 31st, June 30, September 30th and December 31 of each year that includes the following information:
- a. A summary of nitrogen oxides, sulfur dioxide and carbon monoxide CEMS downtime during the reporting period.
 - b. A summary of sorbent injection and pressure drop excursions and sorbent injection and pressure drop monitor downtimes during the reporting period. For the purposes of this condition, a sorbent injection excursion is defined as any 3-hour block average that is below the operating level established during the most recent performance test.
 - c. The total operating time and the types and amounts of fuels fired in Boiler B-1 each month during the reporting period.

**State of Georgia
Department of Natural Resources
Environmental Protection Division**

**Permit No.
4911-185-0107-E-01-0**

Page 12 of 15

- d. Calculated monthly and consecutive twelve-month rolling totals for carbon monoxide (CO), nitrogen oxides (NO_x), and sulfur dioxide (SO₂) emissions, for each month of the reporting period. A twelve-month rolling total shall consist of the monthly total added to the monthly totals for the last eleven consecutive months.
- e. The magnitude of all exceedances and excursions and the date and time of the commencement and completion of each time period of occurrence.
- f. Specific identification of each period of such exceedances and excursions occurring during startups, shutdowns, or malfunction of the facility. Include the nature and cause any malfunction (if known), the corrective action taken and/or preventive measures adopted.
- g. The date and time of each period during which any required monitoring system or device was inoperative (including periods of malfunction), except for zero and span checks, and the nature of the repairs, adjustments, or replacement. When the monitoring system or device has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

All semiannual reports shall be submitted in a manner suitable to the Division and postmarked by the 30th day following the end of the semiannual period, July 30 or January 30.

- 7.5 The Permittee shall maintain monthly records of the operation of the fire pump (FPUMP) in emergency and non-emergency service that are recorded through the non-resettable hour meter required in Permit Condition No. 5.2. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. Records shall be retained in a format suitable for inspection by or submission to the Division.
- 7.6 The Permittee shall demonstrate compliance with the applicable emission limits in Permit Condition 2.7 for the fire pump (FPUMP) by purchasing a certified engine. The engine shall be installed and configured according to the manufacturer's specifications. Records shall be maintained in a format suitable for inspection by or submission to the Division.
- 7.8 The Permittee shall use the following equations to calculate the monthly HCl and Total HAP emissions from Boiler B-1. All calculations shall be kept as part of the monthly record. These records shall be kept available for inspection by or submittal to the Division.
[391-3-1-.02(6)(b)1 and 391-3-1-.02(2)(c)]

- a. Calculation of monthly HCl emissions from the boiler:

$$\text{HCl} = \text{EF} \times \text{R}$$

Where,

HCl = Monthly HCl emissions from the boiler in tons per month.

EF = Emission Factor in lbs/MMBtu developed from approved stack testing and approved by the Division.

**State of Georgia
Department of Natural Resources
Environmental Protection Division**

**Permit No.
4911-185-0107-E-01-0**

Page 13 of 15

R = Monthly heat input to the boiler (MMBtu)

Where:

R = Rated heat input of the boiler in (MMBTU/hr)*(hours operated in a month)

Or

R = Sum of the hourly heat input rates for a month, determined in accordance with the procedures of 40 CFR Part 75, Section 5.5 of Appendix F.

- b. Calculation of individual HAP Emissions (other than HCl) from the boiler:

$$\text{HAP}_i = \text{EF}_i \times R$$

Where,

HAP_i = Monthly individual HAP emissions from the boiler in tons per month.

EF_i = Emission Factor for HAP_i in lbs/MMBtu as specified by NCASI Technical Bulletin No. 858 (February 2003), emission factor developed from approved stack testing, or other factor approved by the Division.

R = Rated heat input (MMBTU) for the boiler.

Where:

R = Rated heat input of the boiler in (MMBTU/hr)*(hours operated in a month)

Or

R = Sum of the hourly heat input rates for a month, determined in accordance with the procedures of 40 CFR Part 75, Section 5.5 of Appendix F.

- c. Total HAPs emitted each month shall be calculated by adding the individual HAP emissions from b. and the total HCl emissions during the month.

- 7.9 The Permittee shall use the results of the calculations required, per Permit Condition 7.8, to determine the total monthly emissions of combined hazardous air pollutants (HAPS) and the total monthly emissions of HCl emissions from Boiler B-1. All demonstration calculations, including any Division-approved emission factor and control efficiency, shall be kept as part of the records required in this condition. The Permittee shall notify the Division in writing if emissions of HCl emissions exceed 0.83 tons from the boiler, or if the total emissions of all listed HAPs combined exceed 2.03 tons from the boiler, during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limits in Permit Condition 2.12.

[391-3-1-.02(6)(b)1 and 391-3-1-.03(2)(c)]

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No.
4911-185-0107-E-01-0

Page 14 of 15

- 7.10 The Permittee shall use the data from the NO_x, CO and SO₂ CEMS required by Permit Condition 5.4 to determine and record the monthly mass emission rate, in tons per month, of NO_x, CO and SO₂. These records (including calculations) shall be maintained as part of the monthly record, suitable for inspection or submittal.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and Avoidance of 40 CFR 52.21]
- 7.11 Within 90 days of permit issuance, the Permittee shall submit a detailed example of the records required by Permit Conditions 7.9 and 7.10. The Permittee shall use these records to determine and record the twelve consecutive month total emission rate, in tons, of HCl, NO_x, CO and SO₂ emissions from Boiler B-1. These records (including calculations) shall be maintained as part of the monthly record suitable for inspection or submittal.
[391-3-1-.02(6)(b)1 and 391-3-1-.03(2)(c)]
- 7.12 The Permittee shall notify the Division in writing if emissions of NO_x, CO, or SO₂ exceed 20.75 tons from the boiler, during any month, or if the emissions of NO_x, CO, or SO₂ exceed 249 tons from the boiler, during any twelve consecutive months, and shall include an explanation of how the Permittee intends to maintain or regain compliance with the emission limit in Permit Condition No. 2.3.
- 7.13 To demonstrate compliance with Permit Condition 2.11, the Permittee shall maintain information documenting that the drift eliminator on the cooling tower (COOL) has been designed to meet the applicable limit. Such records shall be submitted for review during the first quarterly report.
- 7.14 The Permittee shall record and maintain records of the amounts of each fuel combusted during each day in Boiler B-1 using the device(s) required by Permit Condition 5.7, and calculate the annual capacity factor individually for natural gas and wood for the reporting period. The annual capacity factor must be determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
[40 CFR 60.49(d)(1)]

8. Special Conditions

- 8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.
- 8.2 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Fees."
- 8.3 The Permittee shall prepare and submit an initial Title V Operating Permit Application for the operation of the Wiregrass Plant in accordance with 40 CFR 70.5 within 12 months after commencing operation.
[40 CFR Part 70]

**State of Georgia
Department of Natural Resources
Environmental Protection Division**

**Permit No.
4911-185-0107-E-01-0**

Page 15 of 15

- 8.4 The Permittee shall submit a complete Acid Rain Permit application (including a compliance plan) per 40 CFR 72 in accordance with the deadlines specified in 40 CFR 72.30 and shall operate Boiler B-1 in compliance with a complete Acid Rain Permit application until an Acid Rain Permit is issued by the Division.