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MICHIGAN AIR EMISSIONS REPORTING SYSTEM (MAERS)

EU-101 EMISSION UNIT FORM **INSTRUCTIONS AND EXAMPLE**

Complete the EU-101 Emission Unit Form for each unit that produces emissions. Emission units that were not reported in the last MAERS Report must be added, unless they meet the Rule 201 exemption criteria on page 5. **If an emission unit is covered by an air use or Renewable Operating Permit (ROP), emissions from that emission unit must be reported.** Complete this form even if the emission unit was permanently rendered inoperable during the reporting year.

The Design Capacity fields are required if the emission unit is a boiler or turbine. The Maximum Nameplate Capacity is required for all Electric Generator's rated design capacity at 100% (maximum) operation. The AQD Source ID (SRN), AQD Emission Unit ID and Operator's ID are required fields.

INVENTORY YEAR

1. **Inventory Year – (Required)** the year in which the emission activities took place. (Example: 2011 is the inventory year for the 2011 MAERS report, which is due March 15, 2012.)

FORM REFERENCE SECTION:

2. **Form Type** - DEQ Air Quality reference identification for the form.
3. **AQD Source ID (SRN) – (Required)** - AQD Source ID (SRN) is where the SRN must be entered. This number is also called a State Registration Number (SRN).

OPERATOR'S EMISSION UNIT IDENTIFICATION SECTION:

The Emission Unit ID must be unique for each emission unit at the source. Refer to the MAERS General Instructions and Forms booklet, page 8 for the definition of an Emission Unit ID.

4. **AQD Emission Unit ID** - An Air Quality Division generated ID.
5. **EU ID - (Required)** To create an EU ID, use an EU prefix. If you have an ROP (Renewable Operating Permit), verify that your MAERS submittal accurately reflects the organization of your current ROP with regard to emission units (EU's). The naming convention for EU's in your ROP should be carried over to your MAERS report. This will make your MAERS report more accurate for use in PASS-ROP (ROP electronic application process) and will simplify this process in the future.
6. **Emission Unit Type** - Enter the emission unit (EU) type code from the list below.

E U TYPE CODE	E U TYPE NAME	E U TYPE GROUP	COMMENT_TEXT
100	Boiler	Fuel Comb. Equipment	
120	Turbine	Fuel Comb. Equipment	
140	Combined Cycle (Boiler/Gas Turbine)	Fuel Comb. Equipment	
150	Duct Burner	Fuel Comb. Equipment	
160	Reciprocating IC Engine	Fuel Comb. Equipment	
170	Engine Test Cell	Fuel Comb. Equipment	includes aircraft engines, rocket engines, etc
180	Process Heater	Fuel Comb. Equipment	
200	Furnace	Fuel Comb. Equipment	
210	Kiln	Fuel Comb. Equipment	
220	Calciner	Fuel Comb. Equipment	
250	Direct-fired Dryer	Fuel Comb. Equipment	
255	Dryer, unknown if direct or indirect.	Fuel Comb. Equipment	
260	Indirect-fired Dryer	Evaporative Sources	

