

Table of Contents

Section	Page
Alphabetical Listing of Common Abbreviations / Acronyms	2
General Conditions	3
Emission Unit Identification.....	5
Emission Unit Special Conditions.....	5

Common Abbreviations / Acronyms Used in this Permit to Install

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	°F	Degrees Fahrenheit
CEM	Continuous Emission Monitoring	BTU	British Thermal Unit
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
GACS	Gallon of Applied Coating Solids	hr	Hour
GC	General Condition	H ₂ S	Hydrogen Sulfide
HAP	Hazardous Air Pollutant	HP	Horsepower
HVLP	High Volume Low Pressure *	lb	Pound
ID	Identification	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	NO _x	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM-10	Particulate Matter less than 10 microns diameter
NSPS	New Source Performance Standards	pph	Pound per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SRN	State Registration Number	THC	Total Hydrocarbons
TAC	Toxic Air Contaminant	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		VOC	Volatile Organic Compounds
		yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

Supplement to Permit No. 362-01

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, altered, 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. **[R336.1201(1)]**
2. If the installation, reconstruction, relocation, or alteration 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 person to whom this permit was issued, or the designated authorized agent, shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, PO Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or alteration of the equipment allowed by this Permit to Install. **[R336.1201(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 R336.1210, 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. **[R336.1201(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. **[R336.1201(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 R336.1219 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
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. **[R336.1901]**
7. The owner or operator of a source, process, or process equipment shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant in excess of standards for more than one hour, or of any air contaminant in excess of standards for more than two hours, as required in this rule, to the District Supervisor, Air Quality Division. The notice shall be provided no 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 District Supervisor within ten days, with the information required in this rule. **[R336.1912]**
8. Approval of this permit does not exempt the person to whom this permit was issued from complying with any future applicable requirements which may be promulgated under Part 55 of Act 451, PA 1994 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 Act 451, PA 1994, 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 R336.1301, a person 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 R336.1303. **[R336.1301]**
 - 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 R336.1370(2). **[R336.1370]**
13. Except as allowed by Rule 285 (a), (b), and (c), permittee shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application, without prior notification to and approval by the Air Quality Division. **[R336.1201(1)]**
14. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EU-TURBINE1	Turbine generator with water injection system operating in simple-cycle mode	SV-TURBINE1
EU-TANK	100,000 gallon fuel oil storage tank	NA
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

The following conditions apply to: EU-TURBINE1

Emission Limits

	Pollutant	Equipment	Limit**	Time Period	Compliance Method	Applicable Requirement(s)
1.1a	SO ₂	EU-TURBINE1	1645.1 ppd	Daily	See "Compliance Method" below	40 CFR 52.21(c) & (d) R336.1205(3)
1.1b	SO ₂	EU-TURBINE1	28.4 tpy	12-month rolling time period as determined at the end of each calendar month	See "Compliance Method" below	40 CFR 52.21 (c) & (d) R336.1205(3)
1.1c	NO _x	EU-TURBINE1	35.9 tpy	12-month rolling time period as determined at the end of each calendar month	See "Compliance Method" below	R336.1205(3)

**Limits do not include startup, shutdown and malfunction conditions.

ppd = pounds per day

Compliance Method

Test results for SO₂ and NO_x (SC 1.9) shall be used to determine emission rates. The permittee shall use the worse case emission factors from each year of testing. The emission factors, along with the fuel-monitoring requirement (SC 1.10) shall be applied to each day to ensure compliance with the daily and 12-month rolling time periods.

Visible Emission Limits

1.2 Visible emissions from EU-TURBINE1 shall not exceed a six-minute average of 10 percent opacity, except for uncombined water vapor. This opacity limit shall not include periods of startup, shutdown, and initial shakedown of the turbines. Compliance with the visible emissions limit shall be determined at least once per calendar year using Federal Reference Method 9 (40 CFR Part 60, Appendix A).
[R336.1301]

Material Usage Limits

- 1.3 The permittee shall only combust fuel oil no. 2 in EU-TURBINE1. **[40 CFR 52.21(c) and (d), R336.1205(1)(a)]**
- 1.4 The sulfur content of the fuel oil combusted in EU-TURBINE1 shall not exceed 0.20 percent by weight. **[40 CFR 52.21(c) and (d), R336.1205(1)(a)]**
- 1.5 The fuel oil combusted in EU-TURBINE1 shall not exceed 2.0 million gallons per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a)]**

Process/Operational Limits

- 1.6 The permittee shall comply with all of the applicable requirements contained in the federal Acid Rain Program, as it applies to EU-TURBINE1. **[Title IV of the federal Clean Air Act of 1990]**
- 1.7 The permittee shall not operate EU-TURBINE1 unless the AQD District Supervisor has approved a plan that describes how emissions will be minimized during startup(s), shutdown(s) and malfunction(s). The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Unless notified by the District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved. **[R336.1911, R336.1912]**

Equipment

- 1.8 The permittee shall equip and maintain EU-TURBINE1 with a water injection system. **[R336.1205(1)(a), R336.1910]**

Testing

- 1.9 Within 180 days after commencement of trial operation, verification of SO₂ and NO_x emission rates from EU-TURBINE1, by testing at owner's expense, in accordance with Department requirements, will be required. The permittee must complete the test once every 12-months for the first five years of operation and once every five years thereafter. No less than 60 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. 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. **[R336.2001, R336.2003, R336.2004]**

Monitoring

- 1.10 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a fuel oil meter to monitor and record the fuel oil usage for EU-TURBINE1 on a daily basis. **[R336.1205(1)(a) and (3)]**

Recordkeeping / Reporting / Notification

- 1.11 The permittee shall keep, in a satisfactory manner, daily, monthly and previous 12-month SO₂ emission calculation records for EU-TURBINE1. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3)]**
- 1.12 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month NO_x emission calculation records for EU-TURBINE1. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a) and (3)]**

- 1.13 The permittee shall keep, in a satisfactory manner, daily, monthly and previous 12-month fuel oil use records for EU-TURBINE1. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205 (1)(a) and (3)]**
- 1.14 The permittee shall keep, in a satisfactory manner, the following record for each fuel oil shipment for EU-TURBINE1:
- a) Name of the fuel oil supplier.
 - b) Sulfur content in percent by weight.
 - c) Higher Heating Value (HHV) of the fuel oil.
 - d) Quantity of fuel oil received.
- All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205 (1)(a), R336.1401(1)]**
- 1.15 The permittee shall keep, in a satisfactory manner, yearly records of the visible emission readings for EU-TURBINE1. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1301]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Outlet Dimension (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement(s)
1.16a	SV-TURBINE1	105 x 131	26.61	40 CFR 52.52 (c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EU-TANK

Recordkeeping/Reporting/Notification

- 2.1 The permittee shall keep, in a satisfactory manner, records showing the dimensions of the fuel oil storage vessel and an analysis showing the capacity of the fuel oil storage vessel to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart Kb. All source information is for the purpose of compliance demonstration and shall be kept on file throughout the life of the vessel and made available to the Department upon request. [**40 CFR Part 60, Subpart Kb**]