

**STATE OF MISSISSIPPI
AND FEDERALLY ENFORCEABLE
AIR POLLUTION CONTROL
PERMIT**


**TO OPERATE AIR EMISSIONS EQUIPMENT AT A
SYNTHETIC MINOR SOURCE**

THIS CERTIFIES THAT

PG Technologies, LLC
135 Technology Boulevard
Ellisville, Jones County, Mississippi

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with the Federal Clean Air Act and the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), the regulations and standards adopted and promulgated thereunder, and the State Implementation Plan for operating permits for synthetic minor sources.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD



AUTHORIZED SIGNATURE

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: December 29, 2021

Permit No.: 1360-00158

Effective Date: As specified herein.

Expires: November 30, 2026

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. This permit is a Federally-approved permit to operate a synthetic minor source as described in 11 Miss. Admin. Code Pt. 2, R. 2.4.D.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.4.D.)
3. Any activities not identified in the application are not authorized by this permit.

(Ref.: Miss. Code Ann. 49-17-29 1.b)
4. 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 constructing or operating without a valid permit.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(5).)
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 this 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 issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(c).)
8. The permittee shall allow the Mississippi Department of Environmental Quality (MDEQ) Office of Pollution Control and the Mississippi Environmental Quality Permit Board 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.

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

9. 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)

10. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this 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).)

11. This permit does not authorize a modification as defined in Mississippi Administrative Code, Title 11, Part 2, Chapter 2 – “Permit Regulations for the Construction and/or Operation of Air Emission Equipment”. A modification may require a Permit to Construct and a modification of this permit.

“Modification” is defined as [a]ny physical change in or change in the method of operation of a facility which increases the actual emissions or the potential uncontrolled emissions of any air pollutant subject to regulation under the Federal Act emitted into the atmosphere by that facility or which results in the emission of any air pollutant subject to regulation under the Federal Act into the atmosphere not previously emitted. A physical change or change in the method of operation shall not include:

- (a) Routine maintenance, repair, and replacement;
- (b) Use of an alternative fuel or raw material by reason of an order under Sections 2(a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
- (c) Use of an alternative fuel by reason of an order or rule under Section 125 of the Federal Act;
- (d) Use of an alternative fuel or raw material by a stationary source which:

- (1) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51 – Subpart I, or 40 CFR 51.166; or
- (2) The source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51 – Subpart I, or 40 CFR 51.166;
- (e) An increase in the hours of operation or in the production rate unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51 – Subpart I or 40 CFR 51.166; or
- (f) Any change in ownership of the stationary source.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.C(15).)

B. GENERAL OPERATIONAL CONDITIONS

- 1. Should the Executive Director of the Mississippi Department of Environmental Quality declare an Air Pollution Emergency Episode, the permittee will be required to operate in accordance with the permittee’s previously approved Emissions Reduction Schedule or, in the absence of an approved schedule, with the appropriate requirements specified in Mississippi Administrative Code, Title 11, Part 2, Chapter 3 – “Regulations for the Prevention of Air Pollution Emergency Episodes” – for the level of emergency declared.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.10.)

- 2. Any diversion from or bypass of collection and control facilities is prohibited, except as provided for in Mississippi Administrative Code, Title 11, Part 2, Chapter 1, Rule 1.10 – “Provisions for Upsets, Startups, and Shutdowns”.

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

- 3. Solids removed in the course of control of air emissions shall 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 1.a(i and ii).)

- 4. Except as otherwise specified herein, the permittee shall be subject to the following provisions with respect to upsets, start-ups, and shutdowns.

- (a) Upsets

- (1) For an upset defined in 11 Miss. Admin. Code Pt. 2, R. 1.2., the Commission may pursue an enforcement action for noncompliance with an emission standard or other requirement of an applicable rule, regulation, or permit. In determining whether to pursue enforcement action, and/or the appropriate enforcement action to take, the Commission may consider whether the source has demonstrated through properly signed contemporaneous operating logs or other relevant evidence the following:
 - (i) An upset occurred and that the source can identify the cause(s) of the upset;
 - (ii) The source was at the time being properly operated;
 - (iii) During the upset the source took all reasonable steps to minimize levels of emissions that exceeded the emission standard or other requirement of an applicable rule, regulation, or permit;
 - (iv) That within five (5) working days of the time the upset began, the source submitted a written report to the Department describing the upset, the steps taken to mitigate excess emissions or any other noncompliance, and the corrective actions taken and;
 - (v) That as soon as practicable but no later than twenty-four (24) hours of becoming aware of an upset that caused an immediate adverse impact to human health or the environment beyond the source boundary or caused a general nuisance to the public, the source provided notification to the Department.
 - (2) In any enforcement proceeding by the Commission, the source seeking to establish the occurrence of an upset has the burden of proof.
 - (3) This provision is in addition to any upset provision contained in any applicable requirement.
 - (4) These upset provisions apply only to enforcement actions by the Commission and are not intended to prohibit the EPA or third party enforcement actions.
- (b) Start-ups and Shutdowns (as defined by 11 Miss. Admin. Code Pt. 2, R. 1.2.)
- (1) Start-ups and shutdowns are part of normal source operation. Emission limitations apply during start-ups and shutdowns unless source specific emission limitations or work practice standards for start-ups and shutdowns are defined by an applicable rule, regulation, or permit.
 - (2) Where the source is unable to comply with existing emission limitations established under the State Implementation Plan (SIP) and defined in

Mississippi Administrative Code, Title 11, Part 2, Chapter 1, the Department will consider establishing source specific emission limitations or work practice standards for start-ups and shutdowns. Source specific emission limitations or work practice standards established for start-ups and shutdowns are subject to the requirements prescribed in 11 Miss. Admin. Code Pt. 2, R. 1.10.B(2)(a) through (e).

- (3) Where an upset as defined in Rule 1.2 occurs during startup or shutdown, see the upset requirements above.

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

5. *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 of 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).)

C. PERMIT RENEWAL / MODIFICATION / TRANSFER / TERMINATION

1. For renewal of this permit, the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Environmental Quality Permit Board.

If the applicant submits a timely and complete application pursuant to this paragraph and the Permit Board, through no fault of the applicant, fails to act on the application on or before the expiration date of the existing permit, the applicant shall continue to operate the stationary source under the terms and conditions of the expired permit, which shall remain in effect until final action on the application is taken by the Permit Board. Permit expiration terminates the source's ability to operate unless a timely and complete renewal application has been submitted.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.8.)

2. The permittee shall furnish to the MDEQ within a reasonable time any information the MDEQ 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 MDEQ 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 MDEQ 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).)

3. 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).)

4. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including (but not limited to):
 - (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 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.)

