

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

January 26, 2018

PERMIT TO INSTALL
204-16A

ISSUED TO
Pratt & Whitney AutoAir, Inc.

LOCATED AT
1781 Holloway Drive
Holt, Michigan

IN THE COUNTY OF
Ingham

STATE REGISTRATION NUMBER
P0774

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: October 25, 2017	
DATE PERMIT TO INSTALL APPROVED: January 26, 2018	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-PAA	Phosphoric Acid Anodizing. A phosphoric acid anodizing line consisting of thirteen tanks to clean and treat metal surfaces. Two cleaning tanks (106 & 107), two phosphoric acid deoxidizing tank (111 & 112), two phosphoric acid anodizing tanks (114 & 115), and seven rinse tanks (108, 109, 110, 113, 116, 117, and 118).	5/9/2017 / TBD	FG-CLEANUP, FG-FACILITY
EU-AUTOPRIME	An automated metal coating line consisting of: a coating booth for the first primer coat, a curing oven for the first primer coat, a coating booth for the second primer coat, and a curing oven for the second primer coat.	TBD / NA	FG-CLEANUP, FG-COATING, FG-FACILITY
EU-FOAMAPP	A polyurethane adhesive applied to bond foam to the blade. The adhesive is cured in a vacuum sealed bag.	3/20/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-COVERBOND	A bonding process between the blade cover and body. A polyurethane adhesive is applied, the separate parts are joined, and the combined parts are placed in a vacuum seal bag inside a pressure vessel during the curing process.	2/27/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-LEADEDGE BOND	A bonding process between the titanium sheath and the aluminum blade by applying adhesive and curing in a heated, pressurized autoclave.	3/20/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-SHEATHBOND	A bonding process between the sheath and blade assembly by applying adhesive and curing in an oven and a heated, pressurized autoclave.	2/28/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-MEDIABLAST	Three (3) manual and three (3) robotic media blast booths that apply plastic media to the blade body to remove excess adhesive, tape, and scrim cloth from the blade body. Each booth is enclosed, equipped with a fabric filter system, and vented to the general in-plant environment.	3/2/2017, 8/25/2017, 10/20/2017 / NA	FG-CLEANUP, FG-MEDIA, FG-FACILITY
EU-GAPFILL	An epoxy is mixed and used to fill the gaps created by EU-COVERBOND. Curing is performed in two natural gas-fired ovens.	3/2/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-TAI	Thermal Acoustic Imaging. A coating booth for the application of developer films. After application of the films, parts are introduced to high vibrations to inspect the part for loose bonds and then manually cleaned.	3/20/2017 / NA	FG-CLEANUP, FG-COATING, FG-FACILITY

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-LPB	Low Plasticity Burnishing. Fully-enclosed LPB Haas Mills that compress the parts using a coolant, making the parts stronger and more resistant to stress fractures. Excess coolant is removed in two deionized water washing machines.	6/9/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-SHOTPEEN	Two (2) stations for the application of ceramic media to the part to cold work the aluminum and produce a compressive residue stress layer. Each station is enclosed, equipped with a fabric filter system, and vented to the general in-plant environment.	3/22/2017 / NA	FG-CLEANUP, FG-MEDIA, FG-FACILITY
EU-SOLGEL	Manual application, followed by open air curing, of a bonding promoter to the root of the fan blade.	3/27/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-PRIMEBOOTH	A metal surface coating line that consists of a manual coating application booth and two natural gas curing ovens.	3/27/2017 / NA	FG-COATING, FG-FACILITY
EU-GTWP	Ground Tab & Wear Pad Bond. Manual application of corrosive protection, adhesives, wax, and the ground tab. Two electric ovens are used for the curing process.	2/20/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-TEFLON	Manual brush application of a Teflon top-coat. The Teflon material is mixed in a hood that vents to the in-plant environment and applied in the general in-plant environment to the root of the fan blade. The parts open air cure for at least one hour, then are placed in an electric oven for two hours.	2/20/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-BONDPLATSEALS	The application of a rubber seal using RTV silicone in a downdraft table vented to the outside environment, followed by an open-air cure.	3/27/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-BLUELIGHT	A coating process that applies developer film to the blade used for quality inspection. The blade is sprayed with the coating, inspected using a laser scanning machine, and manually wiped from the blade over a downdraft table.	3/10/2017 / NA	FG-CLEANUP, FG-COATING, FG-FACILITY
EU-PARTMARK	A final inspection and ink marking of the blades.	3/10/2017 / NA	FG-CLEANUP, FG-BONDANDFINISH, FG-FACILITY
EU-EMGRICE1	A 97 horsepower (HP) natural gas-fueled emergency engine manufactured in 2013.	2/6/2014	FGFACILITY

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-EROSIONCOAT	An erosion coat line consisting of an electric, infrared radiated oven curing zone, two natural gas fired curing zones, one electric convention oven, clean-up operations, and six paint booths: a Primer booth, Chemlok booth, and four Chemglaze booths. Each booth includes a robot equipped with an HVLP applicator. Emissions will be vented to a regenerative thermal oxidizer.	TBD	FG-FACILITY
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to: EU-PAA

DESCRIPTION: Phosphoric Acid Anodizing. A phosphoric acid anodizing line consisting of thirteen tanks to clean and treat metal surfaces. Two cleaning tanks (106 & 107), two phosphoric acid deoxidizing tank (111 & 112), two phosphoric acid anodizing tanks (114 & 115), and seven rinse tanks (108, 109, 110, 113, 116, 117, and 118).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component that is used in EUPAA. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-PAA. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-PAA	30	55.2	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: EU-EMGRICE1

DESCRIPTION: A nominally rated 97 HP natural gas-fired emergency engine. The engine is used to provide electrical power to the facility in the event power is lost.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO _x + HC	10 g/HP-hr	Test Protocol*	EU-EMGRICE1	SC V.1, VI.1, VI.2	40 CFR 60.4233(d)
2. CO	387 g/HP-hr	Test Protocol*	EU-EMGRICE1	SC V.1, VI.1, VI.2	40 CFR 60.4233(d)

*Test Protocol shall determine averaging time.

II. MATERIAL LIMITS

1. The permittee shall burn only natural gas in EU-EMGRICE1. **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU-EMGRICE1 for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 500 hours includes the 100 hours as described in SC III.2 and SC III.3. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee may operate EU-EMGRICE1 for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, 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 Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. **(40 CFR 60.4243(d)(2))**
3. EU-EMGRICE1 may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing as described in SC III.2. 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 the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4243(d)(3))**
4. The permittee shall operate and maintain EU-EMGRICE1 such that it meets the emission limits in SC I.1 and SC I.2 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**

5. If EU-EMGRICE1 is operated as a certified engine, according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for EU-EMGRICE1:
 - a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
 - b. Meet the requirements as specified in 40 CFR 1068 Subparts A through D, as applicable, including labeling and maintaining certified engines according to the manufacturer's recommendations,
 - c. Only change those engine settings that are permitted by the manufacturer.

If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and be subject to SC III.6. **(40 CFR 60.4243(b)(1))**

6. If EU-EMGRICE1 is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee shall keep a maintenance plan for EU-EMGRICE1 and shall, to the extent practicable, maintain and operate EU-EMGRICE1 in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain EU-EMGRICE1 with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4237(a))**
2. The nameplate capacity of EU-EMGRICE1 shall not exceed 97 HP, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d), 40 CFR 60.4230)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If EU-EMGRICE1 is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee must demonstrate compliance as follows:
 - a. Conduct an initial performance test to demonstrate compliance with the applicable emission limits in SC I.1 and SC I.2 within 60 days after achieving the maximum production rate at which EU-EMGRICE1 will be operated, but not later than 180 days after initial startup of EU-EMGRICE1, or within 1 year after EU-EMGRICE1 is no longer operated as a certified engine.
 - b. The performance tests shall be conducted according to 40 CFR 60.4244.
 - c. Subsequent performance testing shall be completed every 8,760 hours of engine operation or every 3 years, whichever comes first, to demonstrate compliance with the applicable emission limits.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21 (c) & (d), 40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep, in a satisfactory manner, the following records for EU-EMGRICE1:
 - a. If certified: The permittee shall keep records of the documentation from the manufacturer that the EU-EMGRICE1 is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.
 - b. If non-certified: The permittee shall keep records of testing required in SC V.1.

