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| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | GI-05BEmission unit informationAir Quality Permit Program*Doc Type: Permit Application* |

**Instructions on page 2.**

|  |  |  |  |
| --- | --- | --- | --- |
| **1a)** AQ Facility ID number: |       | **1b)** Agency Interest ID number: |       |
| **2)** Facility name: |       |

**3) Fill in a column in the table below for each new or modified emission unit (EU/EQUI). Form *GI-05F* *Emission Source Association* must also be submitted whenever this form is required.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **3a) Emission unit ID number** |       |       |       |       |
| **3b) Emission unit type** |       |       |       |       |
| **3c) Emission unit operator’s description** |       |       |       |       |
| **3d) Manufacturer** |       |       |       |       |
| **3e) Model number** |       |       |       |       |
| **3f) Max design capacity, material and units** |       units:      / material:        |       units:      / material:        |       units:      / material:        |       units:      / material:        |
| **3g) Commence construction date (mm/dd/yyyy)** |       [ ]  to be determined |      [ ]  to be determined |      [ ]  to be determined |      [ ]  to be determined |
| **3h) Initial startup date (mm/dd/yyyy)** |       [ ]  to be determined |       [ ]  to be determined |       [ ]  to be determined |       [ ]  to be determined |
| **3i) Modification or reconstructed date (mm/dd/yyyy)** |       |       |       |       |
| **3j) Firing method** |  |  |  |  |
| **3k) Engine use** |  |  |  |  |
| **3l) Engine displacement** |       Units:  |       Units:  |       Units:  |       Units:  |
| **3m) Subject to CSAPR?** |  |  |  |  |
| **3n) Electric generating capacity (megawatts)** |       |       |       |       |
| **3o) SIC code** |      |      |      |      |
| **3p) Status** |  |  |  |  |
| **3q) Removal date (mm/dd/yyyy)** |       |       |       |       |
| **3r) Reasons for changes/modifications** |       |       |       |       |

Instructions for form GI-05B

Use one column for each emission unit (EU). Use multiple copies of this form, if necessary. Use this form to describe emission units other than liquid storage tanks and fugitive emission sources. Separate forms are provided for liquid storage tanks (GI-05C) and for fugitive emission sources (GI-05D).

All fields as directed by the form are **mandatory** except the Agency Interest Identification (ID) number. (if unknown). **If you submit your application with blank mandatory fields or without mandatory attachments, it will be deemed incomplete and returned.**

**1a) AQ Facility ID number --** Fill in your Air Quality (AQ) Facility ID number. This is the first eight digits of the permit number for all new permits issued under the operating permit program. If you don’t know this number, leave this line blank.

**1b) Agency Interest ID number --** Fill in your Agency Interest ID number. This is an ID number assigned to your facility through the Tempo database. If you don’t know this number, leave this line blank.

# 2) Facility name -- Enter the facility name.

**3a) Emission unit ID number --** For the purposes of this application, this is an ID number you assign to each emission unit using a simple 001, 002, 003,... numbering system and must be the same as shown on the Process Flow Diagram Form (Form GI-02). Note that separate forms are provided for tanks and fugitive emission sources.

If you are adding new emission units to your permit or replacing existing emission units, it is important not to reuse previously used EU/EQUI numbers. The new or replacement emission units must be numbered consecutively beginning with the next number after the last one used. Numbers used for removed emission units cannot be reused for new or replacement emission units. This ID number is unique to this piece of equipment and must be used consistently throughout the application. If known, use Tempo IDs (EQUIxxx) instead of Delta IDs (EUxxx). Note that monitors, tanks, and emission units all use EQUI ID numbers in Tempo and the same ID number should not be used for multiple equipment.

