



**State of Mississippi**



**AIR POLLUTION CONTROL PERMIT**

To Construct Air Emissions Equipment

**THIS CERTIFIES**

**BlueFire Fulton Renewable Energy LLC**  
**South Industrial Access Road and Spring Road**  
**Fulton, MS**  
**Itawamba County**

has been granted permission to construct air emissions equipment to comply with the emission limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

**Mississippi Environmental Quality Permit Board**

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**Mississippi Department of Environmental Quality**

Issued/Modified: **JUN 06 2014**

Expires:

Permit No. 1240-00036

Agency Interest # 52497

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## To Construct Air Emissions Equipment

BlueFire Fulton Renewable Energy LLC

Subject Item Inventory

Permit Number:1240-00036

Activity ID No.: PER20140001

### Subject Item Inventory:

ID	Designation	Description
AI52497	52497	Cellulosic Ethanol Manufacturing Facility
AREA8	AA-001	Wood Processing
AREA9	AA-002	Wood Chip Storage
AREA7	AA-003	Green Biomass Handling
EQPT1	AA-004	Wood Chip Drying (The dryer stack includes exhaust from the boiler)
AREA10	AA-005	Dry Biomass Storage and Handling
EQPT2	AA-006	Limestone Storage Silo
EQPT3	AA-007	Limestone Slaker Storage Silo
EQPT4	AA-008	Fermentation System
AREA11	AA-009	Distillation and Yeast Propagation
EQPT5	AA-010	435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)
EQPT6	AA-011	Truck and Rail Loading Rack
EQPT7	AA-012	500-HP Diesel Fire Pump
EQPT8	AA-013	Ash Silo
EQPT9	AA-014	Ash Loadout
EQPT10	AA-015	200 Proof Ethanol Storage Tank (Ref. T1301A)
EQPT11	AA-016	200 Proof Ethanol Storage Tank (Ref. T1301B)
EQPT12	AA-017	Recycle Ethanol Storage Tank (Ref. T1302A)
EQPT13	AA-018	Recycle Ethanol Storage Tank (Ref. T1302B)
EQPT14	AA-019	Denaturant Storage Tank (Ref. T1402)
EQPT15	AA-020	Denatured Ethanol Storage Tank (Ref. T1401)

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ID	Designation	Description
EQPT16	AA-021	Wood Chip Receiving
AREA12	AA-022	Chip Storage Piles
AREA13	AA-023	Equipment Leaks
AREA14	AA-024	Tank Farm Equipment Leaks
AREA15	AA-025	Paved Road Emissions
AREA16	AA-026	Cooling Tower(s)
CONT1	AA-027	Product Storage Vapor Combustion Unit (Ref. No. TO-1402)

### Subject Item Groups:

ID	Description	Components
GRPT1	Storage Tanks (NSPS Kb applicable)	AREA10 Dry Biomass Storage and Handling
		AREA11 Distillation and Yeast Propagation
		AREA12 Chip Storage Piles
		AREA13 Equipment Leaks
		AREA14 Tank Farm Equipment Leaks
		AREA15 Paved Road Emissions

### Receiving Stream Relationships:

Subject Item	Relationship	Receiving Stream
AI 52497 Cellulosic Ethanol Manufacturing Facility	Discharges Into	Tennessee Tombigbee Waterway

#### KEY

ACT = Activity

AREA = Area

CONT = Control Device

IA = Insignificant Activity

AI = Agency Interest

CAFO = Concentrated Animal Feeding Operation

EQPT = Equipment

IMPD = Impoundment

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### **KEY**

MAFO = Animal Feeding Operation

RPNT = Release Point

WDPT = Withdrawal Point

PCS = PCS

TRMT = Treatment

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### AI0000052497 (52497) Cellulosic Ethanol Manufacturing Facility:

#### Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Particulate Matter	<p>Particulate Matter:</p> <p>Except as otherwise specified, no person shall cause, permit, or allow the emission from any manufacturing process, in any one hour from any point source, particulate matter in total quantities in excess of the amount determined by the relationship:</p> $E = 4.1 p^{0.67}$ <p>where E is the emission rate in pounds per hour and p is the process weight input rate in tons per hour. [11 Miss. Admin. Code Pt. 2, Ch. 1. 3.6(a).]</p>
L-2	Particulate Matter	<p>Particulate Matter:</p> <p>Emissions from installations of less than 10 million BTU per hour heat input shall not exceed 0.6 pounds per million BTU per hour heat input. [11 Miss. Admin. Code Pt. 2, Ch. 1. 4.a(1).]</p>
L-3	Particulate Matter	<p>Particulate Matter:</p> <p>The maximum permissible emission of ash and/or particulate matter from fossil fuel burning installations equal to or greater than 10 million BTU per hour heat input but less than 10,000 million BTU per hour heat input shall not exceed an emission rate as determined by the relationship:</p> $E = 0.8808 * I^{-0.1667}$ <p>where E is the emission rate in pounds per million BTU per hour heat input and I is the heat input in millions of BTU per hour. [11 Miss. Admin. Code Pt. 2, Ch. 1. 4.a(2).]</p>

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### AI0000052497 (continued):

#### Limitation Requirements:

Condition No.	Parameter	Condition
L-4	Opacity	<p>Opacity:</p> <p>The permittee shall not cause, permit, or allow the emission of smoke from a point source into the open air from any manufacturing, industrial, commercial or waste disposal process which exceeds forty percent opacity. Startup operations may produce emissions which exceed 40% opacity for up to fifteen minutes per startup in any one hour and not to exceed three startups per stack in any twenty-four hour period. Emissions resulting from soot blowing operations shall be permitted provided such emissions do not exceed 60 percent opacity, and provided further that the aggregate duration of such emissions during any twenty-four hour period does not exceed ten minutes per billion BTU gross heating value of fuel in any one hour. [11 Miss. Admin. Code Pt. 2, Ch. 1. 3.1.]</p>
L-5	Sulfur oxides	<p>Sulfur oxides:</p> <p>The maximum discharge of sulfur oxides from any fuel burning installation in which the fuel is burned primarily to produce heat or power by indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per million BTU heat input. [11 Miss. Admin. Code Pt. 2, Ch. 1. 4.1(a).]</p>
L-6	Control system	<p>Control system:</p> <p>The facility shall not operate without the respective control equipment, including but not limited to:</p> <p>Boiler Baghouse (Ref. No. BH-1602), Green Biomass Baghouse (Ref. No. BH-110), Dry Biomass Storage Building Baghouse (Ref. No. BH-201), Limestone Storage Vent Filter (Ref. No. BH-1605), Limestone Slaker Storage Vent Filter, Ash Silo Bin Vent Filter (Ref. No. BH-1601), Boiler Scrubber (Ref. No. V-1603),</p> <p>(Federally enforceable operational limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(11).]</p>

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### AI0000052497 (continued):