The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), 40 CFR 60.4243, 40 CFR 60.4245(a))**

2. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EU-EMGRICE1:
 - a. If certified: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that EU-EMGRICE1 has been maintained according to them, as specified in SC III.5.
 - b. If non-certified: The permittee shall keep records of a maintenance plan, as required by SC III.6 and maintenance activities.

The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4243, 40 CFR 60.4245(a), 40 CFR Part 60 Subpart JJJJ)**

3. The permittee shall monitor and record the total hours of operation for EU-EMGRICE1 per calendar year, recorded through the non-resettable hours meter, in a manner acceptable to the District Supervisor, Air Quality Division. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(40 CFR 60.4245(b))**
4. The permittee shall monitor and record the total hours of operation for EU-EMGRICE1 per 12-month rolling time period. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. The permittee shall submit a notification, in writing, within 30 days of switching operation of EU-EMGRICE1 from a certified to a non-certified manner, to the AQD District Supervisor. **(40 CFR Part 60 Subpart JJJJ)**
2. If EU-EMGRICE1 has not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231, the permittee shall submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the following information:
 - a. The date construction of EU-EMGRICE1 commenced;
 - b. Name and address of the owner or operator;
 - c. The address of the affected source;
 - d. EU-EMGRICE1 information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 - e. EU-EMGRICE1 emission control equipment; and
 - f. Fuel used in EU-EMGRICE1.

The notification must be postmarked no later than 30 days after construction commenced for EU-EMGRICE1. **(40 CFR 60.7(a)(1), 40 CFR 60.4245(c))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEMGRICE1	3	4.25	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart JJJJ, as they apply to EU-EMGRICE1. **(40 CFR Part 60 Subparts A & JJJJ)**
2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR, Part 63, Subpart A and Subpart ZZZZ, as they apply to EU-EMGRICE1, by the initial start-up date. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6590(c)(1))**

The following conditions apply to: EU-EROSIONCOAT

DESCRIPTION: An erosion coat line consisting of an electric, infrared radiated oven curing zone, two natural gas fired curing zones, one electric convection oven, and six paint booths: a Primer booth, Chemlok booth, and four Chemglaze booths. Each booth includes a robot equipped with an HVLP applicator. Emissions will be vented to a regenerative thermal oxidizer.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Regenerative Thermal Oxidizer (RTO)

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	7.0 tpy	12-month rolling time period as determined at the end of each calendar month	EU-EROSIONCOAT	SC VI.3	R 336.1205(1)(a), R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall capture all acetone, VOC, and/or HAP-containing waste materials and shall store them in closed containers. The permittee shall dispose of these waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC and/or HAP containing materials, including coatings, reducers, solvents and thinners, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1225, R 336.1702(a))**
3. The permittee shall not operate EU-EROSIONCOAT unless a malfunction abatement plan (MAP) as described in Rule 911(2) has been submitted 45 days prior to initial operation, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205, R 336.1702(a), R 336.1910)**

4. The permittee shall maintain a minimum facial velocity of 200 ft/min between the PTE and the adjacent area on a continuous basis. **(R 336.1205, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. Whenever solvent-based coating is being applied, the permittee shall not operate EU-EROSIONCOAT unless the RTO is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the RTO includes a minimum VOC destruction efficiency of 98 percent (by weight), maintaining a minimum temperature of 1,500°F, and a minimum retention time of 0.5 seconds. **(R 336.1205, R 336.1702(a), R 336.1910)**
2. The permittee shall not operate EU-EROSIONCOAT unless the PTE is installed, maintained and operated in a satisfactory manner. Satisfactory operation requires that the PTE is operating at a pressure lower than all adjacent areas, so that air flows into the PTE through all natural draft openings (NDOs). NDO is defined as any opening that is not connected to a duct in which a fan or blower is installed. **(R 336.1205, R 336.1702(a), R 336.1910)**
3. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, pitot tube array pressure transmitters or equivalent, to monitor and calculate the facial velocity of air introduced into the erosion coat system between the PTE for EU-EROSIONCOAT and the adjacent area on a continuous basis during operation of any portion of EU-EROSIONCOAT. **(R 336.1205, R 336.1702(a), R 336.1910)**
4. The permittee shall equip and maintain EU-EROSIONCOAT with HVLP applicators or comparable technology with equivalent transfer efficiency. For HVLP applicators, the permittee shall keep test caps available for pressure testing. **(R 336.1702(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall determine the VOC content, water content and density of any coating, as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1224, R 336.1225, R 336.1702)**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702)**
3. The permittee shall keep the following information on a calendar month basis for EU-EROSIONCOAT:
 - a. Gallons or pounds (with water) of each coating, cleanup solvent, etc. (materials) used and, if applicable, reclaimed.
 - b. Gallons or pounds (with water) of coatings and cleanup solvent used in gallons per 12-month rolling time period as determined at the end of each calendar month.
 - c. VOC content (with water) of each material as applied and, if applicable, reclaimed.
 - d. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.

- e. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702)**

4. The permittee shall monitor, calculate, and record, in a satisfactory manner, the facial velocity of air introduced into the erosion coat system between the PTE for EU-EROSIONCOAT and the adjacent area, on a continuous basis, to verify that air is entering the PTE. Data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702, R 336.1910)**
5. The permittee shall monitor and record, in a satisfactory manner, the temperature in the RTO on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-EROSIONCOAT. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-EROSIONCOAT	40	35	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-COATING	Four (4) coating booth lines for the application of primer for better adhesion in later steps, or developer film for quality control.	EU-AUTOPRIME, EU-TAI, EU-PRIMEBOOTH, EU-BLUELIGHT
FG-MEDIA	Eight media blasting stations: six for the removal of excess adhesive, tape, etc., and two that use the application of ceramic media to cold work the aluminum of the root of the blade.	EU-MEDIABLAST, EU-SHOTPEEN
FG-CLEANUP	All clean-up operations throughout the facility that consist of IPA and acetone, both in pre-soaked wipes and bulk form. This excludes clean-up operations from EU-EROSIONCOAT	EU-PAA, EU-PRIMEBOOTH, EU-FOAMAPP, EU-COVERBOND, EU-LEADEDGEBOND, EU-SHEATHBOND, EU-MEDIABLAST, EU-GAPFILL, EU-TAI, EU-LPB, EU-SHOTPEEN, EU-SOLGEL, EU-AUTOPRIME, EU-GTWP, EU-TEFLON, EU-BONDPLATSEALS, EU-BLUELIGHT, EU-PARTMARK
FG-BONDANDFINISH	Various adhesive/epoxy bonding stations that bond the different parts of the final product together and a finishing station that weighs the final product and uses ink printers to mark the final product with the appropriate weights.	EU-FOAMAPP, EU-COVERBOND, EU-LEADEDGEBOND, EU-SHEATHBOND, EU-GAPFILL, EU-LPB, EU-SOLGEL, EU-GTWP, EU-TEFLON, EU-BONDPLATSEALS, EU-PARTMARK
FG-FACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

The following conditions apply to: FG-COATING

DESCRIPTION: Four (4) coating booth lines for the application of primer for better adhesion in later steps or developer film for quality control.

Emission Units: EU-PRIMEBOOTH, EU-TAI, EU-AUTOPRIME, EU-BLUELIGHT

POLLUTION CONTROL EQUIPMENT: Fabric filters for each coating booth

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs from coating operations	2,000 lb/month	Calendar Month	Each Emission Unit in FG-COATING	SC VI.3	R 336.1702(d)
2. VOCs from coating operations	10 tpy	12-month rolling time period as determined at the end of each calendar month	Each Emission Unit in FG-COATING	SC VI.3	R 336.1702(d)
3. Acetone (CAS No. 67-64-1) from coating operations	5.0 tpy	12-month rolling time period as determined at the end of each calendar month	EU-TAI	SC VI.4	R 336.1224
4. Acetone (CAS No. 67-64-1) from clean-up of coating operations	3.0 tpy	12-month rolling time period as determined at the end of each calendar month	EU-AUTOPRIME	SC VI.4	R 336.1224

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall capture all acetone, VOC, and/or HAP-containing waste materials and shall store them in closed containers. The permittee shall dispose of these waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. **(R 336.1224, R 336.1370)**
3. The permittee shall handle all VOC and/or HAP containing materials, including coatings, reducers, solvents and thinners, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1224, R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any emission unit in FG-COATING unless all respective exhaust filters are installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1301, R 336.1910)**

2. The permittee shall equip and maintain FG-COATING with HVLP applicators or comparable technology with equivalent transfer efficiency. For HVLP applicators, the permittee shall keep test caps available for pressure testing. **(R 336.1702(d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall determine the VOC content, water content and density of any coating, as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1224, R 336.1225, R 336.1702)**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702)**
3. The permittee shall keep the following information on a monthly basis for EU-PRIMEBOOTH, EU-TAI, EU-AUTOPRIME, and EU-BLUELIGHT, each separately:
 - a. Gallons or pounds (with water) of each material used and, if applicable, reclaimed. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - b. VOC content (with water) of each material as applied.
 - c. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
 - d. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702)**

4. The permittee shall keep the following information on a monthly basis for EU-TAI and EU-AUTOPRIME, each separately:
 - a. Gallons or pounds of acetone (CAS No. 67-64-1) used and, if applicable, reclaimed.
 - b. Acetone (CAS No. 67-64-1) content, in pounds per gallon or pounds per pound, of each material used. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - c. Acetone (CAS No. 67-64-1) mass emission calculations determining the monthly emission rate in tons per calendar month.
 - d. Acetone (CAS No. 67-64-1) mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records on file using mass balance or an alternate method and format acceptable to the AQD District Supervisor and make them available to the Department upon request.¹ **(R 336.1224)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FG-COATING. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-PRIMEAUTOCO1	12	44.75	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV-PRIMEAUTOCO2	12	44.75	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV-PRIMEAUTOBTH1	24	49.83	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV-PRIMEAUTOBTH2	24	49.83	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV-TAI	18	50	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV-PRIMEBTH	24	50	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV-PRIMECO1	12	44.75	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV-PRIMECO2	12	44.75	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV-BLUELIGHT1	18	50	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV-BLUELIGHT2	18	50	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart HHHHHH for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources by the initial compliance date. **(40 CFR Part 63, Subpart A and Subpart HHHHHH)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: FG-MEDIA

DESCRIPTION: Eight media blasting stations: six for the removal of excess adhesive, tape, etc., and two that use the application of ceramic media to cold work the aluminum of the root of the blade.

Emission Units: EU-MEDIABLAST, EU-SHOTPEEN

POLLUTION CONTROL EQUIPMENT: Fabric filter system for each station.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any emission unit in FG-MEDIA unless the respective fabric filter system is installed, maintained, and operated in a satisfactory manner. **(R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FG-MEDIA. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

1. The permittee shall exhaust FG-MEDIA only to the general in-plant environment. **(R 336.1225, 40 CFR 52.21 (c) & (d))**

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: FG-CLEANUP

DESCRIPTION: All clean-up operations throughout the facility that consist of IPA and acetone, both in pre-soaked wipes and bulk form.

Emission Units: EU-PAA, EU-PRIMEBOOTH, EU-FOAMAPP, EU-COVERBOND, EU-LEADEDGEBOOND, EU-SHEATHBOND, EU-MEDIABLAST, EU-GAPFILL, EU-TAI, EU-LPB, EU-SHOTPEEN, EU-SOLGEL, EU-AUTOPRIME, EU-GTWP, EU-TEFLON, EU-BONDPLATSEALS, EU-BLUELIGHT, EU-PARTMARK

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	40.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG-CLEANUP	VI.3	R 336.1702(a)
2. Acetone (CAS No. 67-64-1)	30.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG-CLEANUP	VI.4	R 336.1224

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall capture all acetone, VOC, and/or HAP-containing waste materials and shall store them in closed containers. The permittee shall dispose of these waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall handle all acetone, VOC and/or HAP containing materials, including coatings, reducers, solvents and thinners, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1224, R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall determine the VOC content, water content and density of any material, as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1225, R 336.1702R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1224, R 336.1225, R 336.1702)**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702)**
3. The permittee shall keep the following information on a monthly basis for clean-up operations for FG-CLEANUP:
 - a. Gallons or pounds (with water) of each material used and, if applicable, reclaimed. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - b. VOC content (with water) of each material as applied.
 - c. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
 - d. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702)**

4. The permittee shall keep the following information on a monthly basis for clean-up operations for FG-CLEANUP:
 - a. Gallons or pounds of acetone (CAS No. 67-64-1) used and, if applicable, reclaimed. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - b. Acetone (CAS No. 67-64-1) content, in pounds per gallon or pounds per pound, of each material used.
 - c. Acetone (CAS No. 67-64-1) mass emission calculations determining the monthly emission rate in tons per calendar month.
 - d. Acetone (CAS No. 67-64-1) mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records on file using mass balance or an alternate method and format acceptable to the AQD District Supervisor and make them available to the Department upon request. **(R 336.1224)¹**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FG-BONDANDFINISH. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-BOND&FINISHCO1	5	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV-BOND&FINISHCO2	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV-BOND&FINISHCO3	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV-BOND&FINISHCO4	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV-BOND&FINISHCO5	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV-SEALBOND	22	45.67	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV-AUTOCLAVE1-1	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV-AUTOCLAVE1-2	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV-AUTOCLAVE1-3	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV-AUTOCLAVE2-1	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
11. SV-AUTOCLAVE2-2	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
12. SV-AUTOCLAVE2-3	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
13. SV-NGBOND&FINISHCO1	6	43.5	R 336.1225, 40 CFR 52.21 (c) & (d)
14. SV-NGBOND&FINISHCO2	6	43.5	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: FG-BONDANDFINISH

DESCRIPTION: Various adhesive/epoxy bonding stations that bond the different parts of the final product together and a finishing station that weighs the final product and uses ink printers to mark the final product with the appropriate weights.

Emission Units: EU-FOAMAPP, EU-COVERBOND, EU-LEADEDGEBOND, EU-SHEATHBOND, EU-GAPFILL, EU-LPB, EU-SOLGEL, EU-GTWP, EU-TEFLON, EU-BONDPLATSEALS, EU-PARTMARK

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs from non-cleanup operations	4.5 tpy	12-month rolling time period as determined at the end of each calendar month	FG-BONDANDFINISH	VI.3	R 336.1225, R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall capture all VOC-containing waste materials and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1702(a))**
2. The permittee shall handle all VOC and/or HAP containing materials, including coatings, reducers, solvents and thinners, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1225, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall determine the VOC content, water content and density of any material, as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1225, R 336.1702R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1224, R 336.1225, R 336.1702)**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702)**
3. The permittee shall keep the following information on a monthly basis for FG-BONDANDFINISH:
 - a. Gallons or pounds (with water) of each material used and, if applicable, reclaimed. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - b. VOC content (with water) of each material as applied.
 - c. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
 - d. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FG-BONDANDFINISH. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-BOND&FINISHCO1	5	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV-BOND&FINISHCO2	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SV-BOND&FINISHCO3	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SV-BOND&FINISHCO4	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SV-BOND&FINISHCO5	4	42.5	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SV-SEALBOND	22	45.67	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SV-AUTOCLAVE1-1	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SV-AUTOCLAVE1-2	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
9. SV-AUTOCLAVE1-3	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
10. SV-AUTOCLAVE2-1	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
11. SV-AUTOCLAVE2-2	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
12. SV-AUTOCLAVE2-3	3	45.3	R 336.1225, 40 CFR 52.21 (c) & (d)
13. SV-NGBOND&FINISHCO1	6	43.5	R 336.1225, 40 CFR 52.21 (c) & (d)
14. SV-NGBOND&FINISHCO2	6	43.5	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply Source-Wide to: FG-FACILITY

DESCRIPTION: All process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Each Individual HAP	8.9 tpy*	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3)
2. Aggregate HAPs	22.4 tpy*	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2	R 336.1205(3)
3. VOCs	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.3	R 336.1205(3)
4. VOCs	30.0 tpy	12-month rolling time period as determined at the end of each calendar month	All metal parts coating lines source-wide, including metal parts coating lines covered by other permits, which are exempted by R 336.1621(10)(b). This excludes EU-EROSIONCOAT.	SC VI.3	R 336.1702(d)

* Beginning on the issuance date of this permit, and continuing for the first 12 calendar months, this limit applies to the cumulative total HAP emissions. Thereafter, the limit shall become a 12-month rolling limit.

II. MATERIAL LIMITS

Material	Maximum VOC Content, As Applied, in <u>pounds per gallon*</u>	Usage Limit*	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Coatings (excluding coatings used in EU-EROSIONCOAT)	8.5	9,000 gallons per year	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.3	R 336.1205(1)(a)(ii)(C)

Material	Maximum VOC Content, As Applied, in <u>pounds per gallon</u> *	Usage Limit*	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
2. IPA (CAS No. 67-63-0) (excluding IPA from SC II.1 & EU-EROSIONC OAT)	NA	40.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.4	R 336.1205(1)(a)(ii)(C)

* - VOC Content and usage limits are with water.

Material	Maximum VOC Content, As Applied, in <u>pounds per pound</u> *	Usage Limit*	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
3. Bonding / Finishing Materials – Group 1	1.0	4,750 pounds per year	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.5	R 336.1205(1)(a)(ii)(C)
4. Bonding / Finishing Materials – Group 2	0.35	10,000 pounds per year	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.5	R 336.1205(1)(a)(ii)(C)
5. Bonding / Finishing Materials – Group 3	0.01	100,000 pounds per year	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.5	R 336.1205(1)(a)(ii)(C)

* - VOC Content and usage limits are with water.

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall determine the HAP content of any material as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. **(R 336.1205(3))**
2. The permittee shall determine the VOC content, water content, and density of any material, as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1205(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3))**
2. The permittee shall keep the following information on a monthly basis for FG-FACILITY:
 - a. Gallons or pounds of each HAP containing material used.
 - b. Where applicable, gallons or pounds of each HAP containing material reclaimed. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - c. HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
 - d. Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
 - e. Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months.

The permittee shall keep the records in using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

3. The permittee shall keep the following information on a monthly basis for FG-FACILITY:
 - a. Gallons or pounds of each VOC containing material used and, where applicable, reclaimed. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - b. VOC content, in pounds per gallon or pounds per pound, of each VOC containing material used.
 - c. Gallons, with water, of all coatings used per 12-month rolling time period as determined at the end of each calendar month.
 - d. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
 - e. VOC mass emission calculations determining the monthly emission rate in tons per calendar month for all coating lines operating per the requirements of R 336.1621(10)(b), each separately.
 - f. VOC emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a)(ii)(C) & (3), R 336.1702(d))**

4. The permittee shall keep the following information on a monthly basis for FG-FACILITY (excluding IPA from SC II.1 & EU-EROSIONCOAT):
 - a. Gallons or pounds of each IPA (CAS No. 67-63-0) containing material used and, where applicable, reclaimed. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions.
 - b. IPA content, in pounds per gallon or pounds per pound, of each IPA containing material used.
 - c. IPA mass emission calculations determining the monthly emission rate in tons per calendar month.
 - d. IPA mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a)(ii)(C))**

5. The permittee shall keep the following information on a monthly basis for FG-FACILITY:
 - a. Gallons or pounds, with water, of each VOC containing material used and, if applicable, reclaimed for the following categories, each separately. Reclaimed materials may be subtracted from the total materials used for purposes of calculating emissions:
 - i. Bonding / Finishing Materials – Group 1 as specified in SC II.3
 - ii. Bonding / Finishing Materials – Group 2 as specified in SC II.4
 - iii. Bonding / Finishing Materials – Group 3 as specified in SC II.5
 - b. VOC content, with water, in pounds per pound, of each VOC containing material used for the following categories, each separately:
 - i. Bonding / Finishing Materials – Group 1 as specified in SC II.3
 - ii. Bonding / Finishing Materials – Group 2 as specified in SC II.4
 - iii. Bonding / Finishing Materials – Group 3 as specified in SC II.5
 - c. Gallons or pounds, with water, of each VOC containing material used for the following categories per 12-month rolling time period as determined at the end of each calendar month, each separately:
 - i. Bonding / Finishing Materials – Group 1 as specified in SC II.3
 - ii. Bonding / Finishing Materials – Group 2 as specified in SC II.4
 - iii. Bonding / Finishing Materials – Group 3 as specified in SC II.5

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a)(ii)(C))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA