

# STATE OF MISSISSIPPI AIR POLLUTION CONTROL PERMIT

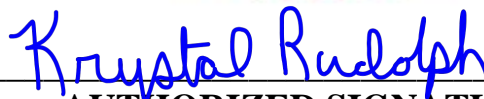
TO CONSTRUCT AIR EMISSIONS EQUIPMENT

## THIS CERTIFIES THAT

General Atomics EMS Systems, Iuka Facility  
751 County Road 989  
Iuka, Mississippi  
Tishomingo 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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AUTHORIZED SIGNATURE

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**

Issued: May 7, 2020

Permit No.: 2640-00066

**SECTION 1**

**A. GENERAL CONDITIONS**

1. This permit is for air pollution control purposes only.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D.)

2. Any activities not identified in the application are not authorized by this permit.

(Ref.: Miss. Code Ann. 49-17-29 1.b)

3. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(5).)

4. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D(6).)

5. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(7).)

6. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(a).)

7. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(b).)

8. The permit does not convey any property rights of any sort, or any exclusive privilege.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(c).)

9. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(d).)

10. Design and Construction Requirements: The stationary source shall be designed and constructed so as to operate without causing a violation of an Applicable Rules and Regulations, 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.A.)

11. Solids Removal: 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.

(Ref.: Miss. Code Ann. 49-17-29)

12. Diversion and Bypass of Air Pollution Controls: 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 11 Miss. Admin. Code Pt. 2, R. 1.10., "Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants."

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.10.)

13. Fugitive Dust Emissions from Construction Activities: 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.A(4).)

14. Right of Entry: The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their representatives upon 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 emissions.

(Ref.: Miss. Code Ann. 49-17-21)

15. Permit Modification or Revocation: After notice and opportunity for a hearing, the Permit Board may modify the permit or revoke it in whole or in part for good cause shown including, but not limited to:

- a) Persistent violation of any of the 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 federal, state, or local laws or regulations that require either a temporary or permanent reduction or elimination of previously authorized air emission.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.C.)

16. Public Record and Confidential Information: 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.

(Ref.: Miss. Code Ann. 49-17-39)

17. Permit Transfer: This permit shall not be transferred except upon approval of the Permit Board.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.16.B.)

18. Severability: 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D(7).)

19. Permit Expiration: 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(1).)

20. Certification of Construction: A new stationary source issued a Permit to Construct cannot begin operation until certification of construction by the permittee.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(3).)

21. Beginning Operation: Except as prohibited in Section 1, Condition 24 of this permit, 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 11 Miss. Admin. Code Pt. 2, R. 2.13.G.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(4).)

22. Application for a Permit to Operate: Except as otherwise specified in Section 1, Condition 24 of this permit, 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(5).)

23. Operating Under a Permit to Construct: Except as otherwise specified in Section 1, Condition 24 of this permit, 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(6).)

24. Application Requirements for a Permit to Operate for Moderate Modifications: 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(7).)

25. General Duty: All air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

26. Deviation Reporting: Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. Said report shall be made within five (5) working days of the time the deviation began.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

27. Compliance Testing: Regarding compliance testing:

- 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.
- b) Compliance testing will be performed at the expense of the permittee.
- c) Each emission sampling and analysis report shall include but not be limited to the following:
  - (1) detailed description of testing procedures;
  - (2) sample calculation(s);
  - (3) results; and
  - (4) comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.6.B(3), (4), and (6).)

**B. GENERAL NOTIFICATION REQUIREMENTS**

1. Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(2).)

2. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(3).)

3. Upon the completion of construction or installation of an approved stationary source or modification, and prior to commencing operation, the applicant shall notify the Permit Board that construction or installation was performed in accordance with the approved plans and specifications on file with the Permit Board.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(1) and (3).)

4. The Permit Board shall be promptly notified in writing of any change in construction from the previously approved plans and specifications or permit. If the Permit Board determines the changes are substantial, it 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(2).)

**SECTION 2  
EMISSION POINT DESCRIPTION**

The permittee is authorized to construct and operate, upon certification of construction, air emissions equipment, as described in the following table.

<b>Emission Point</b>	<b>Description</b>
AA-000	Facility-Wide Emissions
AA-001	Glass Bead Manufacturing (Raw Material handling, electric melting furnace and finishing operations) equipped with dust collectors
AA-002	Two (2) - 0.51 MMBtu/hr Natural Gas-Fired Burners for Furnace
AA-003	150 kW Diesel Fired Emergency Generator



**SECTION 3  
EMISSION LIMITATIONS AND STANDARDS**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
AA-000	11 Miss. Admin. Code Pt. 2, R. 1.3.A.	3.1	Opacity	≤ 40%
	11 Miss. Admin. Code Pt. 2, R. 1.3.B.	3.2		
	11 Miss. Admin. Code Pt. 2, R. 1.3.F(1).	3.3	PM <i>(filterable only)</i>	$E = 4.1*(p)^{0.67}$
AA-002	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.4	PM <i>(filterable only)</i>	0.6 lbs/MMBTU/hr
	11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).	3.5	SO <sub>2</sub>	4.8 lbs/MMBTU
AA-003	National Emission Standards of Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR Part 63, Subpart ZZZZ, 40 CFR 63.6580, 40 CFR 63.6585(a) & (c), 40 CFR 63.6590(a)(2)(iii) & (c)(1); Subpart ZZZZ	3.6	HAPs	Applicability
	40 CFR Part 60, Subpart III – Standards of Performance for Stationary Compression Ignition Combustion Engines 40 CFR 60.4200(a)(2)(i); Subpart III	3.7	NMHC + NO <sub>x</sub> , CO, and PM	Applicability
	40 CFR 60.4205(b) and 60.4206, Subpart III	3.8		
	40 CFR 60.4207(b), Subpart III and 40 CFR 80.510(b)	3.9	Fuel Restriction	Sulfur content ≤ 15 ppm and Cetane index of 40 or aromatic content of 35 volume percent
	40 CFR 60.4211(a)(1-3), (c) and (f)(1-3), Subpart III	3.10	Operating Limit	Emergency operation requirements

3.1 For Emission Point AA-000 (Facility-Wide), except as otherwise specified herein, the permittee shall not cause or allow the emission of smoke from a point source into the open air from any commercial process on-site, which exceeds forty percent (40%) opacity subject to the exceptions provided below:

- (a) Start-up operations may produce emissions, which exceed 40% opacity for up to fifteen (15) minutes per start-up in any one hour and not to exceed three (3) start-ups per stack in any twenty-four (24) hour period.
- (b) Emissions resulting from soot blowing (i.e. ash removal) operations shall be permitted provided such emissions do not exceed 60% opacity and provided further that the aggregate duration of such emissions during any twenty-four (24) hour period does not exceed ten (10) minutes per billion BTU gross heating value of fuel in any one (1) hour.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.A.)

- 3.2 For Emission Point AA-000 (Facility-Wide), unless otherwise specified herein, the permittee shall not discharge into the ambient (from any point source) any air contaminant of such opacity as to obscure an observer's view to a degree in excess of forty percent (40%) opacity. This shall not apply to vision obscuration caused by uncombined water droplets.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.B.)

- 3.3 For Emission Point AA-000 (Facility-Wide), 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 following relationship:

$$E = 4.1 p^{0.67}$$

Where E is the emission rate in pounds per hour and p is the process weight input rate in tons per hour.

Conveyor discharge of coarse solid matter may be allowed if no nuisance is created beyond the property boundary where the discharge occurs.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.F(1).)

- 3.4 For Emission Point AA-002, the maximum permissible emission of ash and/or particulate matter from fossil fuel burning installations of less than 10 million BTU per hour heat input shall not exceed 0.6 pounds per million BTU per hour heat input.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).)

- 3.5 For Emission Point AA-002, 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).)

- 3.6 For Emission Point AA-003, the permittee is subject to and shall comply with all applicable provisions of 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), as a new source located at an area source of HAP emissions. For Emission Point AA-003, the permittee shall meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply for the engine under Subpart ZZZZ.

(Ref.: 40 CFR Part 63.6580, 40 CFR 63.6585(a) & (c), 40.CFR 63.6590(a)(2)(iii) & (c)(1); Subpart ZZZZ)

- 3.7 For Emission Point AA-003, the permittee is subject to and shall comply with the applicable provisions of 40 CFR Part 60, Subpart IIII – New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines.

(Ref.: 40 CFR 60.4200(a)(2)(i), Subpart IIII)

- 3.8 For Emission Point AA-003, the permittee shall not discharge into the atmosphere any gases that contain Non-Methane Hydrocarbons + Nitrogen Oxides (NMHC + NOX) in excess of 4.0 grams per kilowatt-hour (g/kW-hr); Carbon Monoxide (CO) in excess of 3.5 g/kW-hr; and Particulate Matter (PM) in excess of 0.20 g/kW-hr. The permittee shall operate and maintain the emergency generator engine in such a manner to achieve these emission standards over the entire life of the engine.

(Ref.: 40 CFR 60.4205(b), and 40 CFR 60.4206; Subpart IIII)

- 3.9 For Emission Point AA-003, the permittee shall only use diesel fuel in each engine that has a maximum sulfur content of 15 parts per million (ppm) and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

(Ref.: 40 CFR 60.4207(b); Subpart IIII and 40 CFR 80.510(b))

- 3.10 For Emission Point AA-003, the permittee shall install, operate, and maintain the engine according to the manufacturer's emission related written instructions, may change only those emissions related settings that are permitted by the manufacturer, and the engines must be certified to meet the emissions limitations contained in Condition 3.8.

In order for the engine to be considered an emergency stationary RICE under 40 CFR 60 Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited. If the permittee does not operate the engine according to these requirements, the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII and must meet all requirements for non-emergency engines:

- (a) There is no time limit on the use of emergency stationary RICE in emergency situations.
- (b) The permittee may operate the emergency stationary RICE for maintenance checks and readiness testing for a maximum of 100 hours per calendar year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the MDEQ for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records that demonstrate there is a particular requirement under a previously listed authority that requires the engine to operate for more than 100 hours per calendar year.
- (c) The emergency engine may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing.

(Ref.: 40 CFR 60.4211(a)(1-3), (c), and (f)(1-3); Subpart IIII)

**SECTION 4  
WORK PRACTICES**

THIS SECTION WAS INTENTIONALLY LEFT BLANK SINCE NO WORK PRACTICE  
STANDARDS APPLY TO THIS PERMIT ACTION

### SECTION 5 MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Monitoring/Recordkeeping Requirement
AA-003	40 CFR 60.4211(c); Subpart III and 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.1	Operations	Monitoring and recordkeeping requirements
	40 CFR 60.4211(g)(2) and (3), Subpart III	5.2	Operations	Monitoring and recordkeeping requirements

5.1 For Emission Point AA-003, the permittee shall maintain documentation that identifies the emergency engine as certified for the applicable emission standards referenced in Condition 3.8. Additionally, the permittee shall maintain records that demonstrates each emergency engine was installed and configured to the manufacturer’s emission-related specifications.

(Ref.: 40 CFR 60.4211(c), Subpart III and 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

5.2 For Emission Point AA-003, if the permittee does not operate and maintain the engine according to the manufacturer’s emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance through the following actions:

- (a) Keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- (b) The permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within one (1) year of start-up, or within 1 year after an engine is no longer installed, configured, operated, and maintained in accordance with the manufacturer’s emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer.

The permittee shall adhere to the requirements specified in Condition 5.5(b) and conduct a subsequent performance test every 8,760 hours of operation or three (3) years (whichever comes first) thereafter to demonstrate compliance with the applicable emission standards.

(Ref.: 40 CFR 60.4211(g)(2) and (3); Subpart III)

### SECTION 6 REPORTING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Reporting Requirement
AA-000	11 Miss. Admin. Code Pt. 2, R. 2.5. D.	6.1	Submit certification of construction within 30 days of completion
	11 Miss. Admin. Code Pt. 2, R.2.5.C(2).	6.2	Submit notification within 15 days of beginning of construction
	11 Miss. Admin. Code Pt. 2, R.2.5.C(4).	6.3	Submit notification if construction does not begin within 18 months of permit issuance

6.1 The permittee shall submit certification of construction 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D.)

6.2 Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun.

(Ref.: 11 Miss. Admin. Code Pt. 2, R.2.5.C(2).)

6.3 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R.2.5.C(4).)