#### Submittal/Action Requirements:

##### General Monitoring, Recordkeeping & Reporting Requirement:

Condition No.	Condition
S-1	<p>General Monitoring, Recordkeeping &amp; Reporting Requirement:</p> <p>Within 90-days of submitting certification of construction, the facility shall submit a summarized report of applicable New Source Performance Standards (NSPS) detailing the means in which compliance will be achieved. [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
S-2	<p>General Monitoring, Recordkeeping &amp; Reporting Requirement:</p> <p>Upon submittal of the facility's initial summarized report of applicable New Source Performance Standards (NSPS) detailing the means in which compliance will be achieved, the facility shall, thereafter, submit this report on a semiannual basis, due January 31 and July 31. [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
Condition No.	Condition
S-3	<p>General Condition: The permittee shall submit certification of construction: Due within thirty (30) days of completion of construction or installation of an approved stationary source or prior to startup, whichever is earlier. The notification shall certify that construction or installation was performed in accordance with the approved plans and specifications. In the event there is any change in construction from the previously approved plans and specifications or permit, the permittee shall promptly notify MDEQ in writing. If MDEQ determines the changes are substantial, MDEQ may require the submission of a new application to construct with "as built" plans and specifications. Notwithstanding any provision herein to the contrary, the acceptance of an "as built" application shall not constitute a waiver of the right to seek compliance penalties pursuant to State Law. [11 Miss. Admin. Code Pt. 2, R. 2.5.D.]</p>
S-4	<p>Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun. [11 Miss. Admin.Code Pt. 2, R.2.5.C(2).]</p>
S-5	<p>The permittee must notify DEQ in writing when construction does not begin within eighteen (18) months of issuance or if construction is suspended for eighteen (18) months or more. [11 Miss. Admin.Code Pt. 2, R.2.5.C(4).]</p>



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### AI0000052497 (continued):

#### Narrative Requirements:

##### Operating plan:

Condition No.	Condition
T-1	<p>Operating plan:</p> <p>The permittee shall install, operate, and maintain pressure drop indicators on each baghouse. The permittee shall record the pressure drop daily and make the information available to MDEQ personnel upon request. Operational ranges for the pressure drop shall be established to provide a reasonable assurance of compliance. These operational ranges for each control device should be derived from any of the following or a combination of the following to demonstrate the proper operation of the equipment: stack test data, vendor certification, operational history, and visual inspections. [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(12).]</p>

##### General Condition:

Condition No.	Condition
T-2	<p>General Condition: The stationary source shall be designed and constructed so as to operate without causing a violation of any Applicable Rules and Regulations or this permit, without interfering with the attainment and maintenance of State and National Ambient Air Quality Standards, and such that the emission of air toxics does not result in an ambient concentration sufficient to adversely affect human health and well-being or unreasonably and adversely affect plant or animal life beyond the stationary source boundaries. [11 Miss. Admin.Code Pt. 2, R.2.5.A.]</p>
T-3	<p>General Condition: Any activities not identified in the application are not authorized by this permit. [Miss. Code Ann. 49_17_29 1.b]</p>
T-4	<p>General Condition: The necessary facilities shall be constructed so that solids removed in the course of control of air emissions may be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering State waters without the proper environmental permits. [Miss. Code Ann. 49_17_29]</p>
T-5	<p>General Condition: The air pollution control facilities shall be constructed such that diversion from or bypass of collection and control facilities is not needed except as provided for in Regulation 11 Miss. Admin. Code Pt.2, R. 1.10 "Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants", Section 10. [11 Miss. Admin. Code Pt. 2, R. 1.10]</p>

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### AI0000052497 (continued):

#### Narrative Requirements:

##### General Condition:

Condition No.	Condition
T-6	General Condition: The permittee shall allow the Mississippi Environmental Quality Commission, the Mississippi Environmental Quality Permit Board, MDEQ staff and/or their authorized representatives, upon the presentation of credentials: a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit; and b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring equipment or monitoring method required in this permit, and to sample any air emission. [Miss. Code Ann. 49_17_21]
T-7	General Condition: After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for good cause shown including, but not limited to, the following: a. Persistent violation of any terms or conditions of this permit; b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or c. A change in any condition that requires either a temporary or permanent reduction or elimination of previously authorized air emissions. [11 Miss. Admin.Code Pt. 2, R.2.2.C.]
T-8	General Condition: Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Environmental Quality Office of Pollution Control. [Miss. Code Ann. 49_17_39]

##### General Monitoring, Recordkeeping & Reporting Requirement:

Condition No.	Condition
T-9	General Monitoring, Recordkeeping & Reporting Requirement:  This facility is subject to 40 CFR Part 60 Subpart A - General Provisions, and must comply with all applicable conditions and standards listed therein. See the Appendix of this permit for Subpart A. [40 CFR 60]
T-10	General Monitoring, Recordkeeping & Reporting Requirement:  This facility is subject to and must comply with 40 CFR Part 60 Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, and must comply with all applicable conditions and standards listed therein. See the Appendix of this permit for Subpart VVa. [40 CFR 60]

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### AI0000052497 (continued):

#### Narrative Requirements:

Condition No.	Condition
T-11	General Condition: This permit is for air pollution control purposes only. [11 Miss. Admin.Code Pt. 2, R.2.1.D.]
T-12	General Condition: The knowing submittal of a permit application with false information may serve as the basis for the Permit Board to void the permit issued pursuant thereto or subject the applicant to penalties for operating without a valid permit pursuant to State Law. [11 Miss. Admin.Code Pt. 2, R.2.2.B(5).]
T-13	General Condition: It is the responsibility of the applicant/permittee to obtain all other approvals, permits, clearances, easements, agreements, etc., which may be required including, but not limited to, all required local government zoning approvals or permits. [11 Miss. Admin.Code Pt. 2, R.2.1.D(6).]
T-14	General Condition: The issuance of a permit does not release the permittee from liability for constructing or operating air emissions equipment in violation of any applicable statute, rule, or regulation of state or federal environmental authorities. [11 Miss. Admin.Code Pt. 2, R.2.1.D(7).]
T-15	General Condition: It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit, unless halting or reducing activity would create an imminent and substantial endangerment threatening the public health and safety of the lives and property of the people of this state. [11 Miss. Admin.Code Pt. 2, R.2.2.B(15)(a).]
T-16	General Condition: The permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. Sufficient cause for a permit to be reopened shall exist when an air emissions stationary source becomes subject to Title V. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [11 Miss. Admin.Code Pt. 2, R.2.2.B(15)(b).]
T-17	General Condition: The permit does not convey any property rights of any sort, or any exclusive privilege. [11 Miss. Admin.Code Pt. 2, R.2.2.B(15)(c).]
T-18	General Condition: The permittee shall furnish to the DEQ within a reasonable time any information the DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee shall furnish such records to the DEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality. [11 Miss. Admin.Code Pt. 2, R.2.2.B(15)(d).]
T-19	General Condition: This permit shall not be transferred except upon approval of the Permit Board. [11 Miss. Admin.Code Pt. 2, R.2.16.B.]

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### AI0000052497 (continued):

#### Narrative Requirements:

Condition No.	Condition
T-20	General Condition: The provisions of this permit are severable. If any provision of the permit, or the application of any provision of the permit to any circumstances, is challenged or held invalid, the validity of the remaining permit provisions and/or portions thereof or their application to other persons or sets of circumstances, shall not be affected thereby. [11 Miss. Admin.Code Pt. 2, R.1.1.D(7).]
T-21	General Condition: The permit to construct will expire if construction does not begin within eighteen (18) months from the date of issuance or if construction is suspended for eighteen (18) months or more. [11 Miss. Admin.Code Pt. 2, R.2.5.C(1).]
T-22	General Condition: A new stationary source issued a Permit to Construct cannot begin operation until certification of construction by the permittee. [11 Miss. Admin.Code Pt. 2, R.2.5.D(3).]
T-23	General Condition: Except as prohibited in 11 Miss. Admin. Code Pt. 2,R. 2.5.D(7) after certification of construction by the permittee, the Permit to Construct shall be deemed to satisfy the requirement for a permit to operate until the date the application for issuance or modification of the Title V Permit or the application for issuance or modification of the State Permit to Operate, whichever is applicable, is due. This provision is not applicable to a source excluded from the requirement for a permit to operate as provided by APC-S-2, Section XIII.G. [11 Miss. Admin. Code Pt. 2, R. 2.5.D(4).]
T-24	General Condition: Except as otherwise specified in 11 Miss. Admin. Code Pt. 2, R. 2.5.D(7), the application for issuance or modification of the State Permit to Operate or the Title V Permit, whichever is applicable, is due twelve (12) months after beginning operation or such earlier date or time as specified in the Permit to Construct. The Permit Board may specify an earlier date or time for submittal of the application. Beginning operation will be assumed to occur upon certification of construction, unless the permittee specifies differently in writing. [11 Miss. Admin. Code Pt. 2, R. 2.5.D(5).]
T-25	General Condition: Except as otherwise specified in 11 Miss. Admin. Code Pt. 2, R. 2.5.D(7), upon submittal of a timely and complete application for issuance or modification of a State Permit to Operate or a Title V Permit, whichever is applicable, the applicant may continue to operate under the terms and conditions of the Permit to Construct and in compliance with the submitted application until the Permit Board issues, modifies, or denies the Permit to Operate. [11 Miss. Admin. Code Pt. 2, R. 2.5.D(6).]
T-26	General Condition: For moderate modifications that require contemporaneous enforceable emissions reductions from more than one emission point in order to net out of PSD/NSR, the applicable Title V Permit to Operate or State Permit to Operate must be modified prior to beginning operation of the modified facilities. [11 Miss. Admin.Code Pt. 2, R.2.5.D(7).]

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### AI0000052497 (continued):

#### Narrative Requirements:

Condition No.	Condition
T-27	<p>General Condition: Regarding compliance testing:</p> <p>(a) The results of any emissions sampling and analysis shall be expressed both in units consistent with the standards set forth in any Applicable Rules and Regulations or this permit and in units of mass per time.</p> <p>(b) Compliance testing will be performed at the expense of the permittee.</p> <p>(c) Each emission sampling and analysis report shall include but not be limited to the following:</p> <ol style="list-style-type: none"><li>1. detailed description of testing procedures;</li><li>2. sample calculation(s);</li><li>3. results; and</li><li>4. comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit. [11 Miss. Admin.Code Pt. 2, R.2.6.B(3),(4)&amp;(6).]</li></ol>
T-28	<p>General Condition: The construction of the stationary source shall be performed in such a manner so as to reduce fugitive dust emissions from construction activities to a minimum. [11 Miss. Admin.Code Pt. 2, R.2.5.A(4).]</p>

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**EQPT0000000005 (AA-010) 435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004):**

### Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Carbon Monoxide	<p>Carbon Monoxide:</p> <p>The permittee shall limit total Carbon Monoxide (CO) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 52.7 pounds/hour (lb/hr) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-2	Carbon Monoxide	<p>Carbon Monoxide:</p> <p>The permittee shall limit total Carbon Monoxide (CO) emissions from Emission Point AA-010 [435 MBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 208.5 tons per year (tpy) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-3	Hydrochloric acid (HCl)	<p>Hydrochloric acid (HCl):</p> <p>The permittee shall limit Hyrdochloric Acid (HCl) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 2.26 pounds/hour (lb/hr) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-4	Hydrochloric acid (HCl)	<p>Hydrochloric acid (HCl):</p> <p>The permittee shall limit Hyrdochloric Acid (HCl) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 8.94 tons per year (tpy) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>

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**EQPT0000000005 (continued):**

### Limitation Requirements:

Condition No.	Parameter	Condition
L-5	Methanol	<p>Methanol:</p> <p>The permittee shall limit Methanol emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 2.4 pounds/hour (lb/hr) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-6	Methanol	<p>Methanol:</p> <p>The permittee shall limit Methanol emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 9.4 tons per year (tpy) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-7	Nitrogen oxides	<p>Nitrogen oxides:</p> <p>The permittee shall limit total Nitrogen Oxides (NOx) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 57.9 pounds/hour (lb/hr) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-8	Nitrogen oxides	<p>Nitrogen oxides:</p> <p>The permittee shall limit total Nitrogen Oxides (NOx) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 228.7 tons per year (tpy) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [APC-S-2]</p>

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**EQPT0000000005 (continued):**

### Limitation Requirements:

Condition No.	Parameter	Condition
L-9	Particulate Matter (10 microns or less)	<p>Particulate Matter (10 microns or less):</p> <p>The permittee shall limit total Particulate Matter of 10 microns or less (PM10) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 25.1 pounds/hour (lb/hr) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-10	Particulate Matter (10 microns or less)	<p>Particulate Matter (10 microns or less):</p> <p>The permittee shall limit total Particulate Matter of 10 microns or less (PM10) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 99.2 tons per year (tpy) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-11	Sulfur Dioxide	<p>Sulfur Dioxide:</p> <p>The permittee shall limit total Sulfur Dioxide (SO2) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 60.9 pounds/hour (lb/hr) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-12	Sulfur Dioxide	<p>Sulfur Dioxide:</p> <p>The permittee shall limit total Sulfur Dioxide (SO2) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 240.7 tons per year (tpy) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>



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**EQPT0000000005 (continued):**

### Limitation Requirements:

Condition No.	Parameter	Condition
L-13	VOC	<p>VOC:</p> <p>The permittee shall limit total Volatile Organic Compound (VOC) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 43.6 pounds/hour (lb/hr) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-14	VOC	<p>VOC:</p> <p>The permittee shall limit total Volatile Organic Compound (VOC) emissions from Emission Point AA-010 [435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)] to no more than 172.3 tons per year (tpy) as determined for each consecutive 12-month period (Federally enforceable permit limit issued herein). [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>
L-15		<p>For Emission Point AA-010, the permittee shall comply with one of the following operating limits:</p> <p>a) Maintain opacity to less than or equal to 10 percent opacity (daily block average); OR</p> <p>b) Install and operate a bag leak detection system according to 40 CFR 63.11224 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during each 6-month period. [40 CFR 63.11201(c)]</p>
L-16		<p>For Emission Point AA-010, the permittee shall conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in 40 CFR 63.11223(b)(1) through (7). Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. The permittee shall demonstrate initial compliance by the dates specified in 40 CFR Part 63.11210. [40 CFR 63.11223]</p>

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### EQPT0000000005 (continued):

#### Monitoring Requirements:

Condition No.	Parameter	Condition
M-1	Performance Test Data	<p>Performance Test Data:</p> <p>Within 180 days of startup operations, the permittee shall perform an initial performance test to demonstrate compliance with emission limitations by stack testing Emission Point AA-010 (435 MMBTUH Bubbling Fluidized Bed Boiler (The boiler controls emissions from the beer well scrubber and yeast system; the boiler exhaust vents through the dryer, AA-004)) for particulate matter of 10-microns or less (PM10), volatile organic compounds (VOC), carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO2), methanol, and hydrochloric acid (HCl) emissions.</p> <p>Stack testing shall be performed during periods when the relevant process area is being operated at or near the capacity provided in the permit application. Stack testing shall be performed once every two years. Stack testing shall be performed using EPA Method 18, 25, 25A, and/or other EPA approved equivalent method, and shall satisfy all compliance testing requirements of APC-S-2, Section VI. [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(11).]</p>
M-2	Fuel Combusted	<p>Fuel Combusted:</p> <p>The permittee shall maintain monthly records containing the following information for determining compliance with the requirements of 40 CFR 60, Subpart Db:</p> <p>(1) For wood-based fuels and natural gas:</p> <p>(i) The name of the supplier of the fuel;</p> <p>(ii) The potential sulfur emissions rate of the fuel in ng/J heat input; and</p> <p>(iii) The method used to determine the potential sulfur emissions rate of the fuel.</p> <p>(2) For all fuels, the permittee shall record and maintain records of the amount of each fuel combusted during each calendar month. [40 CFR 60_SUBPART Db]</p>

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### EQPT0000000005 (continued):

#### Submittal/Action Requirements:

##### Performance Test Data:

Condition No.	Condition
S-1	<p>Performance Test Data:</p> <p>The permittee shall submit a stack test report for each required stack test (Particulate Matter of 10-microns or less, Carbon Monoxide, Nitrogen Oxides, Volatile Organic Compounds, Sulfur Dioxide, Methanol, and Hydrochloric Acid) within 30 days of completing the test. As part of the test report, the permittee shall provide the average operating rate during testing of the process associated with the units being tested.</p> <p>For all required testing, the permittee shall submit a written test protocol at least thirty (30) days prior to the intended test date(s) to ensure that all test methods and procedures are acceptable to the MDEQ. Also, the permittee shall notify the MDEQ in writing at least ten (10) days prior to the intended test date(s) so that an observer may be afforded the opportunity to witness the test.</p> <p>After the first successful submittal of an initial written test protocol, the permittee may request that the submittal of a testing protocol be waived for subsequent testing by certifying in writing at least thirty (30) days prior to subsequent testing that all conditions for testing remain unchanged such that the original protocol can and will be followed. [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>

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### EQPT0000000005 (continued):

#### Submittal/Action Requirements:

##### General Monitoring, Recordkeeping & Reporting Requirement:

Condition No.	Condition
S-2	<p>General Monitoring, Recordkeeping &amp; Reporting Requirement:</p> <p>The permittee shall submit annual reports containing the following information for determining compliance with the requirements of 40 CFR 60, Subpart Db:</p> <p>(1) For wood-based fuels and natural gas:</p> <p>(iii) The name of the supplier of the fuel;</p> <p>(iv) The potential sulfur emissions rate of the fuel in ng/J heat input; and</p> <p>(iii) The method used to determine the potential sulfur emissions rate of the fuel.</p> <p>(2) For all fuels, the permittee shall record and maintain records of the amount of each fuel combusted during each calendar month. [40 CFR 60_SUBPART Db]</p>
Condition No.	Condition
S-3	<p>The permittee shall submit the following notification as required by 40 CFR 60 Subpart Db no later than 30 days from commencement:</p> <p>(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.</p> <p>(2) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired. [40 CFR 60_SUBPART Db]</p>
S-4	<p>For Emission Point AA-010, the permittee shall submit the Initial Notification as specified in 40 CFR 63.9(b)(2), no later than 120 days after the source becomes subject to 40 CFR Part 60 Subpart JJJJJ. [40 CFR 63.11225(a)(2)]</p>

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### EQPT0000000005 (continued):

#### Narrative Requirements:

Condition No.	Condition
T-1	For Emission Point AA-010, the permittee is subject to and shall comply with all applicable requirements of 40 CFR Part 63 Subpart JJJJJ - National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, and 40 CFR Part 63, Subpart A - General Provisions. [40 CFR 63.11193]
T-2	For Emission Point AA-010, the permittee is subject to and shall comply with all applicable requirements of 40 CFR Part 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, and 40 CFR Part 60 Subpart A - General Provisions. [40 CFR 60.40b]

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### EQPT0000000007 (AA-012) 500-HP Diesel Fire Pump:

#### Narrative Requirements:

##### Operating plan:

Condition No.	Condition
T-1	<p>Operating plan:</p> <p>For Emission Point AA-012, the permittee is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ). Emission Point AA-012 meet the definition of a new affected source at an area source under NESHAP Subpart ZZZZ and must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII for compression ignition engines. No further requirements apply for such engines under NESHAP Subpart ZZZZ. [40 CFR 63.6590(c)]</p> <p>For Emission Point AA-012, the permittee is subject to and shall comply with the applicable requirements of the New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines (CI ICE) (40 CFR Part 60, Subpart IIII) and shall comply with the General Provisions (40 CFR Part 60, Subpart A) as required in Table 8 to NSPS Subpart IIII. [40 CFR 60.4200(a)(2)i]</p> <p>For Emission Point AA-012, beginning October 1, 2007, the permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(a). [40 CFR 60.4207(a)]</p> <p>For Emission Point AA-012, beginning October 1, 2010, the permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [40 CFR 60.4207(a)]</p> <p>The permittee must operate and maintain the engine according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer, over the entire life of the engine. In addition, the permittee may only change those settings that are permitted by the manufacturer. [40 CFR 60.4206, 40 CFR 60.4211(a)]</p> <p>Emission Point AA-012 may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(e)]</p> <p>For Emission Point AA-012, the permittee shall install a non-resettable hour meter. [40 CFR 60.4209(a)]. [40 CFR 60_Subpart IIII]</p>

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### CONT0000000001 (AA-027) Product Storage Vapor Combustion Unit (Ref. No. TO-1402):

#### Narrative Requirements:

##### Operating plan:

Condition No.	Condition
T-1	<p>Operating plan:</p> <p>The Permittee shall use the flare to control the emissions from the ethanol loading rack</p> <p>a) The flare shall be designed as a smokeless flare.</p> <p>b) The VOC emissions from the ethanol loading rack shall be collected and controlled by enclosed flare</p> <p>c) The enclosed flare shall be in operation and control emissions from the ethanol loading rack at all times when this unit is in operation.</p> <p>d) The Permittee shall monitor the presence of a flare pilot flame for flare using a thermocouple or any other equivalent device to detect the presence of a flame when the ethanol loading rack is in operation.</p> <p>e) The Permittee shall maintain monthly records of the total amount of denatured ethanol loaded out from loading rack.</p> <p>f) The Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading rack is in operation.</p> <p>. [11 Miss. Admin. Code Pt. 2, Ch. 2. II.B(10).]</p>

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### **GRPT0000000001 (AA-000) Storage Tanks (NSPS Kb applicable):**

#### Narrative Requirements:

##### **General Monitoring, Recordkeeping & Reporting Requirement:**

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Condition

No. Condition

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T-1 General Monitoring, Recordkeeping & Reporting Requirement:

Emission Group AA-000 (Storage Tanks (NSPS Kb applicable)) must comply with all applicable requirements of 40 CFR Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels, located in the Appendix of this permit. [40 CFR 60\_SUBPART Kb]



## GENERAL INFORMATION

BlueFire Fulton Renewable Energy LLC  
South Industrial Access Road and Spring Road  
Fulton, MS  
Itawamba County

### Alternate/Historic Identifiers

ID	Alternate/Historic Name	User Group	Start Date	End Date
52497	BlueFire Fulton Renewable Energy, LLC	Official Site Name	2/5/2010	
SAM200901686JMT	Itawamba County Board of Supervisors, BlueFire Ethanol Biorefinery	COE Public Notice/ Permit Number	1/25/2010	2/25/2010
WQC2010005	Itawamba County Board of Supervisors, BlueFire Ethanol Biorefinery	WQC Number	7/30/2010	
MSR105785	Itawamba County Board of Supervisors, BlueFire Fulton Renewable Energy LLC	GP-Construction	11/9/2010	6/2/2014
MSR001945	Itawamba County Board of Supervisors, BlueFire Fulton Renewable Energy LLC	GP-Baseline	11/9/2010	9/28/2015
MSP092261	BlueFire Fulton Renewable Energy LLC	Water - Pretreatment	11/9/2010	10/31/2015
124000036	BlueFire Fulton Renewable Energy LLC	Air-Construction	11/9/2010	
2805700036	BlueFire Fulton Renewable Energy, LLC	Air-AIRS AFS	2/5/2010	
MSR105785	BlueFire Fulton Renewable Energy LLC	GP-Construction	6/2/2014	12/31/2015

**Basin:** Tombigbee River Basin

### Location Description: