

**INFORMATION RELATIVE TO
THE DRAFT TITLE V OPERATING PERMIT
October 27, 2016**

FOR:

**Mississippi Power Company
Watson Electrical Generating Facility
10406 Lorraine Road
Gulfport, MS 39503 (Harrison Co.)**

FACILITY DESCRIPTION

The Mississippi Power Company – Watson Electric Generating Facility is an electrical power generating plant whose operations fall within the SIC Code 4911. The facility is applying for renewal of the current Title V Operating Permit, which may incorporate minor modifications to enhance or clarify monitoring, recordkeeping, and reporting requirements. The facility has converted the boilers and turbine exclusively to combusting natural gas fuel only and no longer has the capability to burn coal. The site consists of the following significant emission units:

Emission Point	Description
AA-003	1,119.2 MMBtu/hr Natural Gas-Fired Combustion Engineering Utility Boiler (Ref.: Unit 3)
AA-004	2,760 MMBtu/hr Natural Gas-Fired Riley Stoker Corporation Utility Boiler, which is equipped with an internal fuel staged low NO _x burners and an over-fire air delivery system (Ref.: Unit 4)
AA-005	5,544 MMBtu/hr Natural Gas-Fired Foster Wheeler Reheat Utility Boiler, which is equipped with an internal fuel staged low NO _x burners and an over-fire air delivery system (Ref.: Unit 5)
AA-099	632.7 MMBtu/hr Natural Gas-Fired Pratt and Whitney Combustion Turbine - Model # FT419DF, which was constructed prior to October 3, 1977, with no modifications or reconstruction since that date (Ref.: Combustion Turbine A)
AA-008	2,000 gallon Waste Oil Storage Tank (Ref. No.: WEGP01)
AA-009	4,500 gallon No. 1 and No. 2 Oil Storage Tanks (Ref. No.: WEGP02)
AA-012	8,000 gallon Unit 4 Turbine Oil Storage Tank (Ref. No.: WEGP05)
AA-018	10,000 gallon Truck Shed #2 Fuel Oil Storage Tank (Ref. No.: WEGP10)
AA-020	2,800 gallon Unit 1 Main Turbine Oil Tank (Ref. No.: WEGP12)
AA-021	2,800 gallon Unit 2 Main Turbine Oil Tank (Ref. No.: WEGP13)
AA-022	3,590 gallon Unit 3 Main Turbine Oil Tank (Ref. No.: WEGP14)
AA-023	6,050 gallon Unit 4 Main Turbine Oil Tank (Ref. No.: WEGP15)

Emission Point	Description
AA-024	1,253 gallon Unit 4 Bowser (Turbine Oil) Storage Tank (Ref. No.: WEGP16)
AA-026	7,450 gallon Unit 5 Main Turbine Oil Tank (Ref. No.: WEGP18)
AA-027	1,020 gallon Unit 5-A BFP Oil Reservoir (Ref. No.: WEGP19)
AA-028	1,020 gallon Unit 5-B BFP Oil Reservoir (Ref. No.: WEGP20)
AA-033	116kW (156 HP) Emergency Unit 1 and Unit 2 <i>Diesel-Fired</i> Compression Ignition (CI), 4-Stroke Generator with < 10 liters displacement per cylinder, which was manufactured before April 1, 2006, and commenced construction prior to July 11, 2005 (Ref No.: RC01)
AA-034	172 kW (231 HP) Emergency <i>Diesel-Fired</i> CI, 4-Stroke Generator Fire Pump with < 10 liters displacement per cylinder, which was manufactured before April 1, 2006, and commenced construction prior to July 11, 2005 (Ref No.:RC02)
AA-035	153.6 kW (206 HP) Emergency Telephone System <i>Propane-Fired</i> Spark Ignition (SI), 4-Stroke Generator with < 10 liters displacement per cylinder, which was manufactured and commenced construction (date ordered) before June 12, 2006 (Ref No.:RC03)
AA-036	510.8 kW (685 HP) Emergency Combustion Turbine Black Start Up <i>Diesel-Fired</i> CI, 4-Stroke Generator with < 10 liters displacement per cylinder, which was manufactured and commenced construction after June 12, 2006 (Ref No.:RC04)
AA-037	300 kW (448 HP) Emergency Unit 3 and Unit 4 Black Start Up <i>Diesel-Fired</i> CI, 4-Stroke Generator with < 10 liters displacement per cylinder, which was manufactured and commenced construction after June 12, 2006 (Ref No.:RC05)
AA-038	300 kW (448 HP) Emergency Unit 5 Black Start Up <i>Diesel-Fired</i> CI, 4-Stroke Generator with < 10 liters displacement per cylinder, which was manufactured and commenced construction after June 12, 2006 (Ref No.:RC06)
AA-039	3,000 gallon Unleaded Gasoline Tank (Ref No.: WEGP21)
AA-040	6,500 gallon Unit 3 Turbine Oil Storage Tank (Ref No.:WEGP22)

This facility was constructed prior to promulgation of the PSD regulations. Since emissions exceed the PSD threshold (250 tons per year), the facility is classified as an existing major PSD source. Therefore, any modifications as defined by the PSD regulations require a PSD review. The Title V Operating Permit renewal does not include any modifications that result in an increase in emissions and would not require a PSD review or any other permit modification.

Due to converting from the combustion of coal to only natural gas for the boilers and turbine, several pieces of equipment have been removed, which includes:

- the coal-fired boiler (AA-001 and AA-002);
- the coal storage piles and transfer systems (AA-006 and AA-007);
- the precipitator dust collectors (AA-029, AA-030, and AA-031); and

- the ash silo dust collector (AA-032).

TITLE V PROGRAM APPLICABILITY BASIS

The facility's potential-to-emit exceeds the Title V threshold limits of 100 tons/year of each of the following criteria air pollutants: Nitrogen Oxides (NOX), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), Particulate Matter (PM), 10 microns or less, and/or Volatile Organic Compounds (VOC). The facility is now an area source for Hazardous Air Pollutants (HAPs) with a potential to emit less than 25 TPY of Total HAPs and/or 10 TPY of a single HAP.

The site was previously a major source for HAPs (Non-VOC); however, since this site no longer combusts coal (fuel conversion project) and no longer has the equipment in use to combust, store, or transfer coal, this site potential to emit (PTE) is now reflective of an area source for HAPs. However, the processes and equipment previously subject to specific major HAP source NESHAPs after the compliance date of the standard will continue to be subject to those standards due to the EPA "Once In, Always In" policy.

GREENHOUSE GAS (GHG) REQUIREMENTS

In light of the U.S. Supreme Court decision (i.e., *Utility Air Regulatory Group v. Environmental Protection Agency*, June 23, 2014), MDEQ is following EPA's guidance memo entitled "*Next Steps and Preliminary Views on the Application of Clean Air Act Permitting Programs to Greenhouse Gases...*", dated July 24, 2014. Therefore, GHGs will only be regulated as a part of the NSR/PSD process for new or modified sources that will be major or significant for an NSR regulated pollutant, other than GHGs. This is a renewal permit with no significant revisions that would impact GHGs; therefore, this renewal does not include the addition or removal of any GHG requirements.

LEGAL AND FACTUAL BASIS FOR DRAFT PERMIT CONDITIONS

The State and Federally-enforceable conditions of Title V Operating Permits are based upon the requirements of the State of Mississippi Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act (11 Miss. Admin. Code Pt. 2, Ch. 6.), and applicable requirements effective upon the date of permit issuance. Applicable requirement means all of the following as they apply to emissions units in a Title V source:

1. any standard or other requirement set forth in the State Implementation Plan (SIP) approved or promulgated by EPA through rulemaking under Title I of the Federal Clean Air Act (Federal Act) including the following:
 - a. most of the State of Mississippi Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants (11 Miss. Admin. Code Pt. 2, Ch. 1.)
 - b. the State of Mississippi Regulations for the Prevention of Air Pollution Emergency Episodes (11 Miss. Admin. Code Pt. 2, Ch. 3.),

- c. the State of Mississippi Regulations for the Prevention of Significant Deterioration of Air Quality (11 Miss. Admin. Code Pt. 2, Ch. 5.), and 40 CFR Part 52.21 by reference, and
 - d. the provisions of the State of Mississippi Permit Regulations for the Construction and/or Operation of Air Emissions Equipment (11 Miss. Admin. Code Pt. 2, Ch. 2.), relating to construction permits and synthetic minor operating permits;
2. any term or condition of any construction permits issued pursuant to Mississippi regulations approved or promulgated through rulemaking under Title I;
 3. any standard or other requirement under Section 111 of the Federal Act, including Section 111(d) which includes Title 40, Part 60 of the Code of Federal Regulations (40 CFR Part 60) and relevant sections of 11 Miss. Admin. Code Pt. 2, Ch. 1.;
 4. any standard or other requirement under Section 112 of the Federal Act, including relevant sections of 11 Miss. Admin. Code Pt. 2, Ch. 1. and 40 CFR Parts 61, 63, and 68;
 5. any standard or other requirement of the acid rain program under Title IV of the Federal Act or the regulations promulgated thereunder, including the State of Mississippi Acid Rain Program Permit Regulations for Purposes of Title IV of the Federal Clean Air Act (11 Miss. Admin. Code Pt. 2, Ch. 7.) adopted November 17, 1994, and 40 CFR Parts 72, 73, 75, 77, and 78;
 6. any requirements established pursuant to Section 504(b) or Section 114(a)(3) of the Federal Act;
 7. any standard or other requirement governing solid waste incineration under Section 129 of the Federal Act;
 8. any standard or other requirement for consumer and commercial products under Section 183(e) of the Federal Act;
 9. any standard or other requirement for tank vessels under Section 183(f) of the Federal Act;
 10. any standard or other requirement of the program to control air pollution from outer continental shelf sources under Section 328 of the Federal Act;
 11. any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Federal Act;
 12. any national ambient air quality standard or increment or visibility requirement under part C of Title I of the Federal Act.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 11 Miss. Admin. Code Pt. 2, Ch. 6. or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

CAM APPLICABILITY

Compliance Assurance Monitoring (CAM) formally applied to Emission Points AA-004 and AA-005, when the units combusted coal and used an ESP to control emissions. These units currently only combust natural gas. Therefore, these units along with the other emission points do not use control equipment to comply with an emission limit or standard, and CAM does not apply.

NSPS APPLICABILITY

Emission Points AA-036, AA-037, and AA-038 are subject to 40 CFR 60, Subpart IIII – New Source Performance Standards (NSPS) for Compression Ignition (CI) Internal Combustion Engines (ICE).

The permittee is not subject to the following subparts as follows:

- 40 CFR 60, Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators, since AA-003 through AA-005 did not commence construction or modification after August 17, 1971.
- 40 CFR 60, Subpart Da – Standards of Performance for Electric Utility Steam Generating Units, since AA-003 through AA-005 did not commence construction or modification after September 18, 1978.
- 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, since AA-003 through AA-005 did not commence construction or modification after June 19, 1984.
- 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, since AA-003 through AA-005 do not meet the size requirements and did not commence construction or modification after June 9, 1989.
- 40 CFR 60, Subpart GG – Standards of Performance for Stationary Gas Turbines, since AA-099 did not commence construction, modification, or reconstruction after October 3, 1977.
- 40 CFR 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines, since AA-099 did not commence construction, modification, or reconstruction after February 18, 2005.
- 40 CFR 60, Subpart TTTT – Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units, since AA-003 through AA-005 and AA-099 did not commence construction after January 8, 2014 or commence modification or reconstruction after June 18, 2014.

NESHAP APPLICABILITY

The permittee was previously a major source for HAP emissions (total HAPs > 25 tpy) when coal was combusted in the boilers. Coal is no longer combusted as fuel and two (2) boilers have been removed from the facility. On this basis, the facility emissions are now at the level of a minor (area) source for HAP emissions (total HAPs < 25 tpy). With that said processes and equipment previously subject to specific major HAP source NESHAPs after the compliance date of the standard will continue to be subject to those standards due to the EPA "Once In, Always In" policy.

Emission Points AA-033, AA-034, and AA-035 are subject to major HAP source requirements of 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE).

Emission Points AA-036, AA-037, and AA-038 are subject to major HAP source requirements of 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE). For purposes of this subpart, Emission Points AA-037 and AA-038 are considered new emergency stationary RICE with a site rating <500 HP located at a major HAP source, and per 63.6590(c)(6), the engines will meet the requirements of Subpart ZZZZ by complying with the requirements of 40 CFR 60, Subpart IIII – NSPS for Stationary CI ICE. Emission Point AA-036 is considered a new emergency stationary RICE with a site rating >500 HP located at a major HAP source and per 63.6590(b)(1)(i) the engine does not have to meet the requirements of Subpart ZZZZ. (Ref.: 40 CFR 63.6580, 63.6585(a) and (b), 63.6590(a)(2)(i) and (ii), (b)(1)(i), and (c)(6))

Emission Point AA-099 is subject to 40 CFR 63, Subpart YYYY – NESHAP for Stationary Combustion Turbines. This is an existing stationary combustion turbine, since it commenced construction or reconstruction on or before January 14, 2003. Although the combustion turbine is subject to Subpart YYYY, existing stationary combustion turbines in all subcategories do not have to meet the requirements of this subpart and of subpart A. In addition, no initial notification is necessary for any existing stationary combustion turbine. (Ref. §63.6090(b)(4))

The permittee is not subject to the following subparts as follows:

- 40 CFR 63, Subpart UUUUU – NESHAP for Coal- and Oil-Fired Electric Utility Steam Generating Units, AA-003 through AA-005 were considered existing coal/oil-fired units (commenced construction before May 3, 2011); however, the permittee converted to natural gas only prior to the compliance date of April 16, 2015. (Ref. §63.9980-9984)
- 40 CFR 63, Subpart DDDDD – NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, AA-003 through AA-005 were considered existing units (commenced construction before June 4, 2010). The permittee was a major HAP source prior to the compliance deadline (January 31, 2016). Since the boilers were located at a major HAP source on the compliance date for Subpart DDDDD, the boilers would be subject to the applicable requirements of the subpart. However, these boilers are now natural-gas fired electric utility steam generating units (EGU) as defined in Subpart UUUUU and per §63.7491(a) they are not subject to Subpart DDDDD.

ACID RAIN AND ASSOCIATED PROGRAMS

This facility is subject to Acid Rain Permitting Requirements. For Emission Points AA-003 through AA-005, the permittee is subject to and shall comply with all applicable requirements of the Acid Rain Program Regulations as specified in 40 CFR Parts 72-78. The Acid Rain permit is being reissued at the same time as the Title V Operating Permit and is incorporated in the Title V Operating Permit. Emission Point AA-99 is a simple cycle combustion turbine which commenced commercial operation before November 15, 1990; therefore, it is exempt from the Acid Rain Regulations.

Emission Points AA-003 through AA-005 and AA-099 are subject to the Cross-State Air Pollution Rule (CSAPR) as set forth in 40 CFR 97, the Transport Rule (TR) Monitoring Provisions. The TR subject units and the unit-specific monitoring provisions at this source are subject to the requirements for the TR NO_x Ozone Season Trading Program.

SPECIFIC APPLICABLE REQUIREMENTS

EMISSION LIMITS			
Emission Point No.	Pollutant	Draft Permit Emission Limits	Monitoring Requirements
AA-003	PM	$E = 0.8808 * I^{-0.1667}$, or 0.273 lb/MMBTU	Fuel monitoring
	SO ₂	4.8 lb/MMBTU	
AA-004	PM	$E = 0.8808 * I^{-0.1667}$, or 0.239 lb/MMBTU	Fuel monitoring and stack testing
	SO ₂	4.8 lb/MMBTU	
	CO	0.149 lb/MMBTU, not to exceed 1,648 tons/yr	
AA-005	PM	$E = 0.8808 * I^{-0.1667}$, or 0.212 lb/MMBTU	Fuel monitoring and stack testing
	SO ₂	4.8 lb/MMBTU	
	CO	0.149 lb/MMBTU, not to exceed 3,325 tons/yr	
AA-099	PM	$E = 0.8808 * I^{-0.1667}$, or 0.301 lb/MMBTU	Fuel monitoring and stack testing
	SO ₂	4.8 lb/MMBTU	
AA-003, AA-004, & AA-005	NO _x , CO ₂	CEMS per 40 CFR Part 75	NO _x and CO ₂ CEMS and fuel flow monitoring
	SO ₂	Fuel flow monitoring per App. D of Part 75 Phase II NO _x Averaging Plan	
	Heat Input	Phase II Acid Rain Permit	

EMISSION LIMITS			
Emission Point No.	Pollutant	Draft Permit Emission Limits	Monitoring Requirements
AA-003, AA-004, AA-005, & AA-099	NO _x	CSAPR Requirements	N/A
AA-099	HAPs	Although subject to 40 CFR 63, Subpart YYYY, existing units are exempt from the requirements of this standard and the General Provisions (40 CFR 63, Subpart A).	N/A
AA-033, AA-034, & AA-035	HAPs	40 CFR 63, Subpart ZZZZ, Operations & Maintenance (O&M) Requirements	O&M Recordkeeping Hour Meter and Hours of Operation
AA-036, AA-037, & AA-038	PM, NO _x , & NMHC	40 CFR 60, Subpart IIII, O&M Requirements	Obtain and maintain engine certification Diesel fuel specifications Hour Meter and Hours of Operation
Facility-Wide	SO ₂	1,988 tons/yr	Calculate SO ₂ emissions on a monthly and 12-month rolling basis.

OTHER LIMITS:

The permittee is subject to the SO₂ Data Requirements Rule (DRR) in 40 CFR 51, Subpart BB (§51.1203(e)), and the permittee has chosen to limit facility-wide SO₂ emissions below 1,988 tons per year. The SO₂ emissions must be calculated on a monthly basis, and added to the total emissions from the previous 11 months to determine an annual emissions total each month (i.e. a rolling 12-month total is calculated every month).