

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

April 3, 2019

**PERMIT TO INSTALL
20-19**

**ISSUED TO
JP Morgan Chase Co.**

**LOCATED AT
9000 Haggerty Road
Belleville, Michigan**

**IN THE COUNTY OF
Wayne**

**STATE REGISTRATION NUMBER
P0608**

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: March 12, 2019	
DATE PERMIT TO INSTALL APPROVED: April 3, 2019	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department	Michigan Department of Environmental Quality
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MDEQ	Michigan Department of Environmental Quality
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

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 Rule 210 (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 Rule 219 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 Rule 219 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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT 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 (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUENGINE1	A 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engine with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. This emergency engine is subject to the New Source Performance Standards for Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.	June 2015	FGENGINES
EUENGINE2	A 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engine with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. This emergency engine is subject to the New Source Performance Standards for Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.	June 2015	FGENGINES
EUENGINE3	A 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engine with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. This emergency engine is subject to the New Source Performance Standards for Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.	June 2015	FGENGINES
EUENGINE4	A 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engine with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. This emergency engine is subject to the New Source Performance Standards for Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.	June 2015	FGENGINES
EUENGINE5	A 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engine with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. This emergency engine is subject to the New Source Performance Standards for Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.	TBD	FGENGINES

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUENGINE6	A 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engine with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. This emergency engine is subject to the New Source Performance Standards for Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.	TBD	FGENGINES

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 336.1291.

FLEXIBLE GROUP SPECIAL CONDITIONS

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
FGENGINES	Six 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engines with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. The engines are subject to New Source Performance Standards Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.	EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4 EUENGINE5 EUENGINE6

**FGENGINES
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Six 2,500 kilowatt (kW) (3,352 hp) diesel-fueled emergency engines with a model year of 2006 or later, and a displacement of less than 30 liters/cylinder. The engines are subject to New Source Performance Standards Stationary Reciprocating Internal Combustion Engines (RICE), combustion ignition, emergency RICE greater than 3000 hp.

Emission Unit: EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NMHC + NO _x	6.4 g/kW-hr	Hourly	Each engine in FGENGINES	SC VI.2	40 CFR 60.4205(b), 40 CFR 60.4202(a), 40 CFR 89.112 Table 1
2. CO	3.5 g/kW-hr	Hourly	Each engine in FGENGINES	SC VI.2	40 CFR 60.4205(b), 40 CFR 60.4202(a), 40 CFR 89.112 Table 1
3. PM	0.20 g/kW-hr	Hourly	Each engine in FGENGINES	SC VI.2	40 CFR 60.4205(b), 40 CFR 60.4202(a), 40 CFR 89.112 Table 1
4. NO _x	5.32 g/hp-hr	Hourly	Each engine in FGENGINES	GC 13	R 336.1205(1)(a)&(3), 40 CFR 52.21(c) & (d)

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel, in FGENGINES with the maximum sulfur content of 15 ppm (0.0015 percent) by weight, and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (3), 40 CFR 60.4207, 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate each engine in FGENGINES 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 hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21 (c) & (d))**
2. The permittee shall not allow each engine in FGENGINES to exceed 100 hours per calendar year for maintenance checks and readiness testing and emergency demand response. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. **(40 CFR 60.4211(f)(2))**

3. The permittee may operate each engine in FGENGINES up to 50 hours per calendar year for non-emergency situations, but those hours are to be counted towards the 100 hours per calendar year for maintenance and testing and emergency demand response, as allowed in 40 CFR 63.6640(f)(2). **(40 CFR 60.4211(f)(3))**
4. The permittee shall install, maintain, and operate each of FGENGINES according to the manufacturer written instructions, or procedures developed by the owner/operator and approved by the engine manufacturer, over the entire life of the engine. **(40 CFR 60.4206, 40 CFR 60.4211(a))**
5. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year, the permittee shall meet the following requirements for each engine in FGENGINES:
 - a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
 - b) Keep a maintenance plan and the permittee may only change those engine settings that are permitted by the manufacturer. If you do 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
 - c) Meet the requirements as specified in 40 CFR Parts 89, 94, and/or 1068, as they apply to each engine. **(40 CFR 60.4211(a), (c), (g))**
6. The permittee shall not operate more than one engine at full load simultaneously. If two or more engines in FGENGINES are operated simultaneously, the total load shall not exceed 3,000 KW. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each engine in FGENGINES with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4209)**
2. The nameplate capacity of each engine in FGENGINES shall not exceed 2,500 kW, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), 40 CFR 60.4202, 40 CFR 89.112(a))**

V. TESTING/SAMPLING

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

1. The permittee shall conduct an initial performance test for each engine in FGENGINES, within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205(a), unless the engines have been certified by the manufacturer as required by 40 CFR Part 60 Subpart IIII and the permittee maintains the engine as required by 40 CFR 60.4211. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. After conducting the initial performance test, the permittee shall conduct subsequent performance testing, for non-certified engines, every 8,760 hours or 3 years, whichever comes first. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 60.4205(b), 40 CFR 60.4211(g), 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for each engine in FGENGINES, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall document how many hours are spent for emergency operation of FGENGINES, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (3), 40 CFR 60.4211, 40 CFR 60.4214)**

2. The permittee shall keep, in a satisfactory manner, a maintenance plan and records of conducted maintenance for each engine in FGENGINES. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211(g))**
3. The permittee shall keep records of the operation of each engine in FGENGINES in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4214(b))**
4. The permittee shall keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that each engine in FGEINGINES meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If any engine in FGENGINES becomes uncertified then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211(g))**
5. The permittee shall keep, in a satisfactory manner, records of the diesel fuel used in each engine in FGENGINES, demonstrating that the fuel sulfur content meets the requirement of 40 CFR 80.510(b). The records shall include the sulfur content of the fuel and the cetane index. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4207, 40 CFR 80.510(b))**
6. The permittee shall monitor and record the total load on FGENGINES during all times that more than one engine is operated simultaneously, to ensure compliance with SC III.6. **(40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Any engine in FGENGINES that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements below:
 - a) The report must contain the following information:
 - i) Company name and address where the engine is located.
 - ii) Date of the report and beginning and ending dates of the reporting period.
 - iii) Engine site rating and model year.
 - iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).
 - vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).
 - vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. **(40 CFR 60.4214)**
2. The annual report for each calendar year must be submitted no later than March 31 of the following calendar year. **(40 CFR 60.4214)**
3. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4. **(40 CFR 60.4214)**

VIII. STACK/VENT RESTRICTION(S)

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-ENGINE1	20	19	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-ENGINE2	20	19	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-ENGINE3	20	19	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-ENGINE4	20	19	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVENGINE5*	30	28.5	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVENGINE6*	30	28.5	R 336.1225, 40 CFR 52.21(c) & (d)

*denotes that the stack has a rain cap

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the New Source Performance Standards, as specified in 40 CFR, Part 60, Subpart A and Subpart IIII, as they apply to FGENGINES. **(40 CFR Part 60 Subparts A and IIII, 60.4200)**
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 FGENGINES, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

Footnotes:

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