

**OFFICE OF ENVIRONMENTAL QUALITY CONTROL
BUREAU OF AIR QUALITY
SYNTHETIC MINOR AND NSPS (40CFR60) CONSTRUCTION PERMIT**

Orangeburg County Biomass, LLC
Hwy 301 & I-176/Old State Road
Orangeburg, South Carolina 29115

Permission is hereby granted to install a 525 million BTU/hr heat input electric utility steam generating boiler and associated equipment, nominally rated at a net capacity of 35 MWe. The boiler design will be a bubbling fluidized bed (BFB) and fueled by a mixture of clean, untreated wood waste (as primary fuel) and natural gas as startup. The boiler is equipped with four (4) 40 million BTU/hr capacity natural gas startup burners, and up to six bed lances at 14.5 million BTU/hr each for a total of 247 million BTU/hr. The facility will use the four (4) startup burners (total of 160 million BTU/hr) during startups.

The initial material handling operations will consists of a variety of processes to include wood chip handling, staging, sizing, and conveying. OCB will secure wood chip delivery contracts with a third parties to provide the necessary wood fuel delivery. Wood chips and forestry thinnings will be delivered via truck to the facility.. The chips will be dumped, screened and stock piled via stacker/reclaimer, then subsequently conveyed for direct introduction into the bubbling fluidized bed boiler (BFB). Oversize material will be ground to an acceptable size.

The bubbling fluidized bed provides very efficient combustion. Combustion by-products are further controlled by flue gas recirculation for NO_x, fuel gas sorbent injection processes for SO₂, and HCl, particulate capture baghouse for PM/PM₁₀, and finally a Selective Catalytic Reduction (SCR) system for Oxides of Nitrogen (NO_x).

OCB will install a Continuous Emission Monitoring Systems (CEMS) for SO₂, NO_x, CO, flue gas O₂ content and a Continuous Opacity Monitoring System (COMS) for opacity.

The boiler will be subject to the Regulation 61-62.5- Standard 1, Standard 4, and Standard 5.2, Regulation 61-62.72-Acid Rain, 40CFR60- Subparts A and Db, 40CFR 96-Clean Air Interstate Rule (CAIR),and 40 CFR 64 - Compliance Assurance Monitoring (CAM).

PERMIT NUMBER: 1860-0123CA
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FACILITY SIC/NAICS CODES: 4911/221119

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The facility will operate under federally enforceable conditions to restrict annual emissions from all sources at the site to below major source thresholds. The facility will demonstrate compliance by limiting PM, NO_x, and CO potential emissions to less than 250 TPY.

In order to demonstrate compliance for PM/PM₁₀, the facility will be installing a baghouse. The boiler is subject to source testing requirements for PM every 2 years. In order to demonstrate compliance for NO_x, the facility will be installing an SCR. Also, the facility will be installing and operating a NO_x CEMS. No emission controls have been proposed for CO. The facility will take an hourly operating limitation of 8520 hours/year and will be installing and operating a CEMS for CO. Since the potential emissions for SO₂ and VOCs are less than 250 TPY, no synthetic minor limit will be established for these pollutants.

NOTWITHSTANDING ANY OF THE CONDITIONS LISTED BELOW, NO APPLICABLE LAW, REGULATION, OR STANDARD WILL BE CONTRAVENED.

CONDITIONS

1. All official correspondence, plans, permit application forms, and written statements are an integral part of this permit.
2. The owner/operator shall submit written notification to the Director of the Engineering Services Division of the date construction is commenced, postmarked no later than 30 days after such date, and written notification of the actual date of initial startup of each new or altered source, postmarked within 15 days after such date.
3. Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time frame. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration.
4. The owner or operator shall comply with all terms, conditions, and limitations of this permit.

This is pursuant to the provisions of Section 48-1-110, 1976 *Code of Laws of South Carolina*, as amended, and the *South Carolina Air Quality Control Regulation 61-62.1*, Section II and the *Code of Federal Regulations*, Title 40 and Parts 60 (Subpart A) and 63 (Subpart A).