E U TYPE CODE	E U TYPE NAME	E U TYPE GROUP	COMMENT_TEXT
280	Flare	Fuel Comb. Equipment	
285	Open Burning	Fuel Comb. Equipment	
290	Other combustion	Fuel Comb. Equipment	Includes space heaters, asphalt kettle heaters, etc.
300	Open Air Fugitive Source	Fugitive Areas	Landfills, Runways, Feedlots, Settling Ponds, WW Treatment units, Equipment Leaks, Haul Roads etc.
310	Roof vents/Building vents	Fugitive Areas	
350	Process Equipment Fugitive Leaks	Fugitive Areas	
360	Process Equipment and Process Area Drains	Fugitive Areas	
390	Other fugitive	Fugitive Areas	
400	Storage Tank	Evaporative Sources	
410	Open Tank or Vat	Evaporative Sources	
430	Degreaser	Evaporative Sources	
450	Spray Booth or Coating Line	Evaporative Sources	
470	Printing Line	Evaporative Sources	
480	Gasoline Loading Rack or Arm	Evaporative Sources	
490	Other evaporative sources	Evaporative Sources	
600	Chemical Reactor	Process Equipment	
610	Oxidation Unit	Process Equipment	
620	Distillation Column/Stripper	Process Equipment	
640	Mixer	Process Equipment	
680	Cooling Tower	Process Equipment	
690	Other process equipment	Process Equipment	
720	Crusher	BMH Equipment	
730	Grinder	BMH Equipment	
740	Screen	BMH Equipment	
760	Conveyor	BMH Equipment	
770	Transfer Point	BMH Equipment	
780	Silo	BMH Equipment	
785	Open Storage Pile	BMH Equipment	
790	Other bulk material equipment	BMH Equipment	
999	Unclassified	Unclassified	

7. **NAICS Code** - If the NAICS Code for this emission unit is different than the NAICS Code identified on Source Form S-101, enter the appropriate NAICS Code.
8. **Installation Date** - Enter the date the emission unit was installed.
9. **Dismantle Date** - Report the date this emission unit was permanently removed or rendered inoperable during this reporting year. If the emission unit was dismantled prior to the reporting year, mark "Remove from MAERS" as "YES".

10. **Emission Unit Description** - Provide a brief narrative description of the emission unit.
11. **Design Capacity** - Enter the design capacity if this emission unit is a boiler or a turbine.
12. **Design Capacity Numerator** – Enter the appropriate unit code from the Unit Code table which is located on the DEQ-AQD website. (If the emission unit is a boiler, the numerator should be either BTUs (BTU), Million BTUs (E6BTU) or Horsepower (HP).
13. **Design Capacity Denominator** – Enter the appropriate unit code from the Unit Code table, which is located on the DEQ-AQD website. If the emission unit is a boiler, report the denominator as Hour (HR). (If the numerator is Horsepower (HP), denominator does not apply. Leave this field blank.)
14. **Maximum Nameplate Capacity** – Report the electric generator’s rated design capacity at 100% (maximum) operation in megawatts.

RULE 201 APPLICABILITY SECTION:

15. **Grandfathered?** - Select “YES” if this emission unit was installed prior to August 15, 1967 and not subsequently modified or reconstructed.
16. **Exempt from Rule 201?** - If the emission unit is exempt from permitting pursuant to **Rules 280 - 290** select “YES”. For a list of exemptions from Rule 201, see Table I page 6).
17. **If Yes, Rule Number** – Enter the specific rule that applies from the Rule 201 Exemption List. If the specific rule that applies from Table I (page 6) is not listed, enter “Other” and describe in Field 10, the “Operator’s Emission Unit Description” field.
18. **If Rule 201 Exempt, Is Throughput Below the Reporting Thresholds?** - Compare the annual throughput to the specific rule listing in Table I (page 6). If the throughput is below the thresholds, select “YES”.
19. **Permit?** – Indicate whether the equipment represented by the Operator’s Emission Unit ID is permitted.
20. **If Yes, Enter the Permit Number** - Enter the number of the appropriate air use permit (i.e., ROP, NSR, and Wayne County). Include the “dash” and any letters that are a part of the permit number (Examples: 115-87 or 115-87A, etc.).

21. Is This Emission Unit Required to Report Emissions to MAERS for this Reporting Year?

Emissions from the following types of emission units must be reported:

- Grandfathered emission units;
- Rule 201 exempt emission units for which emissions reporting is required based on equipment type, capacity, or throughput activity (see Table I, page 6);
- Permitted emission units;
- Emission units from which emissions are accounted for in a Renewable Operating Permit opt-out mechanism;
- For Renewable Operating Permit sources, those additional Rule 201 exempt emission units from which actual emissions exceed 10 percent of significant levels, as defined in Rule 119(e)(see below).

Pollutant	Rule 119 Significant Level(tons per year)	10% of Significant Level (tons per year)
Carbon monoxide	100	10
Nitrogen oxides	40	4
Sulfur dioxide	40	4
Particulate matter	25	2.5
PM10	15	1.5
Volatile organic compounds	40	4
Lead	0.6	0.06

YES is the most common choice to select for this field. NO may be selected for EU's that are not described above. Selecting NO suspends the requirements for further activity and emissions information, yet this allows for the optional reporting of the EU in future reporting years.

TABLE I – Exempt Rule 201 EU’s that must be reported in MAERS:

Emissions from emission units that are identified in the following list of **Rule 201** exemptions must be reported. Report the estimated air pollutants by SCC on the E-101 form. Sum the material throughputs for identical emission units by SCC on form A-101.

For ROP Sources, per Rule 212(7), emissions from any Rule 201 exempt emission unit must be reported if actual emissions from the unit exceed 10% of significant, as defined in Rule 119(e).

EXEMPTION RULE	REPORTING REQUIREMENT
Rule 281(h)	Only report emissions of applicable criteria pollutants for cold cleaners having a total annual throughput greater than 1000 gallons of cleaner (the total annual throughput is the amount of cleaner used minus the cleaner recovered as waste).
Rule 282(b)	Only report emissions of applicable criteria pollutants from fuel burning equipment which has a total annual throughput equal to or greater than any of the following: 50,000,000 cubic feet of gases in Rule 282(b)(i), 400,000 gallons of fuel oil in Rule 282(b)(ii), and 1,000 tons of wood in Rule 282(b)(iii).
Rule 283(1)(c)	Report all emissions of applicable criteria pollutants if the testing medium contains a VOC.
Rule 283(1)(d)	Report all emissions of applicable criteria pollutants if the testing medium contains a VOC.
Rule 284(e)	Report all emissions of applicable criteria pollutants.
Rule 284(f)	Report all emissions of applicable criteria pollutants.
Rule 285(g)	Only report emissions of applicable criteria pollutants for engines with 300 horsepower and larger. Exclude emergency generators whose sole function is to provide back-up power when local utility service is interrupted.
Rule 285(l)(vi)(C)	Only report emissions of applicable criteria pollutants for equipment operating at a rate of 30,000 cubic feet per minute or higher.
Rule 285(p)	Only report emissions of applicable criteria pollutants for annual grain throughputs equal to or greater than 4,000,000 bushels.
Rule 285(r)(iv)	Only report emissions of applicable criteria pollutants for cold cleaners having a total annual throughput greater than 1,000 gallons of cleaner (the total annual throughput is the amount of cleaner used minus the cleaner recovered as waste).
Rule 285(aa)	Report all emissions of applicable criteria pollutants.
Rule 286(b)	Report emissions of applicable criteria pollutants when 3,000 tons or more of plastic is processed annually (aggregate of all plastic processes combined).
Rule 287(c)	Report all emissions of applicable criteria pollutants.
Rule 290	Report all emissions of applicable criteria pollutants.

Control Device Code(s):

22. **Control Device Code** - Enter the unique device code(s) that best describes the method of emissions control. The Control Device codes are available on our website www.michigan.gov/deqair, go to “Emissions”, “Emissions Reporting”, and then “MAERS Support Resources”. Copies of this table may be requested from the district offices listed in the Submittal Instructions, Map and Table I guide. Indicate whether a control device code is being added or deleted by selecting the appropriate box. Indicate the number of control devices associated with this emission unit in the Operator’s Emission Unit Description area, Field 10.

Emission Unit Stack(s):

23. **Operator’s Stack ID** - Provide the Operator’s Stack ID created on form SV-101. Indicate whether a stack is being added or deleted for this emission unit by selecting the appropriate box.