5. This permit may only be transferred upon approval of the Mississippi Environmental Quality Permit Board.

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

SECTION 2 EMISSION POINT DESCRIPTION

The permittee is authorized to operate air emissions equipment, as described in the following table:

Emission Point	Facility Equipment ID	Facility Control ID	Description
AA-100	—	—	Facility-Wide (PG Technologies, LLC)
AA-001	GB-01 through GB-28	DC-1G through DC-28G	<u>Grit Blasters</u> – twenty-eight (28) abrasive blasting units that are used to prepare the surface of parts to undergo various coating operations. Various abrasive blasting media may be used (e.g. aluminum oxide, glass peen, calcined aluminum). A corresponding dust collector equipped with a filter rated MERV 16 or higher controls emissions from each individual grit blaster.
AA-002	HV001 HV002 HV003	DC-26 DC-27 DC-28	<u>Coating Operation No. 1</u> – Three (3) coating stations that apply a powder-based coating onto parts via thermal spraying. A corresponding dust collector equipped with a filter rated MERV 16 or higher controls emissions from each individual coating station.
AA-003	EC005 EC006 EC008 EC009	DC-38 DC-39 DC-40 DC-44	<u>Coating Operation No. 2</u> – Four (4) coaters. A corresponding dust collector equipped with a MERV 16 or higher filter cartridge controls emissions from each individual coater.
AA-004	SS001 SS002 SS003 SS004	DC-41 DC-42 DC-43	<u>Coating Operation No. 3</u> – Four (4) coating booths that deposit a slurry mixture onto the surface of parts. A corresponding dust collector controls the emissions from SS001 and SS004. A shared dust collector controls emissions from SS002 and SS003. All three (3) dust collectors are equipped with a MERV 16 or higher filter cartridge.
AA-005	VF001 through VF009	—	<u>Coating Operation No. 4</u> – Nine (9) coating stations in which a metal-containing coating is deposited onto parts. A wet scrubber controls the emission of hydrogen fluoride (HF) and particulate matter (PM).
AA-006	PA001 PA002 PA003 PA004	—	<u>Coating Operation No. 5</u> – Four (4) coating stations that pre-coat metal parts using a series of rinse tanks and metal-containing salt tanks. Emissions are uncontrolled.
AA-007	N001	—	<u>Coating Operation No. 6</u> – One (1) coating station in which a masking agent is applied to metal parts to prevent certain areas from being coated. Emissions are uncontrolled.
AA-008	P001 P002 P003	DC-29 DC-30 DC-31	<u>Coating Operation No. 7</u> – Three (3) coating stations that apply a powder-based coating onto parts via thermal spraying. A corresponding dust collector equipped with a filter rated MERV 16 or higher controls emissions from each individual coating station.
AA-009	HY001 HY002	DC-35 DC-36	<u>Coating Operation No. 8</u> – Two (2) coating stations that apply a powder-based coating onto parts via thermal spraying. Emissions from each individual coating station are controlled by a corresponding dust collector equipped with a filter rated MERV16 or higher.

Emission Point	Facility Equipment ID	Facility Control ID	Description
AA-010	S001 S002 S003	DC-32 DC-33 DC-44	<u>Coating Operation No. 9</u> – Three (3) coating stations that apply a wet, powder-based coating onto parts. A corresponding dust collector equipped with a carbon filter rated MERV 15 or higher controls emissions from each individual coating station.
AA-011	SF-1 SF-2	DC-41	<u>Surface Finishing</u> – Two (2) surface finishing systems that are used to prepare parts before and after various coating operations. A single dust collector equipped with a MERV 16 or higher filter cartridge controls emissions from both surface finishing systems.
AA-012	A-1 A-2	—	<u>Stripping Operation No. 1</u> – One (1) dip tank at A-1 and two (2) dip tanks at A-2 used to remove the coatings from defective parts. Emissions are uncontrolled.
AA-013	D001 through D005	—	<u>Degreasing Operations</u> – Five (5) degreasing units that remove fluids and oils from parts prior to coating. Emissions are uncontrolled.
AA-014a	—	—	<u>Emergency Generator No. 1</u> – One (1) 603 HP (450 kW) diesel-fired, compression-ignition reciprocating internal combustion engine (CI RICE) Model year is 2012 and the displacement is <10 L / cyl.
AA-014b	—	—	<u>Emergency Generator No. 2</u> – One (1) 1,340 HP (1,000 kW) diesel-fired, compression-ignition reciprocating internal combustion engine (CI RICE) Model year is 2017 and the displacement is <10 L / cyl.
AA-014c	—	—	<u>Fire Pump No. 1</u> – One (1) 130 HP diesel-fired, compression-ignition reciprocating internal combustion engine (CI RICE) Model year is 2018 and the displacement is <10 L / cyl.
AA-008	P001 P002 P003	DC-29 DC-30 DC-31	<u>Coating Operation No. 7</u> – Three (3) coating stations that apply a powder-based coating onto parts via thermal spraying. A corresponding dust collector equipped with a filter rated MERV 16 or higher controls emissions from each individual coating station.
AA-009	HY001 HY002	DC-35 DC-36	<u>Coating Operation No. 8</u> – Two (2) coating stations that apply a powder-based coating onto parts via thermal spraying. Emissions from each individual coating station are controlled by a corresponding dust collector equipped with a filter rated MERV16 or higher.
AA-010	S001 S002 S003	DC-32 DC-33 DC-44	<u>Coating Operation No. 9</u> – Three (3) coating stations that apply a wet, powder-based coating onto parts. A corresponding dust collector equipped with a carbon filter rated MERV 15 or higher controls emissions from each individual coating station.
AA-011	SF-1 SF-2	DC-41	<u>Surface Finishing</u> – Two (2) surface finishing systems that are used to prepare parts before and after various coating operations. A single dust collector equipped with a MERV 16 or higher filter cartridge controls emissions from both surface finishing systems.
AA-012	A-1 A-2	—	<u>Stripping Operation No. 1</u> – One (1) dip tank at A-1 and two (2) dip tanks at A-2, used to remove the coatings from defective parts. Emissions are uncontrolled.
AA-013	D001 through D005	—	<u>Degreasing Operations</u> – Five (5) degreasing units that remove fluids and oils from parts prior to coating. Emissions are uncontrolled.

Emission Point	Facility Equipment ID	Facility Control ID	Description
AA-014a	—	—	<u>Emergency Generator Engine No. 1</u> – One (1) 603 HP (450 kW) diesel-fired, compression-ignition reciprocating internal combustion engine (CI RICE) Model year is 2012 and the displacement is <10 L / cyl.
AA-014b	—	—	<u>Emergency Generator Engine No. 2</u> – One (1) 1,340 HP (1,000 kW) diesel-fired, compression-ignition reciprocating internal combustion engine (CI RICE) Model year is 2017 and the displacement is <10 L / cyl.
AA-014c	—	—	<u>Emergency Fire Water Pump Engine No. 1</u> – One (1) 130 HP diesel-fired, compression-ignition reciprocating internal combustion engine (CI RICE) Model year is 2018 and the displacement is <10 L / cyl.
AA-015	—	—	<p><u>Natural Gas Fired Equipment:</u></p> <ul style="list-style-type: none"> • Air Handling Units [AHU-3 through AHU-10] <ul style="list-style-type: none"> ○ Two (2) each with a rated heat input capacity of 0.7 MMBTU / hour ○ Six (6) each with a rated heat input capacity of less than 1 MMBTU / hour • Rooftop Air Handling Units [RTU-1 through RTU-21] <ul style="list-style-type: none"> ○ Sixteen (16) each with a rated heat capacity of 0.85 MMBTU / hour ○ Four (4) each with a rated heat capacity of 2.468 MMBTU / hour ○ One (1) with a rated heat capacity of 1.670 MMBTU / hour • Gas Heaters [DOAS-01] <ul style="list-style-type: none"> ○ One (1) with a rated heat input capacity of 0.174 MMBTU / hour ○ One (1) with a rated heat input capacity of 0.279 MMBTU / hour • Four (4) boilers – each with a maximum heat input of 0.63 MMBTU / hour [B001 through B004] The boilers provide heat to the Rinse and Q-Salt Tanks in Coating Operation No. 5 (Emission AA-006)
AA-016			<p><u>Miscellaneous Activities:</u></p> <ul style="list-style-type: none"> • Met Lab • Maintenance Welding • Maintenance Metal Working • Paved Road Emissions • 3D Printing Station • Two (2) Dry Ice Abrasive Blasters

SECTION 3
EMISSION LIMITATIONS AND STANDARDS

Emission Point(s)	Applicable Requirement	Condition Number	Pollutant / Parameter	Limitation / Standard
AA-100	11 Miss. Admin. Code Pt. 2, R. 1.3.A(1) and (2).	3.1	Opacity (Smoke)	40%
	11 Miss. Admin. Code Pt. 2, R. 1.3.B.	3.2	Opacity	
	11 Miss. Admin. Code Pt. 2, R. 1.3.F(1).	3.3	PM <i>(filterable)</i>	E = 4.1 (p ^{0.67})
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). (Title V Avoidance Limits)	3.4	PM ₁₀ / PM _{2.5} <i>(filterable + condensable)</i>	99.0 tpy (Rolling 12-Month Totals)
		3.5	HAPs	9.0 tpy (Individual) 24.0 tpy (Combined) (Rolling 12-Month Totals)
AA-001 AA-003 AA-004 AA-010	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). (PSD Avoidance Limit)	3.6	PM <i>(filterable)</i>	Operational Requirements for the Dust Collectors
AA-002 AA-008 AA-009 AA-011	40 CFR Part 63, Subpart WWWW – NESHAP: Area Source Standards for Plating and Polishing Operations 40 CFR 63.11504(a)(1)(iv), 63.11505(a)(2) – (3) and (c), 63.11506(c), and 63.11508(b); Subpart WWWW	3.7	Plating and Polishing Metal HAPs	General Applicability
AA-014a AA-014b AA-014c AA-015	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.8	PM <i>(filterable)</i>	0.6 lbs. / MMBTU per Hour
AA-014a AA-014b AA-014c	40 CFR Part 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines 40 CFR 63.6585(a) and (c), 63.6590(a)(2)(iii) and (c)(1), and Table 8; Subpart ZZZZ	3.9	HAPs	General Applicability

Emission Point(s)	Applicable Requirement	Condition Number	Pollutant / Parameter	Limitation / Standard
AA-014a AA-014b AA-014c	40 CFR Part 60, Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines 40 CFR 60.4200(a)(2) and Table 8; Subpart III	3.10	NMHC+NO _x CO PM	General Applicability
	40 CFR 60.4211(f)(1) – (3); Subpart III	3.11	Operating Requirements	100 Hours / Calendar Year for Maintenance and Readiness Testing; 50 Hours / Calendar Year for Non-Emergency Situations
	40 CFR 60.4207(b); Subpart III	3.12	Fuel Requirements	<u>Sulfur Content:</u> A maximum sulfur content of 15 ppm <u>Cetane Index or Aromatic Content:</u> A minimum cetane index of 40; OR A maximum aromatic content of 35 volume percent
AA-014a AA-014b	40 CFR 60.4205(b), 60.4202(a)(2), and 60.4206; Subpart III Table 2 in Appendix I to 40 CFR Part 1039 40 CFR 1039.105(b); Subpart B	3.13	NMHC+NO _x	6.4 grams / kW-hr
			CO	3.5 grams / kW-hr
			PM	0.2 grams / kW-hr
			Opacity (Smoke)	Applicable Standards
AA-014c	40 CFR 60.4205(c), 60.4206, and Table 4; Subpart III	3.14	NMHC+NO _x	4.0 grams / kW-hr
			CO	5.0 grams / kW-hr
			PM	0.3 grams / kW-hr
AA-015	11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).	3.15	SO ₂	4.8 lbs. / MMBTU

3.1 For Emission Point AA-100 (Facility-Wide), except as otherwise specified or limited herein, the permittee shall not cause or allow the emission of smoke from a point source into the open air from any manufacturing, industrial, commercial or waste disposal process that exceeds forty percent (40%) opacity.

Start-up operations may produce emissions, which exceed 40% opacity for up to fifteen (15) minutes per start-up in any one (1) hour and not to exceed three (3) start-ups per stack in any twenty-four (24) hour period.

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

- 3.2 For Emission Point AA-100 (Facility-Wide), except as otherwise specified or limited herein, the permittee shall not cause or allow the discharge into the ambient air from any point source any air contaminant of such opacity as to obscure an observer's view to a degree in excess of 40% opacity equivalent to that provided in Condition 3.A.1. 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-100 (Facility-Wide), except as otherwise specified, the permittee shall not cause or allow the emission of particulate matter (PM) in total quantities in any one (1) hour from any manufacturing process (which includes any associated stacks, vents, outlets, or combination thereof) to exceed the amount determine by the relationship:

$$E = 4.1 \cdot (p^{0.67})$$

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-100 (Facility-Wide), the permittee shall limit the respective emission of particulate matter less than 10 microns in diameter (PM₁₀; filterable and condensable) and particulate matter less than 2.5 microns in diameter (PM_{2.5}; filterable and condensable) to no more than 99.0 tons per year (tpy) based on a rolling 12-month totals.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). – Title V Avoidance Limits)

- 3.5 For Emission Point AA-100 (Facility-Wide), the permittee shall limit the emission of any individual hazardous air pollutant (HAP) to no more than 9.0 tpy and all combined HAPs to no more than 24.0 tpy based on a rolling 12-month total.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). – Title V Avoidance Limits)

- 3.6 For Emission Points AA-001, AA-003, AA-004, AA-010, and AA-011, the permittee shall operate the emission capture and control system (i.e. the dust collector) associated with each process equipment at all times during active operations to minimize the emission of filterable particulate matter. In the event that a control system malfunctions or becomes non-operational, the permittee shall cease activity at the applicable process equipment until the control system returns to service.

Additionally, each emission capture and control system shall be operated and maintained in accordance with the manufacturer's specifications and instructions.

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

- 3.7 For Emission Points AA-002, AA-008, AA-009, and AA-011, the permittee is subject to and shall comply with all applicable requirements found in 40 CFR Part 63, Subpart WWWW – National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Plating and Polishing Operations and 40 CFR Part 63, Subpart A – General Provisions (as outlined in Table 1 of Subpart WWWW).

The permittee shall comply with all applicable required management practices and equipment standards at all times.

For the purpose of this permit, a “plating and polishing metal HAP” is defined as any compound of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form (with the exception of lead). Any material that does not contain cadmium, chromium, lead, or nickel in amounts greater than / equal to 0.1 percent by weight (as the metal) **or** does not contain manganese in amounts greater than / equal to 1.0 percent by weight (as the metal) is not considered a plating and polishing metal HAP.

(Ref.: 40 CFR 63.11504(a)(1)(iv), 63.11505(a)(2) – (3) and (c), and 63.11508(b); Subpart WWWW)

- 3.8 For Emission Points AA-014a, AA-014b, AA-014c, and AA-015, the maximum permissible emission of ash and/or particulate matter (PM) from fossil fuel burning installations of less than ten (10) million BTU (MMBTU) per hour heat input shall not exceed 0.6 pounds per MMBTU per hour heat input.

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

- 3.9 For Emission Points AA-014a, AA-014b, and AA-014c, the permittee is subject to and shall comply with all applicable requirements found in 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) and 40 CFR Part 63, Subpart A – General Provisions (as outlined in Table 8 of Subpart ZZZZ).

For the purpose of this permit, Emission Points AA-014a, AA-014b, and AA-014c are considered new (i.e. constructed after June 12, 2006) compression ignition (CI) emergency stationary RICE located at an area source of HAP emissions. As such, the engines shall meet the requirements of Subpart ZZZZ by complying with the applicable requirements of the 40 CFR 60, Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. No further requirements apply for such engines under Subpart ZZZZ.

(Ref.: 40 CFR 63.6585(a) and (c), 63.6590(a)(2)(iii) and (c)(1), and Table 8; Subpart ZZZZ)

3.10 For Emission Points AA-014a, AA-014b, and AA-014c, the permittee is subject to and shall comply with all applicable requirements found in 40 CFR Part 60, Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR Part 60, Subpart A – General Provisions (as outlined in Table 8 of Subpart III).

(Ref.: 40 CFR 60.4200(a)(2) and Table 8; Subpart III; and 40 CFR 60.1, Subpart A)

3.11 For Emission Points AA-014a, AA-014b, and AA-014c, any operation of the engine for any reason other than emergency operation, maintenance and testing, and operation in non-emergency situations for fifty (50) hours per year is prohibited. If the engine is not operated in accordance with paragraphs (a) through (c) of this condition, the engine will not be considered an emergency engine under the referenced regulation and shall meet all requirements for a corresponding non-emergency engine

- (a) There is no time limit on the use of an engine in emergency situations.
- (b) The permittee may operate an engine 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 accompanied with the engine. Maintenance checks and readiness testing of an engine is limited to a maximum of one hundred (100) hours per calendar year. The permittee may petition the MDEQ for approval of additional hours to be used for maintenance checks and readiness testing. However, a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of the engine beyond 100 hours per calendar year.
- (c) The permittee may operate an engine 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. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(Ref.: 40 CFR 60.4211(f)(1) – (3); Subpart III)

3.12 For Emission Points AA-014a, AA-014b, and AA-014c, the permittee shall only combust diesel fuel within each engine that meets the following requirements (on a per-gallon basis):

- (a) Sulfur content:
 - (1) A maximum sulfur content of fifteen (15) ppm.
- (b) Cetane index or aromatic content:

- (1) A minimum cetane index of forty (40); or
- (2) A maximum aromatic content of thirty-five (35) volume percent.

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

3.13 For Emission Points AA-014a and AA-014b, the permittee shall comply with the following emission standards:

- (a) Non-Methane Hydrocarbons and Nitrogen Oxides (NMHC+NO_x): 6.4 grams per kilowatt-hour (g / kW-hr);
- (b) Carbon Monoxide (CO): 3.5 g / kW-hr; and
- (c) Particulate Matter (PM): 0.2 g / kW-hr.
- (d) Opacity (From Smoke):
 - (1) Twenty (20) percent during acceleration mode;
 - (2) Fifteen (15) percent during lugging mode; and
 - (3) Fifty (50) percent during the peaks in either the acceleration or lugging mode.

The permittee shall operate and maintain each engine in such a manner to achieve the referenced emission standards over the entire life of each engine.

(Ref.: 40 CFR 60.4205(b), 60.4202(a)(2), and 60.4206; Subpart IIII)

(Ref: Table 2 in Appendix I; 40 CFR Part 1039 and 40 CFR 1039.105(b); Subpart B)

3.14 For Emission Point AA-014c, the permittee shall comply with the following emission standards:

- (a) Non-Methane Hydrocarbons and Nitrogen Oxides (NMHC+NO_x): 4.0 g / kW-hr;
- (b) Carbon Monoxide (CO): 5.0 g / kW-hr; and
- (c) Particulate Matter (PM): 0.3 g / kW-hr.

The permittee shall operate and maintain each engine in such a manner to achieve the referenced emission standards over the entire life of the engine.

(Ref.: 40 CFR 60.4205(c), 60.4206, and Table 4; Subpart IIII)

- 3.15 For Emission Point AA-015, the permittee shall limit the emission of sulfur oxides from all each fossil fuel burning installation in which heat is provided by indirect heat transfer to no more than 4.8 pounds (measured as sulfur dioxide) per MMBTU of total heat input.

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

SECTION 4 WORK PRACTICE STANDARDS

Emission Point(s)	Applicable Requirement	Condition Number	Pollutant / Parameter	Work Practice
AA-001 AA-003 AA-004 AA-010	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	4.1	Operating Requirements	Maintain and Implement a Preventative Maintenance Plan (PMP)
		4.2		Utilize Filter Cartridges with a MERV Rating of 16 or Higher
		4.3		Maintain the Pressure Drop Across Each Dust Collector Within 0.2 – 5.0 Inches of H ₂ O
AA-002 AA-008 AA-009 AA-011	40 CFR 63.11507(g)(6), (9), and (12), Subpart WWWW	4.4	HAPs	Perform Emission Management Practices
AA-014a AA-014b AA-014c	40 CFR 60.4211(a)(1) – (3) and (c); Subpart III	4.5	NMHC+NO _x CO PM	Operate In Accordance With Manufacturer's Recommendations

- 4.1 For Emission Points AA-001, AA-003, AA-004, and AA-010 the permittee shall maintain, implement, and revise (as necessary) the Preventative Maintenance Plan (PMP) (as found in Appendix A) in accordance with the following requirements:
- (a) The PMP shall identify the individual(s) responsible for inspecting, maintaining, and repairing each applicable air pollution control device;
 - (b) The PMP shall list and describe the items or conditions that will be inspected and the inspection schedule for each specified item / condition. Each inspection shall be conducted at a frequency no less than once every ninety (90) days;
 - (c) The PMP shall identify and quantify the replacement parts that will be maintained in inventory for quick replacement;
 - (d) The PMP shall specify weekly pressure drop monitoring across each dust collector (as outlined in Conditions 4.3 and 5.7);
 - (e) The permittee may be required to revise the PMP following a review by MDEQ personnel. Furthermore, the MDEQ may require the permittee to revise the PMP whenever a lack of proper maintenance causes or is the primary contributor to an exceedance of any emission limitation.

- (g) If an applicable source is modified (e.g. process and/or control equipment is added, removed, replaced, or physically changed), the PMP shall be revised to reflect the modification;

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

- 4.2 For each dust collector at Emission Points AA-001 (with the exception of GB-26), AA-003, AA-004, and AA-010, the permittee shall utilize filter cartridges that have a certified Minimum Efficiency Reporting Value (MERV) of at least 16 or higher to minimize the emission filterable particulate matter and metal HAPs.

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

- 4.3 For Emission Points AA-001 (with the exception of GB-26), AA-002, AA-003, AA-004, and AA-010, the permittee shall maintain the pressure drop across each dust collector within the range of 0.2 and 5.0 inches of water (H₂O) at all times. This pressure drop range shall be included in the final approved PMP.

In the event that the measured pressure drop is outside of the specified range, the permittee shall implement corrective actions to restore a dust collector to a proper operational status.

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

- 4.4 For Emission Points AA-002, AA-008, AA-009, and AA-011 the permittee shall perform the following work practices (as applicable):
 - (a) Perform regular repair, maintenance, and preventative maintenance of all equipment associated with each source;
 - (b) Perform good housekeeping practices (such as regular sweeping or vacuuming – if needed) and periodic wash-downs (as practicable); and
 - (c) Perform regular inspections to identify leaks and other opportunities for pollution prevention.

(Ref.: 40 CFR 63.11507(g)(6), (9), and (12); Subpart WWWWWW)

- 4.5 For Emission Points AA-014a, AA-014b, and AA-014c the permittee shall operate and maintain each engine in accordance with the manufacturer's emission-related written instructions, change only those emission-related settings that are permitted by the manufacturer, and meet the applicable emission standards specified in Conditions 3.13 and 3.14.

The permittee shall comply with the applicable emission standards by purchasing a certified engine. The engine shall be installed and configured according to the manufacturer's emission-related specifications. If the manufacturer's specifications are not

followed, the permittee shall demonstrate compliance using the procedures detailed in 40 CFR 60.4211(g)(3); Subpart III.

(Ref.: 40 CFR 60.4211(a)(1) – (3) and (c); Subpart III)

SECTION 5 MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point(s)	Applicable Requirement	Condition Number	Pollutant / Parameter	Monitoring / Recordkeeping Requirement
AA-100	11 Miss. Admin. Code Pt. 2, R. 2.9.	5.1	Recordkeeping	Maintain Records For a Minimum of Five (5) Years
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.2	PM ₁₀ / PM _{2.5} (filterable + condensable)	Calculate and Record Emissions (Monthly and Rolling 12-Month Total)
		5.3	HAPs	Implement and Maintain a Monitoring Plan
AA-001 AA-003 AA-004 AA-010	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.4	PM (filterable)	Install, Calibrate, and Maintain a Pressure Gauge in Accordance With Manufacturer's Specifications Recordkeeping Requirements
		5.5	Pressure Drop	Monitor Each Dust Collector Once Per Day Recordkeeping Requirements for Deviations
AA-002 AA-008 AA-009 AA-011	40 CFR 63.11507(e), (f)(2), 63.11508(c)(8)(i), (iii), (10)(i), and (iii); Subpart WWWWWW	5.6	HAPs	Initial Compliance Requirements
	40 CFR 63.11508(d)(1), (4)(i), (ii), (iv), and (v), Subpart WWWWWW	5.7		Continuous Compliance Requirements
	40 CFR 63.11509(e)(1) – (3), Subpart WWWWWW	5.8		Recordkeeping Requirements
AA-014a AA-014b AA-014c	40 CFR 60.4214(a)(2); Subpart IIII 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.9	NMHC+NO _x CO PM	Recordkeeping Requirements
	40 CFR 60.4209(a) and 60.4214(b); Subpart IIII 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.10	Emergency Engine Status	Record Hours of Operation (Emergency and Non-Emergency)

- 5.1 For Emission Point AA-100 (Facility-Wide), the permittee shall retain all required records, monitoring data, supporting information, and reports for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records, all original strip-chart recordings, or other data for continuous monitoring instrumentation, and copies of all reports required by this permit. Copies of such records shall be submitted to the MDEQ as required by Applicable Rules and Regulations of this permit upon request.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.9.)

- 5.2 For Emission Point AA-100 (Facility-Wide), the permittee shall demonstrate compliance with the emission limitations specified in 3.4 by calculating the emission of PM₁₀ (filterable and condensable) and PM_{2.5} (filterable and condensable) emissions in tons both on a monthly and rolling 12-month total basis.

Unless otherwise specified herein, the permittee shall maintain all reference data utilized to validate calculated emissions (e.g. operational data; the applicable emission factors presented in the corresponding application; engineering judgement determinations; etc.).

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

- 5.3 For Emission Point AA-100 (Facility-Wide), the permittee shall implement and maintain a HAP Monitoring Plan (as found in Appendix B) in order to demonstrate compliance with the HAP limitations specified in Condition 3.5. This plan shall detail how HAP emissions from each applicable source are estimated and what documentation will be maintained for each applicable source.

The HAP monitoring plan shall be subject to review and approval by the MDEQ. Upon review, the permittee may be required to revise the HAP monitoring plan. Furthermore, in the event of an exceedance of the specified HAP limitations, the MDEQ may require the permittee to revise the HAP monitoring plan.

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

- 5.4 For Emission Points AA-001 (with the exception of GB-26), AA-002, AA-003, AA-004, AA-008, AA-009, and AA-010, the permittee shall install, calibrate, and maintain a pressure gauge within each dust collector in accordance with the manufacturer's specifications and scaled to read inches of water (H₂O).

Additionally, the permittee shall maintain documentation for each dust collector that details any gauge calibration performed, any maintenance (either preventative or corrective) performed on a pressure gauge, and the specifications from the respective manufacturer.

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

- 5.5 For Emission Points AA-001 (with the exception of GB-26), AA-002, AA-003, AA-004, AA-008, AA-009, and AA-010, the permittee shall monitor and record the pressure drop across each dust collector once per day during active corresponding operations.

Upon submittal of the PMP and approval by the MDEQ, the permittee may reduce the pressure drop monitoring frequency from daily to once every seven (7) days during corresponding active operations. As such, the monitoring of the pressure at a frequency no less than once every seven (7) days shall be included in the PMP.

In the event that a pressure drop reading deviates from the range specified in Condition 4.3, the permittee shall maintain documentation that details the duration of time the deviation occurred, why the deviation occurred, and any corrective actions that were taken to restore the pressure drop to the appropriate operating range.

For the purposes of this permit, a “deviation” shall be defined as any time the monitored pressure drop falls outside the required pressure range.

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

5.6 For Emission Points AA-002, AA-008, AA-009, and AA-011, the permittee shall demonstrate initial compliance with management practices specified in Condition 4.4 in accordance with the following requirements:

- (a) The permittee shall install a control system that is designed to capture PM emissions from the thermal spraying operations and the dry mechanical polishing operations and exhaust them to a cartridge, fabric, or HEPA filter.
- (b) The permittee shall denote in the applicable amended Notification of Compliance Status (as required in Condition 6.5) that the control system has been installed and is being operated according to manufacturer’s specifications and instructions.
- (c) The permittee shall maintain the manufacturer’s operating instructions on-site at all times in a location where they can be easily accessed by the operators.

(Ref.: 40 CFR 63.11507(e), (f)(2), 63.11508(c)(8)(i), (iii), (10)(i), and (iii); Subpart WWWWWW)

5.7 For Emission Points AA-002, AA-008, AA-009, and AA-011, the permittee shall demonstrate continuous compliance with the management practices and equipment standards in Conditions 4.4 in accordance with the following specifications:

- (a) The permittee shall always operate and maintain an applicable source (including air pollution control equipment).
- (b) The permittee shall operate and maintain each required emission control systems in accordance with the manufacturer’s specifications and instructions.
- (c) Following any malfunction or failure of a required capture or control device to operate properly, the permittee shall take immediate corrective action to return the device to normal operation according to the manufacturer’s specifications and operating instructions.
- (d) The permittee shall record the results of all control system inspections, deviations from proper operation, and any corrective action(s) taken.

- (e) The permittee shall maintain the manufacturer's operating instructions on-site at all times in a location where they may be easily accessed by the operators.

(Ref.: 40 CFR 63.11508(d)(1), (4)(i), (ii), (iv), and (v); Subpart WWWWWW)

5.8 For Emission Points AA-002, AA-008, AA-009, and AA-011 the permittee shall maintain documentation for the following information:

- (a) A copy of each Notification of Compliance Status and all documentation supporting this notification.
- (b) Records on the occurrence and duration of each malfunction of applicable process equipment (or the required air pollution control and monitoring equipment), all required maintenance performed on the air pollution control and monitoring equipment, and all documentation supporting the notifications of compliance status.
- (c) Records necessary to demonstrate continuous compliance with the management practices and equipment standards specified in this permit.

(Ref.: 40 CFR 63.11509(e)(1) – (3); Subpart WWWWWW)

5.9 For Emission Points AA-014a, AA-014b, and AA-014c, the permittee shall maintain records that detail the following information:

- (a) All notifications submitted to comply with 40 CFR Part 60, Subpart IIII;
- (b) Any maintenance conducted on an engine;
- (c) The manufacturer's emission-related written instructions for each engine; and
- (d) Documentation from the manufacturer that indicates an engine is certified to meet the emission standards specified in either Condition 3.13 or 3.14.

(Ref.: 40 CFR 60.4214(a)(2); Subpart IIII and 11 Miss. Admin. Code. Pt. 2, R. 2.2.B(11).)

5.10 For Emission Points AA-014a, AA-014b, and AA-014c, the permittee shall monitor (via a non-resettable hour meter) and record the hours of operation for each engine on a monthly basis for both emergency and non-emergency service. Additionally, the permittee shall detail (in writing) and maintain what classified each occurrence as either an emergency or a non-emergency.

(Ref.: 40 CFR 60.4209(a) and 60.4214(b); Subpart IIII)

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

SECTION 6 REPORTING REQUIREMENTS

Emission Point(s)	Applicable Requirement	Condition Number	Reporting Requirement
AA-100 (Facility-Wide)	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.1	Report Permit Deviations Within Five (5) Working Days
		6.2	Submit a Certified Annual Monitoring Report (AMR).
		6.3	All Documents Submitted to the MDEQ Shall Be Certified By a Responsible Official
AA-001 AA-002 AA-008 AA-009 AA-011	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.4	Submit a Notification on a Change to the PMP
AA-002 AA-008 AA-009 AA-011	40 CFR 63.11508(a) and 63.11509(b)(1) – (3); Subpart WWWWWW	6.5	Submit an Amended Notification of Compliance Status (As Applicable)
	40 CFR 63.11509(c)(2)(iii), (6), and (7), (d), and 63.11511; Subpart WWWWWW	6.6	Submit an Annual Certification of Compliance Report
AA-014a AA-014b AA-014c	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.7	Submit a AMR on Hours of Operation

6.1 For Emission Point AA-100 (Facility-Wide), 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. The 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(11).)

6.2 For Emission Point AA-100 (Facility-Wide), except as otherwise specified herein, the permittee shall submit a certified annual monitoring report postmarked no later than January 31 of each year for the preceding calendar year. This report shall address any required monitoring specified in Section 6 of this permit. All instances of deviations from permit requirements must be clearly identified in the report. Where no monitoring data is required to be reported and/or there are no deviations to report, the report shall contain the appropriate negative declaration.

Each AMR shall include the following information (at a minimum):

- (a) The facility-wide emission of PM (filterable), PM₁₀ (filterable and condensable), PM_{2.5} (filterable and condensable), each individual HAP, and all HAPs combined in tons per year based a rolling 12-month total;
- (b) Any maintenance action(s) performed on a dust collector and any periods of time (including date and duration) in which a dust collector was non-operational.

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

- 6.3 Any document required by this permit to be submitted to the MDEQ shall contain a certification signed by a responsible official stating that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

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

- 6.4 For Emission Points AA-001, AA-003, AA-004, and AA-010, the permittee shall submit a notification to the MDEQ **if** the PMP is revised in accordance with Condition 4.1(e), (f), or for some other reason no later than fourteen (14) days after completing the revision.

The notification shall summarize the revision(s) made, and upon review of the notification, the MDEQ may request a complete up-to-date PMP.

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

- 6.5 For Emission Points AA-002, AA-008, AA-009, and AA-011, the permittee shall submit an amended Notification of Compliance Status to the MDEQ if a change is made to one (1) of the following items that does not result in a deviation no later than thirty (30) days after the change:

- (a) The affected sources and the plating and polishing metal HAPs used in (or emitted by) each unit;
- (b) The methods used to comply with the applicable management practices and equipment standards;
- (c) A description of the capture and emission control system used to comply with the applicable equipment standards; and
- (d) A statement certifying whether the source is in compliance with the applicable standards or other requirements.

(Ref.: 40 CFR 63.11508(a) and 63.11509(b)(1) – (3); Subpart WWWWWW)

6.5 For Emission Points AA-002, AA-008, AA-009, and AA-011 the permittee shall submit an annual certification of compliance report in accordance with Condition 6.2 that certifies the following statements:

- (a) Each control system was operated and maintained in accordance with the manufacturer's specifications and instructions; and
- (b) All management specified in Condition 4.4 practices were implemented (as applicable).

If a deviation does occur within the reporting year, the permittee shall include with the annual certification of compliance report an additional report that details the deviations along with any corrective action(s) taken. However, if a deviation **does not** occur within the reporting year, the permittee is not required to submit a deviation report.

For the purpose of this permit condition, a "deviation" means any instance in which the permittee meets one (1) of the following stipulations:

- (c) A failure to meet any requirement or obligation established by Subpart WWWWWW including (but not limited to) any equipment standard, management practice, or operation and maintenance requirement;
- (d) A failure to meet any term or condition that is adopted to implement an applicable requirement in Subpart WWWWWW and that is included in this this permit; or
- (e) A failure to meet any equipment standard, management standard, or operation and maintenance required in Subpart WWWWWW during start-up, shutdown, or malfunction.

(Ref.: 40 CFR 63.11509(c)(2)(iii), (6), and (7), (d), and 63.11511; Subpart WWWWWW)

6.6 For Emission Points AA-014a, AA-014b, and AA-014c, the permittee shall submit an annual monitoring report in accordance with Condition 6.2 that details the total hours of operation for each engine. The report shall include how many hours are spent for emergency operation, what classified the operation as an emergency, how many hours are spent for non-emergency operation, and the reason for the non-emergency operation.

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

APPENDIX A

PREVENTATIVE MAINTENANCE PLAN (PMP)

PREVENTIVE MAINTENANCE PLAN

PG Technologies LLC

PROJECT #: JV0452.240

PREPARED FOR:
PG Technologies LLC
135 Technology Boulevard
Ellisville, Mississippi 39437

ISSUE DATE:
October 2017

REVISION DATE:
May 2021



**PREVENTIVE MAINTENANCE PLAN
POLLUTION PREVENTION EQUIPMENT
PG TECHNOLOGIES LLC
ELLISVILLE, MISSISSIPPI
AUGUST MACK PROJECT NUMBER JR0438.240**

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**PREVENTIVE MAINTENANCE PLAN
POLLUTION PREVENTION EQUIPMENT
PG TECHNOLOGIES LLC
ELLISVILLE, MISSISSIPPI
AUGUST MACK PROJECT NUMBER JR0438.240**

INTRODUCTION

PG Technologies LLC (PGT) has prepared this preventive maintenance plan (PMP) in order to satisfy Condition 4.1 of Construction Permit 1360-00158. The purpose of the PMP is to (1) identify the individuals responsible for inspecting, maintaining, and repairing the air pollution control equipment located at the source; (2) provide a schedule for and description of the items or conditions that will be inspected; (3) provide troubleshooting contingency and corrective actions procedures; and (4) identify and quantify the control equipment replacement parts which will be maintained in inventory for quick replacement.

SOURCE DESCRIPTION

PGT operations include grit blasting, coating operations, and surface finishing. The pollutants emitted include particulate matter (PM), particulate matter less than ten microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}) and metal Hazardous Air Pollutants (HAPs). PGT uses numerous cartridge-style dust collectors to control PM, PM₁₀, PM_{2.5} and metal HAP emissions from the various processes. The cartridge filters used in these dust collectors must have a minimum efficiency reporting value (MERV) rating of 16, or higher, as required by the permit.

IDENTIFICATION OF RESPONSIBLE INDIVIDUALS

PGT will have a maintenance manager, who will have overall responsibility for inspecting, monitoring and repairing emission control equipment. The maintenance

manager may delegate, at his or her discretion, the specific tasks necessary to comply with this plan (i.e., inspection and/or repair activities) to a PGT employee or an outside contractor.

DUST COLLECTORS

PGT will inspect the operation of its dust collectors on a weekly and semi-annual basis. The dust collectors to be included in this inspection schedule are listed in Table 1. The items to be inspected and frequency of item inspections are provided in the following section.

TABLE 1
Summary of Dust Collectors

Emission Point ID	Dust Collector ID	Process ID	Controlled Process	Pressure Drop Range (inches H ₂ O)
AA-001	DC-1G	GB-01	Grit Blasting Unit	0.2 - 5.0
	DC-2G	GB-02	Grit Blasting Unit	0.2 - 5.0
	DC-3G	GB-03	Grit Blasting Unit	0.2 - 5.0
	DC-4G	GB-04	Grit Blasting Unit	0.2 - 5.0
	DC-5G	GB-05	Grit Blasting Unit	0.2 - 5.0
	DC-6G	GB-06	Grit Blasting Unit	0.2 - 5.0
	DC-7G	GB-07	Grit Blasting Unit	0.2 - 5.0
	DC-8G	GB-08	Grit Blasting Unit	0.2 - 5.0
	DC-9G	GB-09	Grit Blasting Unit	0.2 - 5.0
	DC-10G	GB-10	Grit Blasting Unit	0.2 - 5.0
	DC-11G	GB-11	Grit Blasting Unit	0.2 - 5.0
	DC-12G	GB-12	Grit Blasting Unit	0.2 - 5.0
	DC-13G	GB-13	Grit Blasting Unit	0.2 - 5.0
	DC-14G	GB-14	Grit Blasting Unit	0.2 - 5.0
	DC-15G	GB-15	Grit Blasting Unit	0.2 - 5.0
	DC-16G	GB-16	Grit Blasting Unit	0.2 - 5.0
	DC-17G	GB-17	Grit Blasting Unit	0.2 - 5.0
	DC-18G	GB-18	Grit Blasting Unit	0.2 - 5.0
	DC-19G	GB-19	Grit Blasting Unit	0.2 - 5.0
	DC-20G	GB-20	Grit Blasting Unit	0.2 - 5.0
	DC-21G	GB-21	Grit Blasting Unit	0.2 - 5.0
	DC-22G	GB-22	Grit Blasting Unit	0.2 - 5.0

Emission Point ID	Dust Collector ID	Process ID	Controlled Process	Pressure Drop Range (inches H ₂ O)
	DC-23G	GB-23	Grit Blasting Unit	0.2 – 5.0
	DC-24G	GB-24	Grit Blasting Unit	0.2 – 5.0
	DC-25G	GB-25	Grit Blasting Unit	0.2 – 5.0
	DC-27G	GB-27	Grit Blasting Unit	0.2 – 5.0
	DC-28G	GB-28	Grit Blasting Unit	0.2 – 5.0
AA-002**	DC-26	HV001	Coating Operation 1	**
	DC-27	HV002	Coating Operation 1	**
	DC-28	HV003	Coating Operation 1	**
AA-003	DC-38	EC005	Coating Operation 2	0.2 – 5.0
	DC-39	EC006	Coating Operation 2	0.2 – 5.0
	DC-40	EC008	Coating Operation 2	0.2 – 5.0
	DC-44	EC009	Coating Operation 2	0.2 – 5.0
AA-004	DC-37A	SS001	Coating Operation 3	0.2 – 5.0
	DC-37B	SS002-SS003	Coating Operation 3	0.2 – 5.0
	DC-37C	SS004	Coating Operation 3	0.2 – 5.0
AA-008**	DC-29	P001	Coating Operation 7	**
	DC-30	P002	Coating Operation 7	**
	DC-31	P003	Coating Operation 7	**
AA-009**	DC-35	HY001	Coating Operation 8	**
	DC-36	HY002	Coating Operation 8	**
AA-011	DC-41A	SF-1	Surface Finishing	0.2 – 5.0
	DC-41B	SF-2	Surface Finishing	0.2 – 5.0

** These units are subject to 40 CFR 63, Subpart WWWW, which requires the filter range be determined by the filter manufacturer's specifications.

Description of Items to be Inspected and Schedule of Inspection

PGT will complete weekly and semi-annual inspections of the dust collectors. The inspections will include the following:

Weekly Inspection Items

1. Record the differential pressure reading of the magnehelic or photohelic gauge. If the gauge reading is outside the acceptable range shown in Table 1, implement the troubleshooting contingency and corrective actions provided in the Section titled "Troubleshooting Contingency and Corrective Action".

Semi-Annual Inspection Items

1. Check cleaning system components and compressed air system for system leaks. Repair or replace as required.
2. Check discharge hoppers for material buildup. Tap the hoppers and if a dull thud is heard, notify supervisor.
3. Listen for excessive noise from the fan which would indicate that the bearings or bushings are bad. Repair or replace as required.
4. Check for excess vibration from the fan system.
5. Visually check inlet and outlet duct work systems for leaks. Repair as required.
6. Visually check the collector housing for leaks. Repair as required.
7. Visually inspect after filter for material buildup. Replace as required.
8. Measure the pressure drop across the after-filter. Compare to manufacturers specifications. Replace as required.
9. Inspect the magnehelic/photohelic gauge for plugging. Clean as required.
10. Inspect the magnehelic/photohelic gauge for proper operation. Verify the accuracy of the gauge by measuring the pressure drop across the collector with an alternative gauge. Calibrate the gauge. Disconnect tubing from gauge and clean gauge tubing with compressed air. Repair or replace as required.
11. Measure the volumetric air flow to the collector. Compare to previous readings and rated fan capacity (if known). Repair or replace system components as required.
12. Record the date of the inspection, inspection activities and any troubleshooting or corrective actions to be taken as a result of the semi-annual inspection. A sample form has been included in Appendix A.

Troubleshooting Contingency and Corrective Actions

If the weekly pressure drop observed across the collectors is outside the normal operating range shown in Table 1, PGT will implement the following troubleshooting contingency and corrective actions, as needed.

Abnormal Pressure Readings

High Readings

1. Inspect the collector magnehelic gauge for proper operation. Verify the accuracy of the gauge by measuring the pressure drop across the collector with an alternative gauge. Disconnect tubing from gauge and clean the gauge tubing with compressed air. Reread the pressure drop across the collector. Repair or replace the magnehelic gauge as required.
2. Adjust cleaning system settings to increase pulsing and reduce pressure.
3. Check inlet and outlet ductwork systems for material buildup. Repair and clean as required.
4. Check cleaning system components (i.e., valves, couplings, pulse header, pulse pipes, solenoids, timer). Repair or replace as required.
5. Check compressed air system. Repair as required.
6. Visually inspect the filters of the collector for material bridging. Remove material buildup. Replace filters, as needed.

Low Readings

1. Inspect the collector magnehelic gauge for proper operation. Verify the accuracy of the gauge by measuring the pressure drop across the collector with an alternative gauge. Disconnect tubing from gauge and clean the gauge tubing with compressed air. Reread the pressure drop across the collector. Repair or replace the magnehelic gauge as required.
2. Adjust cleaning system settings to decrease pulsing and build pressure.
3. Check plenum for leaks and wear. Repair as required.
4. Check access doors and hardware for leaks and wear. Repair as required.
5. Check inlet and outlet ductwork systems for leaks. Repair and clean as required.
6. Check the collector housing for leaks. Repair and clean as required.
7. Check filter seals at the tube sheet. Repair or replace as required.
8. Inspect the fan components (i.e., blades, belts, wheel, inlet and outlet doors) for leaks and wear. Replace or repair as required.

9. Conduct a leak test on the filters of the collector. Replace filters as needed.

FEDERAL RULE APPLICABILITY

It should be noted that emission units AA-002, AA-008 and AA-009 are thermal spraying operations subject to 40 CFR 63, Subpart WWWWWW. Subpart WWWWWW requires that the dust collector be operated and maintained according to the manufacturer's specifications and instructions. In any situation where the manufacturer's preventative maintenance instructions are more stringent than those identified in this plan, PGT shall follow the manufacturer's instructions.

INVENTORY OF REPLACEMENT PARTS

Praxair will maintain an inventory of critical parts, including replacement cartridge filters (MERV rating ≥ 16). If the necessary replacement part/cartridge is not on hand and the continued use of the collector would result in a violation of any applicable air regulation, the process being controlled will be shut down until the replacement part is obtained and installed.

Sample Semiannual Inspection Checklist

DUST COLLECTOR PREVENTIVE MAINTENANCE INSPECTION CHECKLIST

LOCATION ID#

Date	Time	Pass/Fail (check)	<u>Routine inspections</u>	<u>NOTES</u>
Weekly Inspection Items				
			1. Record the differential pressure reading of the magnehelic or photohelic gauge. If the gauge reading is outside the acceptable range listed in Table 1, implement the troubleshooting contingency and corrective actions provided in the Section titled "Troubleshooting Contingency and Corrective Action".	
Semi-Annual Inspection Items				
			1. Check cleaning system components and compressed air system for system leaks. Repair or replace as required.	
			2. Check discharge hoppers for material buildup. Tap the hoppers and if a dull thud is heard, notify supervisor.	
			3. Listen for excessive noise from the fan which would indicate that the bearings or bushings are bad.	
			4. Check for excess vibration from the fan system.	
			5. Visually check inlet and outlet duct work systems for leaks. Repair as required.	
			6. Visually check the collector housing for leaks. Repair as required.	
			7. Visually inspect after filter for material buildup. Replace as required.	
			8. Measure the pressure drop across the after-filter. Compare to manufacturers specifications. Replace as required.	
			9. Inspect the magnehelic/photohelic gauge for plugging. Clean as required.	
			10. Inspect the magnehelic/photohelic gauge for proper operation. Verify the accuracy of the gauge by measuring the pressure drop across the collector with an alternative gauge.	
			11. Record the date of the inspection , inspection activities and any troubleshooting or corrective actions to be taken as a results of the semi-annual inspectionon this form	

APPENDIX B
HAP MONITORING PLAN

HAP MONITORING PLAN
PG Technologies LLC
Ellisville, Mississippi

Introduction

PG Technologies LLC (PGT) has prepared this hazardous air pollutant (HAP) monitoring plan in order to satisfy Condition 5.4 of PGT's Construction Permit Number 1360-00158. Praxair has accepted synthetic minor limits in order to avoid being a major source under Section 112 of the Clean Air Act (CAA). Construction Permit 1360-00158 limits facility-wide HAP emissions to nine (9) tons per year of a single HAP and 24 tons per year of all combined HAPs. The purpose of the HAP monitoring plan is to identify how the HAP emissions from the emission units will be estimated and how PGT intends to maintain records of the HAP emissions to demonstrate ongoing compliance with HAP emission limits.

HAP Emitting Processes

The emission units contributing to facility-wide HAP, and the specific HAPs associated with each, are listed below. HAP emissions from all other processes at the facility are negligible.

- Coating Operation 1 (Nickel, Cobalt, Chromium)
- Coating Operation 4 (Hydrogen Fluoride)
- Coating Operation 6 (Methanol)
- Coating Operation 7 (Nickel, Cobalt, Chromium)
- Coating Operation 8 (Nickel, Cobalt, Chromium)
- Coating Operation 9 (Nickel, Cobalt, Chromium)
- Stripping Operation 1 (Hydrogen Fluoride)

HAP Monitoring Plan

HAP emissions from the aforementioned emission units will directly correlate with the material usage rates in each of these processes. Praxair will track material usage rates in

order to estimate HAP emissions on a monthly basis. A 12-month rolling total will also be maintained to verify compliance with the synthetic minor limits. In lieu of using actual HAP composition data for each coating material, Praxair may conservatively utilize the maximum HAP compositions included in the permit application. Praxair will utilize the control device efficiencies identified in the permit application to estimate emission rates, when applicable. HAP emissions from Stripping Operation 1 and Coating Operation 4 are due to chemical reactions in the processes. The calculation for these processes will be based on the stoichiometry of the chemical reactions involved. Table 1 shows all assumed values that will be used to calculate HAP emissions on an ongoing basis.

**Table 1
HAP Calculation Data**

Unit ID	Control Device ID	Process	Parameter to Track Monthly	Emission Factor (lb/lb)	Nickel Content (%)	Chromium Content (%)	Cobalt Content (%)	Total HAP Content (%)	Control Efficiency
HV001	DC-26	Coating Operation 1	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%
HV002	DC-27	Coating Operation 1	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%
HV003	DC-28	Coating Operation 1	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%
P001	DC-29	Coating Operation 7	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%
P002	DC-30	Coating Operation 7	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%
P003	DC-31	Coating Operation 7	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%
S001	DC-32	Coating Operation 9	Coating Material Usage	0.52	9%	16%	9%	45%	99.7%
S002	DC-33	Coating Operation 9	Coating Material Usage	0.52	9%	16%	9%	45%	99.7%
S003	DC-34	Coating Operation 9	Coating Material Usage	0.52	9%	16%	9%	45%	99.7%
HY001	DC-35	Coating Operation 8	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%
HY002	DC-36	Coating Operation 8	Coating Material Usage	0.63	50%	50%	50%	95%	99.7%

Unit ID	Control Device ID	Process	Parameter to Track Monthly	Emission Factor (lb/lb)	Nickel Content (%)	Chromium Content (%)	Cobalt Content (%)	Total HAP Content (%)	Control Efficiency
N001	N/A	Coating Operation 6	Ingredient E Usage	1.00	0%	0%	0%	1.2% <i>Methanol</i>	0%
VF001 - VF009	Wet Scrubber	Coating Operation 4	Ingredient F Usage	<i>HAP emissions calculated based on chemical reactions within process as detailed in permit application.</i>					90%
A-1	N/A	Stripping Operation 1	Ingredient B Usage						0%

Notes:

Emission factors calculated as follows based on mass balances and emission calculations in the permit application:

Potential Emissions (lb/hr) / Potential Throughput (lb/hr)