I. STANDARD CONDITIONS

- A. This permit expressly incorporates all the provisions of *South Carolina Department of Health and Environmental Control Regulation 61-62.1*, Section II, Paragraph J and the *Code of Federal Regulations*, Title 40 and Parts 60 (Subpart A) 63 (Subpart A).

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II. SPECIAL CONDITIONS

A. EMISSION LIMITATIONS

Air pollutant emissions shall not exceed the following:

ID	Pollutant/Standard	Limit	Reference Method	Regulation	State Only
STK1 Boiler	Opacity	20%	9	SC Regulation 61-62.5, Standard 1, Section I	No
	PM	0.6 lb/10 ⁶ BTU	5	SC Regulation 61-62.5, Standard 1, Section II	No
	SO ₂	3.5 lb/10 ⁶ BTU	6	SC Regulation 61-62.5, Standard 1, Section III	No
STK1 Boiler	NO _x	0.20 lbs/10 ⁶ BTU	*	SC Regulation 61-62.5, Standard 5.2	No
STK1 Boiler	NO _x	0.147lbs/10 ⁶ BTU- while firing natural gas and wood	*	SC Regulation 61-62.5, Standard 5.2	No
STK1 Boiler	PM	0.03 lb/10 ⁶ BTU	5, 5B, or 17	40 CFR 60 Subpart Db	No
STK1 Boiler	Annual Capacity Factor	10%	*	40 CFR 60 Subpart Db	No
STK1 Boiler	Opacity	20%	*	40 CFR 60 Subpart Db	No
CHIP1	Opacity	20%	9	SC Regulation 61-62.5, Standard 1, Section I	No
CHIP1	PM	46.02 lbs/hr	*	SC Regulation 61-62.5, Standard 4, Section VIII	No
Facility Wide	HAPs	Less than 10 TPY single HAP, Less than 25 TPY total HAPs	*	SC Reg 61-62.1, Section II(G)	No
Facility Wide	CO	Less than 250 TPY	*	SC Reg 61-62.1, Section II(E)	No
Facility Wide	NO _x	Less than 250 TPY	*	SC Reg 61-62.1, Section II(E)	No
Facility Wide	PM	Less than 250 TPY	*	SC Reg 61-62.1, Section II(E)	No
STK1 Boiler	NO _x , SO ₂	As specified by Acid Rain	*	40 CFR 72, 73, 75, & 76	No
STK1 Boiler	NO _x , SO ₂	As specified by CAIR	*	S.C. Regulation 61-62.96 and 40 CFR 96	No

*As Approved By the Department

The emission limitations listed for each emission unit are based on operation at permitted capacity. Operation at less than permitted capacity must meet emission limits specified in the applicable regulations based on that operating rate. All test methods must be the most recent revisions that are published in the *Code of Federal Regulations*, in accordance with the requirements of SC Regulation 61-62.1, Section IV, Source Test.

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B. CONTINUOUS MONITORING REQUIREMENTS

ID	Pollutant	Averaging Time
CA	NOx	1 Hour Average
CA	O ₂	30 day rolling average and 12-month rolling sum
CA	Opacity	6 minute average
CA	CO	30 day rolling average and 12-month rolling sum

C. SOURCE TEST SCHEDULE

ID	Pollutant	Frequency	Method
CA	PM	Initial, Bi-annually	5
CA	HCl	180 days of start-up, Every 2 years	*
CA	SO ₂	Initially**	*

*As Approved By the Department

** The owner/operator can either demonstrate compliance with the SO₂ emission limitations, by conducting a fuel analysis or an initial source test.

D. ADDITIONAL CONDITIONS

Condition Number	Conditions
1.	The permittee shall pay fees in accordance with SC Regulation 61-30, SC Environmental Protection Fees.
2.	In accordance with SC Regulation 61-62.1 Section II(J), for all sources not required to have continuous emissions monitors, in the event of any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the local Environmental Quality Control (EQC) Regional office within twenty-four (24) hours after the beginning of the occurrence. The permittee shall also submit a written report within thirty (30) days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality (BAQ). The report shall contain as a minimum, the following: the identity of the emission unit and associated equipment where excess emissions occurred, the magnitude of excess emissions, the time and duration of excess emissions, the steps taken to remedy the malfunction and to prevent a recurrence, documentation that control equipment and processes were at all times maintained and operated, to the maximum extent practicable, in a manner that was consistent with good practice for minimizing emissions. Such a report shall in no way serve to excuse, otherwise justify, or in any manner affect any potential liability or enforcement action resulting from the occurrence.

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3.	<p>Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded.</p> <p>The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment A, not to exceed the pollutant limitations of this construction permit. Should the facility wish to increase the emission rates listed in Attachment A, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified in this permit condition. This is a State Only enforceable requirement.</p>
4.	<p>These conditions shall not supersede any State or Federal requirements such as National Emission Standards for Hazardous Air Pollutants, unless these conditions would impose a more restrictive limit.</p>
5.	<p>This construction permit was reviewed and issued based on the permit application submitted by the owner/operator. The owner/operator shall obtain any Bureau authorization required under South Carolina Regulation 61-62.1, Section II(A) prior to making modifications not covered under this construction permit.</p>
6.	<p>For sources not yet covered by an effective Title V operating permit, the owner or operator shall submit a written request to the Director of the Engineering Services Division for a new operating permit to cover any new, or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source. In accordance with SC Regulation 61-62.70.5(a), the owner or operator shall submit a timely and complete Part 70 permit application within 12 months of start up.</p>
7.	<p>The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department. If construction is certified as provided above, the permittee may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department. If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Director of the Engineering Services Division a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation. Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.</p>
8.	<p>Unless elsewhere specified within this permit, all records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.</p>
9.	<p>The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel.</p>
<p align="center"><i>SC Regulation 61-62.5, Standard 1- Emissions from Fuel Burning Operations</i></p>	

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10.	<p>(STK1) The boiler must demonstrate simultaneous compliance with requirements A and B and associated record keeping as detailed below:</p> <p>A. In accordance with SC Regulation 61-62.5, Standard No. 1, Section I (B), the boiler shall not discharge into the ambient air smoke which exceeds opacity of 20%. During times of soot blowing the opacity may be exceeded for a total of 6 minutes in any hour or 24 minutes in any 24-hour period, but shall in no case exceed opacity of 60%. This opacity standard does not apply during startup and shutdown.</p> <p>B. In accordance with 40 CFR 60.42b(f), the boiler shall not discharge into the ambient air smoke which exceeds an opacity of 20% except for one six-minute period per hour of not more than 27% opacity. This opacity standard does not apply during startup, shutdown, and malfunction.</p> <p>The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. In addition the owner/operator shall maintain a log of the time, magnitude, duration and any other pertinent information to determine periods of startup and shutdown and make these records available to a Department representative upon request.</p>
11.	<p>(STK1) In accordance with SC Regulation 61-62.5, Standard No. 1 - Emissions from Fuel Burning Operations, Section II - Particulate Matter Emissions, the allowable discharge of particulate matter resulting from the fuel burning operations is 0.6 lbs/10⁶ BTU input.</p>
12.	<p>(STK1) In accordance with SC Regulation 61-62.5, Standard No. 1 - Emissions from Fuel Burning Operations, Section III - Sulfur Dioxide Emissions, the maximum allowable discharge of SO₂ resulting from the fuel burning operations is 3.5 lbs/10⁶ BTU input.</p>
13.	<p>(STK1) In accordance with SC Regulation 61-62.5, Standard 1, source tests for PM emissions shall be conducted initially within 180 days after startup and every 2 year(s) thereafter.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to SC Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing, or as approved in a site specific test plan.</p>
14.	<p>(STK1) In accordance with SC Regulation 61-62.5, Standard 1, the owner or operator shall either conduct a fuel analysis or source test to demonstrate compliance with the SO₂ limit. If the owner or operator chooses to perform a fuel analysis for SO₂ emissions, an initial fuel analysis shall be conducted, and no additional analysis will be required, unless the clean, untreated wood becomes inconsistent in composition or is received from another source. If the owner or operator chooses to perform a source test, an initial source test shall be conducted within 180 days of startup.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to SC Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing, or as approved in a site specific test plan.</p>
<p><i>SC Regulation 61-62.5, Standard 4- Emissions from Process Industries</i></p>	
15.	<p>(CHIP1) In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%.</p>

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16.	<p>(CHIP1) In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equations: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) and for process weight rates greater than 30 tons per hour ($E = 55.0P^{0.11} - 40$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> <table border="1" data-bbox="492 520 1284 621"> <thead> <tr> <th align="center">Process</th> <th align="center">Emission Limit (lbs/hr)</th> <th align="center">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td align="center">CHIP1</td> <td align="center">46.02</td> <td align="center">58.33</td> </tr> </tbody> </table>	Process	Emission Limit (lbs/hr)	Process Weight Rate (tons/hr)	CHIP1	46.02	58.33
Process	Emission Limit (lbs/hr)	Process Weight Rate (tons/hr)					
CHIP1	46.02	58.33					
<i>SC Regulation 61-62.5, Standard 5.2-Control of Oxides of Nitrogen</i>							
17.	(STK1) In accordance with SC Regulation 61-62.5, Standard No. 5.2 – Control of Oxides of Nitrogen, Section IV, stationary source that emits or has the potential to emit NO _x generated from fuel combustion constructed after 06/25/2004 must perform tune-ups every two years, a tune-up plan must be developed and kept on file, and records of tune-ups must be kept on site for a minimum of 5 years.						
18.	(STK1) In accordance with SC Regulation 61-62.5, Standard No. 5.2 – Control of Oxides of Nitrogen, Section III for wood residue boilers, the allowable discharge of NO _x resulting from the fuel burning operations is 0.20 lbs/10 ⁶ BTU.						
19.	(STK1) In accordance with SC Regulation 61-62.5, Standard No. 5.2 – Control of Oxides of Nitrogen, Section III for boiler configuration using multiple fuels, the allowable discharge of NO _x resulting from the fuel burning operations is 0.147 lbs/10 ⁶ BTU while firing natural gas and wood.						
<i>SC Regulation 61-62.6 Fugitive Particulate Emissions</i>							
20.	(Facility Wide) Fugitive Particulate (PM) emissions from material handling, process equipment, control equipment, or storage piles will be minimized to the maximum extent possible. This will include proper maintenance of the control system such as scheduled inspections, replacement of damaged or worn parts, etc. Fugitive emissions from dust buildup will be controlled by proper housekeeping and/or wet suppression.						
<i>SC Regulation 61-62.72- Acid Rain</i>							
21.	(STK1)The boiler is subject to SC Regulation 62.72, 40 CFR 72, 73, 74, 75, and 76 - Acid Rain and shall comply with all applicable provisions.						
<i>SC Regulations 62.1 Section II(E)-Synthetic Minor</i>							
22.	(Facility wide) This project is a potential major source for Hazardous Air Pollutant (HAP) emissions as defined by SC Regulation 61-62.70.3(a)(1). The facility has agreed to Federally enforceable operating limitations to limit its potential to emit to less than 10 tons single HAP emissions per year and to less than 25 tons total HAP emissions per year.						
23.	(Facility wide) This facility is a potential major source for PM, PM ₁₀ , NO _x , & CO emissions as defined by SC Regulation 61-62.5, Standard 7, Prevention of Significant Deterioration (PSD). The facility has agreed to federally enforceable operating limitations to limit its potential to emit to less than 250 tons per year for PM, PM ₁₀ , NO _x , & CO emissions to avoid PSD.						
24.	<p>(Facility wide) The owner/operator shall maintain emission limitation records and any other records necessary to determine facility wide PM, PM₁₀, NO_x, CO, HCl, and total HAP emissions. PM, PM₁₀, NO_x, CO, HCl, and total HAP emissions shall be calculated on monthly basis, and a twelve month rolling sum shall be calculated for total PM, PM₁₀, NO_x, CO, HCl, and total HAP emissions. The twelve month rolling sum shall be less than 250 tons per year for potential to emit emissions and 10/25 tons per year for single and total HAP emissions. Reports of the calculated values and the twelve-month rolling sum shall be submitted semiannually.</p> <p>An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall be included in the initial report. Subsequent submittals of the algorithm and example calculations are unnecessary, unless the method of calculation is found to be unacceptable by the Bureau or if the facility changes the method of calculating emissions and/or changes emission factors.</p>						

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	<i>40 CFR 60 Subpart A - General Provisions, Subpart Db- Standards Of Performance For Industrial-Commercial-Institutional Steam Generating Units, and SC Regulation 61-62.60 - SC Designated Facilities Plan and New Source Performance Standards</i>
25.	(STK1) The boiler is subject to New Source Performance Standards (NSPS), 40 CFR 60 Subparts A and Db, General Provisions and Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, applies to boiler STK1. The permittee shall comply with all applicable parts of Subparts A and Db.
26.	(STK1) In accordance with 40 CFR 60.43b(g), the PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.
27.	(STK1) In accordance with 40 CFR 60.43b(h)(1), on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts wood in combination with any other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input.
28.	(STK1) In accordance with 40 CFR 60.44b(d), on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO _x in excess of 130 ng/J (0.30 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.
29.	(STK1) The owner/operator will be demonstrating compliance with the annual capacity factor as per 40 CFR 60.44(d). The annual capacity factor as defined in 40 CFR 60.41b means the ratio between the actual heat input to a steam generating unit from the fuels listed in 40 CFR 60.42b(a), 60.43b(a), or 60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. The owner/operator shall record and maintain records of the amounts of natural gas combusted during each day and determine the annual capacity factor on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. Reports of the calculated values shall be submitted semiannually.
30.	(STK1) In accordance with 40 CFR 60.48b(a), the owner or operator of the boiler shall install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere from the boiler and record the output of the system.
31.	(STK1) In accordance with 40 CFR 60.49b(a), the owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include: (1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility; (2) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.
32.	(STK1) In accordance with 40 CFR 60.7(c), the owner or operator is required to submit excess emission reports to the Bureau of Air Quality semiannually during which there are excess emissions from a boiler. If there are no excess emissions during the semiannual period, the owner or operator shall submit a semiannual report stating that excess emissions have not occurred during the reporting period.

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33.	<p>(STK1) In accordance with 40 CFR 60, Subpart Db, within 60 calendar days after achieving the maximum production rate at which this biomass facility will be operated, but no later than 180 calendar days after its initial startup and at such other times as may be required by the Department under section 114 of the Clean Air Act, the owner or operator shall conduct performance tests. Performance tests shall be conducted on the boiler to show compliance with the opacity and PM standards. Compliance with the opacity and PM standards shall be determined by conducting performance tests in accordance with 40 CFR 60 Appendix A.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to SC Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing, or as approved in a site specific test plan.</p>
<i>40 CFR 64, Compliance Assurance Monitoring (CAM)</i>	
34.	<p>(STK1) These sources are subject to 40 CFR 64, Compliance Assurance Monitoring (CAM) and shall comply with all applicable provisions.</p> <p>To meet the requirements of 40 CFR 64 for Emission Unit No. STK1, the indicator for PM and NO_x shall be determined prior to CAM applicability. The owner/operator shall install and maintain a PM and NO_x indicators measuring instrument at an appropriate location as the measurement approach. The indicator type shall be used to provide assurance of compliance with applicable requirement that has subjected the facility to CAM.</p> <p>The operational ranges for the PM and NO_x indicators, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of the Title V permit renewal. At that time an excursion for monitoring parameters shall also be defined. These operational ranges for the monitored parameters shall be derived from data which demonstrate a reasonable assurance of compliance. Process and capture system operational parameters shall be monitored during the stack tests and operational ranges or inspection and maintenance activities shall be developed for these parameters to reflect proper operation and maintenance of the control device and capture system. Testing must be conducted in accordance with SC Regulation 61-62.1, Section IV, Source Tests. The owner or operator shall coordinate with the Source Evaluation Section of this Bureau, and the test must be performed according to a protocol approved by this Department. The Bureau shall be notified not less than two (2) weeks before the initiation of the test and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>The operational range, exceedance and excursion information shall be incorporated into the cogeneration facility's Part 70 (Title V) Operating Permit once all appropriate testing has been completed and the test results have been approved by the Bureau. Such incorporation will represent a minor modification to the permit. The owner/operator shall provide all relevant information for this modification, including a listing of the exact changes needed to the existing Title V permit as required by Part 70 regulations. The owner/operator shall update their CAM plan with this information as appropriate.</p>
<i>40 CFR 96, Clean Air Interstate Rule(CAIR)</i>	
35.	<p>(STK1) This source is subject to SC Regulation 61-62.96 Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO₂) Budget Trading Program General Provisions, and 40 CFR 96 NO_x Budget Trading Program And CAIR NO_x and SO₂ Trading Programs For State Implementation Plans, and shall comply with all applicable requirements.</p>

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36.	(STK1) The owners and operators, and to the extent applicable, the NOx authorized account representative of a NOx Budget unit, shall comply with the monitoring and reporting requirements as provided in subpart H of SC Regulation 61-62.96 and in subpart H of 40 CFR part 75. For purposes of complying with such requirements, the definitions in SC Regulation 61-62.96.2 and in 40 CFR part 72 section 72.2 shall apply, and the terms “affected unit,” “designated representative,” and “continuous emission monitoring system” (or “CEMS”) in 40 CFR part 75 shall be replaced by the terms “NOx Budget unit,” “NOx authorized account representative,” and “continuous emission monitoring system” (or “CEMS”), respectively, as defined in SC Regulation 61-62.96.2.
<i>Monitoring of Control Devices</i>	
37.	(STK1) In accordance with SC Regulation 61-62.1, Section II(E), the owner or operator of the boiler shall install, calibrate, maintain, and operate a CEMS for measuring CO concentration discharged to the atmosphere from the boiler and record the output of the system. All continuous monitoring systems required shall be subject to the provisions of SC Regulation 61-62.60 Subpart A.
38.	(STK1) In accordance with SC Regulation 61-62.1, Section II(E), the owner or operator of the boiler shall install, calibrate, maintain, and operate a CEMS for measuring SO ₂ concentration discharged to the atmosphere from the boiler and record the output of the system. All continuous monitoring systems required shall be subject to the provisions of SC Regulation 61-62.60 Subpart A.
39.	(STK1) In accordance with with SC Regulation 61-62.1, Section II(E), t the owner or operator of the boiler shall install, calibrate, maintain, and operate a CEMS for measuring NO _x emissions discharged to the atmosphere from the boiler and record the output of the system. All continuous monitoring systems required shall be subject to the provisions of 40 CFR Part 75.
40.	(STK1) In accordance with with SC Regulation 61-62.1, Section II(E), t the owner or operator of the boiler shall install, calibrate, maintain, and operate a CEMS for measuring O ₂ emissions discharged to the atmosphere from the boiler and record the output of the system. All continuous monitoring systems required shall be subject to the provisions of SC Regulation 61-62.60 Subpart A.
41.	(STK1) The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel.
42.	(STK1) Operational ranges for the monitored parameters shall be established to provide a reasonable assurance of compliance. These operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up. The operating ranges may be updated using this procedure, following Bureau approval.
43.	(STK1) The owner/operator shall install, operate and maintain pressure drop gauge(s) on each module of the baghouse(s). Pressure drop readings shall be recorded daily during source operation. The baghouse(s) shall be in place and operational whenever processes controlled by the baghouse(s) are running, except during periods of baghouse malfunction or mechanical failure. The following operation and maintenance checks will be made on at least a weekly basis for all baghouses: a) The baghouse cleaning systems will be checked for proper operation. b) Check dust collection hoppers and conveying systems for proper operation.

Orangeburg County Biomass, LLC
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Condition Number	Conditions
44.	<p>(STK1)All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (i.e., pressure drop readings, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each incidence of operation outside the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these incidences shall be submitted semiannually. If no incidences occurred during the reporting period then a letter shall indicate such.</p> <p>Any alternative method for monitoring control device performance must be preapproved by the Bureau and shall be incorporated into the permit as set forth in SC Regulation 61-62.70.7.</p>
<i>Stack testing</i>	
45.	<p>(STK1) In accordance with SC Regulation 61-62.1, Section II E and 40 CFR 63 MACT avoidance limits, an initial source test for HCl emissions shall be conducted within 180 days after startup or and every two years thereafter.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to SC Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing, or as approved in a site specific test plan.</p>
<i>Operating Hours Limitation</i>	
46.	<p>(STK1) The boiler is limited to operating a maximum of 8520 hours per year. The owner/operator must record the actual operating hours. Records of recorded hours and 12-month rolling sums shall be submitted to the Technical Management Section, Bureau of Air Quality, annually postmarked no later than thirty (30) calendar days after the end of the reporting period.</p>
<i>Fuel Limitation</i>	
47.	<p>(STK1) The boiler is permitted to burn natural gas only as start-up fuel. The maximum BTU rating of the natural gas burners are 247 MMBTU/hr. The owner/operator must record the natural gas fuel consumption on a monthly basis and calculate the yearly natural gas fuel consumption on a twelve-month rolling sum. Reports of the calculated values and the twelve-month rolling sum shall be submitted semiannually.</p>

Elizabeth J. Basil, Director
Engineering Services Division
Bureau of Air Quality

ATTACHMENT A

Modeled Emission Rates Orangeburg County Biomass, LLC 1860-0123-CA PAGE 1 OF 2

STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR)					
STACK ID	TSP	PM ₁₀	SO ₂	NO ₂	CO
STK1	0.29	0.26	2.63	11.55	57.75
CHIP1	0.76	0.12	--	--	--
CONTRAN1	0.15	0.055	--	--	--
CONTRAN2	0.15	0.055	--	--	--
CONTRAN3	0.15	0.055	--	--	--
FACILITY TOTAL	1.5	0.545	2.63	11.55	57.75

CLASS II PREVENTION OF SIGNIFICANT DETERIORATION - STANDARD 7			
STACK	Modeled Emission Rates (lbs/hr)		
	PM ₁₀	SO ₂	NO ₂
STK1	0.28	11.05	12.06
CHIP1	0.05	--	--
CONTRAN1	0.055	--	--
CONTRAN2	0.055	--	--
CONTRAN3	0.055	--	--
FACILITY TOTAL	0.495	11.05	12.06

STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR)			
STACK ID	Minor Source Baseline Date(s)		
	5/23/1980	5/23/1980	9/4/1991
	PM ₁₀	SO ₂	NO ₂
STK1	0.26	2.63	11.55
CHIP1	0.12	--	--
CONTRAN1	0.055	--	--
CONTRAN2	0.055	--	--
CONTRAN3	0.055	--	--
FACILITY TOTAL	0.545	2.63	11.55

STANDARD NO. 8 - MODELED AIR TOXIC EMISSION RATES (LBS/HR)				
STACK ID	Acrolein	Benzene	Beryllium	Chlorine
	107-02-8	71-43-2	7440-41-7	7782-50-5
STK1	0.04	0.02	5.78E-07	0.41
FACILITY TOTAL	0.04	0.02	5.78E-07	0.41

STANDARD NO. 8 - MODELED AIR TOXIC EMISSION RATES (LBS/HR)				
STACK ID	Formaldehyde	HCL	Naphthalene	Nickel
	50-00-0	7647-01-0	91-20-3	7440-02-0
STK1	0.14	1.00	0.05	1.73E-05
FACILITY TOTAL	0.14	1.00	0.05	1.73E-05

ATTACHMENT A

**Modeled Emission Rates
Orangeburg County Biomass, LLC
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PAGE 2 OF 2**

STANDARD NO. 8 - MODELED AIR TOXIC EMISSION RATES (LBS/HR)				
STACK ID	Toluene	N/A	N/A	N/A
	108-88-3			
STK1	0.03			
FACILITY TOTAL	0.03			

draft

[DATE]

Orangeburg County Biomass, LLC
2350 Highway 101 South
Greer, South Carolina 29651

ATTENTION: Dan Page

Dear Mr. Page:

Enclosed is Construction Permit No. 1860-0123-CA. Please note the conditions on this permit by reading it carefully. Pursuant to the South Carolina Administrative Procedures Act, this permit decision may be appealed in accordance with applicable state law. Please see the enclosed Notice of Appeal Procedure, effective July 01, 2006, for guidelines on appeal submittals.

In addition to this permit to construct, a permit to operate is required in accordance with the Air Pollution Control Regulations and Standards for the State of South Carolina. The regulations require a written request for a new or revised operating permit to cover any new, or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source unless a more stringent time frame is required.

Please examine this new permit carefully for errors or omissions and notify the appropriate staff member, Jidida K. Douglas, (803-898-4193) or e-mail at douglajk@dhec.sc.gov promptly if any are discovered.

Sincerely,

Elizabeth J. Basil, Director
Engineering Services Division
Bureau of Air Quality

EJB:JKD:<TYPIST'S INITIALS>

Enclosures

cc: Tabatha Corley, Region 5, Aiken EQC Office
Permit File: 1860-0123

ec: Jason Davis, Projection Integration, Inc.
Michael Shroup

Notice of Appeal Procedure

The following procedures are in effect beginning July 1, 2006, pursuant to 2006 Act No. 387:

1. This decision of the S.C. Department of Health and Environmental Control (Department) becomes the final agency decision 15 days after notice of the decision has been mailed to the applicant or respondent, unless a written request for final review is filed with the Department by the applicant, permittee, licensee, or affected person.
2. An applicant, permittee, licensee, or affected person who wishes to appeal this decision must file a written request for final review with the Clerk of the Board at the following address or by facsimile at 803-898-3393.

Clerk of the Board
SC DHEC
2600 Bull Street
Columbia, SC 29201

3. The request for final review should include the following:
 - a. the grounds on which the Department's decision is challenged and the specific changes sought in the decision
 - b. a statement of any significant issues or factors the Board should consider in deciding how to handle the matter
 - c. a copy of the Department's decision or action under review
4. In order to be timely, a request for final review must be received by the Clerk of the Board within 15 days after notice of the decision has been mailed to the applicant or respondent. If the 15th day occurs on a weekend or State holiday, the request is due to be received by the Clerk of the Board on the next working day. The request for final review must be received by the Clerk of the Board by 5:00 p.m. on the date it is due.
5. If a timely request for final review is filed with the Clerk of the Board, the Clerk will provide additional information regarding procedures.
6. The Board of Health and Environmental Control has 60 days from the date of receipt of a request for final review to conduct a final review conference. The conference may be conducted by the Board, its designee, or a committee of three members of the Board appointed by the chair.

If a final review conference is not conducted within 60 days, the Department decision becomes the final agency decision, and a party may request a contested case hearing before the Administrative Law Court within 30 days after the deadline for the final review conference.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.