**3b) Emission unit type --** You must choose from the following list.

| **Emission unit types** |
| --- |
| Abrasive equipment |  | Conveyor |  | Furnace |  | Process heater |
| Acid treatment equipment |  | Cooler |  | Gasoline loading |  | Pulverizer |
| Adhesion equipment |  | Cracking equipment |  | Glazing equipment |  | Pump |
| Aerated pond |  | Crusher |  | Gluing equipment |  | Purification equipment |
| Aggregrate handling equipment |  | Cutting equipment |  | Granulator |  | Quenching equipment |
| Aging equipment |  | Debarking equipment |  | Grinder |  | Reactor |
| Arc cutting equipment |  | Decanting equipment |  | Hopper |  | Reciprocating IC engine |
| Barge loading equipment |  | Degreaser |  | Huller |  | Refining equipment |
| Bleaching equipment |  | Dehydrator |  | Incinerator |  | Reflux column |
| Blender |  | Desublimer |  | Inline mixer |  | Regenerator |
| Blowing equipment |  | Digestor |  | Kiln |  | Rolling equipment |
| Boiler |  | Dipping equipment |  | Liquefaction equipment |  | Sanding equipment |
| Brazing equipment |  | Dissolver |  | Loading-unloading equipment |  | Sawing equipment |
| Brewing equipment |  | Distillation equipment |  | Machining equipment |  | Screens |
| Briquetting equipment |  | Drilling equipment |  | Material handling equipment |  | Separation equipment |
| Buffing equipment |  | Dryer/oven, direct fired |  | Mechanical processing |  | Shredding equipment |
| Calciner |  | Dryer/oven, indirect fired |  | Melting equipment |  | Silo/bin |
| Carbon reactivator |  | Dryer/oven, unknown firing method |  | Metal deposition equipment |  | Smelting equipment |
| Casing equipment |  | Duct burner |  | Milling equipment |  | Soldering equipment |
| Casting equipment |  | Electrical equipment |  | Mixing equipment |  | Solvent equipment |
| Causticizing equipment |  | Electroplating equipment |  | Molding equipment |  | Spray booth/coating line |
| Cementing equipment |  | Elevator |  | Neutralizer |  | Spraying equipment |
| Channel process equipment |  | Emulsion equipment |  | Open ended lines |  | Stripping equipment |
| Chemical milling equipment |  | Engine test cell |  | Open ended valves |  | Sulfur recovery unit |
| Chipping equipment |  | Extractor |  | Other combustion |  | Tapping equipment |
| Circuit board etching equipment |  | Extruder |  | Other emission unit |  | Thermal process equipment |
| Cleaning equipment |  | Feeder |  | Oxidation unit |  | Thermal unit |
| Closure device |  | Fermentation equipment |  | Potlines |  | Turbine |
| Coke handling equipment |  | Filling operations equipment |  | Pouring equipment |  | Valves |
| Combined cycle (boiler/gas turbine) |  | Finishing equipment |  | Pressing equipment |  | Washer |
| Compressor |  | Flaker equipment |  | Pressure relief device |  | Welding equipment |
| Concentrators |  | Fractionation equipment |  | Prilling equipment |  |  |
| Converter |  | Fryer/cooker |  | Printing press |  |  |

**3c) Emission unit operator's description --** Provide a description sufficient to identify this emission unit at the facility, for example, "North Boiler," "Heatset Web Press."

**3d) Manufacturer --** For packaged and pre-assembled equipment, and for equipment completely designed by a single company and field-assembled, provide the name of the manufacturer or designer. For equipment designed and manufactured by the contractor or owner, indicate this.

**3e) Model number --** For equipment which has a model number, provide the model number. If there is no model number, you may enter “NA” or something similar to indicate that there is no model number.

**3f) Maximum design capacity --** Provide the maximum production capacity of each emission unit; for example, for a boiler, the maximum steam generation rate; for a crusher, the maximum crushing rate; for a paint spray booth, the maximum spraying rate; for a reciprocating IC engine, the horsepower rating.

**Maximum design capacity material and units --** Provide the material and units of measure for the number provided for capacity, such as "pounds of steam per hour" or "tons crushed per hour." Enter the material (“steam,” “energy,” etc), numerator and denominator in the separate fields provided.

For example, equipment that uses fuel may have an entry similar to the following – 4 Mmbtu/Hr heat.

**Note:** Tempo may constrain the numerator and denominator options based on the material chosen. MPCA will contact you while processing your permit action if a different numerator or denominator is required.

If the emission unit uses fuel and has a material process throughput, you must list the max design capacity based on fuel use.

For the material, choose from the following list:

| **Table entry** | **Detail** |  | **Table entry** | **Detail** |
| --- | --- | --- | --- | --- |
| Acid | Acid |  | Hydrated Lime | Hydrated Lime |
| Adhesive | Adhesive |  | Ink | Ink |
| A/D Pulp | Air Dried Pulp |  | Lead | Lead |
| Airflow | Airflow  |  | Lime | Lime |
| Aluminum | Aluminum |  | Limestone | Limestone |
| Ash | Ash |  | Log | Log |
| Asphalt | Asphalt |  | Material | Material |
| Battery  | Battery  |  | Metal | Metal |
| Bean | Bean |  | Methane | Methane |
| Beer | Beer |  | Natural Gas | Natural Gas |
| Bentonite | Bentonite |  | Ore  | Ore  |
| Blk Liq Slds | Black Liquor Solids (Kraft Pulp Mill) |  | Wood, Dried | Oven Dried Wood |
| Meal, Blood | Blood Meal |  | Paint | Paint |
| Board | Board |  | Paper | Paper |
| Bottle | Bottle |  | Pellet | Pellet |
| Bread | Bread |  | Power | Power |
| Can | Can |  | Product | Product |
| Carbon | Carbon |  | Pulp | Pulp |
| Casting | Casting |  | RDF | Refuse Derived Fuel |
| Chlor Dioxid | Chlorine Dioxide |  | Resin | Resin |
| Clothes | Clothes |  | Rock | Rock |
| Coal | Coal |  | Sand | Sand |
| Coating | Coating |  | Sawdust | Sawdust |
| Coke | Coke |  | Scrap | Scrap |
| Core | Core |  | Shingles | Shingles |
| Core Oil | Core Oil |  | Shot | Shot Material |
| Corn | Corn |  | Silicon Diox | Silicon Dioxide |
| Current | Current Applied |  | Sludge | Sludge |
| Diesel Fuel | Diesel Fuel |  | Solid | Solid |
| DDGS | Distillers Dried Grains With Solubles |  | Waste, Solid | Solid Waste |
| Meal, Dry Bld | Dried Blood Meal |  | Solvents | Solvents |
| D Pulp, Unble | Dry Pulp, Unbleached |  | Soy | Soy |
| Sludge, Dry | Dry Sludge |  | Steam | Steam |
| Elect Energy | Electrical Energy |  | Sugar | Sugar |
| Emery | Emery |  | Sulfur | Sulfur |
| Energy | Energy |  | Surface Area | Surface Area |
| Ethanol | Ethanol |  | Varnish | Varnish |
| Ethylene Oxi | Ethylene Oxide |  | Vehicle | Vehicle |
| Fiber | Fiber |  | VOC | Volatile Organic Compound |
| Fiberglass | Fiberglass |  | Wafer/Chip | Wafer/Chip |
| Foam | Foam |  | Waste | Waste |
| Fuel | Fuel |  | Wastewater | Waste Water |
| Glue | Glue |  | Water | Water |
| Grain | Grain |  | Wood | Wood |
| Heat | Heat |  | Yeast | Yeast |

For the numerator, choose from the following list:

**Note:** For numerator choices where the denominator is not needed (e.g., horsepower-hours or kilowatt-hours), choose “each” for the denominator.

| **Table entry** | **Detail** |  | **Table entry** | **Detail** |
| --- | --- | --- | --- | --- |
| Acre  | Acres |  | Hp | Horsepower |
| Amp | Ampheres |  | Hp-Hr | Horsepower-hours |
| Avg CFM | Avg Std cubic feet per minute |  | Hr | Hours |
| Batch | Batch |  | In | Inches |
| Bbl | Barrels |  | Kg | Kilograms |
| Bhp | Brake horsepower |  | KPA  | Kilopascals |
| BRDFT | Board Foot |  | Kw | Kilowatts |
| Btu | British Thermal Unit |  | Kw-Hr | Killowatt-hours |
| Bushel | Bushels |  | Lb | Pounds |
| Cc | Cubic centimeters |  | Lng Tns | Long tons |
| Cord | Cord |  | M | Meters |
| Cycle | Cycle |  | M3 | Cubic meters |
| E3 Gal | 1000 gallons |  | Mbtu | 1000 British thermal units |
| E3 Lb | 1000 pounds |  | Mcf | Thousand cubic feet |
| E6 Bdft | Million board feet |  | Megagram | Megagrams |
| E6 Ft2 | Million square feet |  | Mgal | Million gallons |
| E6 Lb | Million pounds |  | Mile | Miles |
| E6 Mg | Million megagrams |  | Mmbtu | Million British thermal units |
| Each | Each |  | Mmcf | Million cubic feet |
| F | Degrees Farenheit |  | Mw | Megawatts |
| Floz | Fluid ounces |  | Oz | Ounces |
| Ft | Feet |  | RPM  | Revolutions per minute |
| Ft2 | Square feet |  | Ton | English tonn (2000 U.S. Lb) |
| Ft3 | Cubic feet |  | Tonne | Metric tons |
| Ft3(s) | Standard cubic feet |  | Yd | Yards |
| Gal | Gallons |  | Yd2 | Square yards |
| Gr | Grains |  | Yd3 | Cubic Yards |

For the denominator, choose from the following list:

| **Table entry** | **Detail** |  | **Table entry** | **Detail** |
| --- | --- | --- | --- | --- |
| Batch | Batch |  | L | Liters |
| Cycle | Cycle |  | Lb | Pounds |
| Day | Days |  | M2-Hr | Square meter hours |
| Each | Each |  | Min | Minutes |
| Ft2 | Square feet |  | Mo | Month |
| Ft2-Hr | Square foot hours |  | Ton | English tons (2000 U. S. lbs) |
| Ft3 | Cubic Feet |  | Wk | Week |
| Gal | Gallons |  | Yr | Years |
| Hr | Hours |  |   |   |

**3g) Commence construction date --** Provide the date on which installation of the unit started at the source. If unknown, provide your best estimate of the year construction commenced. For units on which construction has not been started, check the box “to be determined.”

**3h) Initial startup date --** Provide the date on which operation of the emission unit started. For units for which the initial startup date has not occurred, check the box “to be determined.”

**3i) Modification or reconstruction date --** Provide the date on which modification or reconstruction of the emission unit started. *Modification* is defined in Minn. R. 7007.0100, subp. 14, and *reconstruction* is defined in 40 CFR § 60.15.

**3j) Firing method --** For coal-burning units, indicate the firing method as one of the following.

Pulverized coal -- wet bottom

Pulverized coal -- dry bottom

Pulverized coal -- dry bottom (tangential firing)

Cyclone furnace

Spreader stoker

Overfeed stoker (traveling grate)

Underfeed stoker

Wet slurry

Atmospheric fluidized bed combustion

For non-coal burning units, indicate the firing method as one of the following.

CI

SI-4SLB

SI-2SLB

SI-4SRB

Not coal-burning

**3k) Engine use --** For engines only, fill in the appropriate usage category of the engine.

Emergency/blackstart

Limited use (less than 100 hours per year)

24 hrs or less (per year)

Unlimited use

Firepump

LFG/digester gas

**3l) Engine displacement --** For engines only, provide the engine displacement in the following units.

|  |  |  |
| --- | --- | --- |
| l/cyl | liters per cylinder | for CI or SI engines |
| total cc | total cubic centimeters | for SI engines only |

**3m) Subject to CSAPR? --** From the drop-down list, select whether the emission unit is subject to theCross-State Air Pollution Rule (CSAPR) or not. This question is mandatory for boilers, combined cycle (boilers/gas turbines), turbines, duct burners, and incinerators. Please refer to the definitions in 40 CFR § 97.402 and 40 CFR § 97.702.

Use form GI-09K to determine applicability if you currently, or will in the future, own or operate any

* stationary fossil-fuel-fired boilers, or
* stationary fossil-fuel-fired combustion turbines
* and the boiler or turbine serves at any time, on or after January 1, 2005, a generator with a nameplate capacity of more than 25 megawatt electric (MWe) that produces electricity for sale

Any unit that otherwise would be subject to CSAPR may be exempt under one of the following two provisions.

**Cogeneration** (40 CFR § 97.404(b)(1)(i) and 40 CFR § 97.704(b)(1)(i)): Any unit A.) qualifying as a cogeneration unit throughout the later of 2005 or the 12-month period starting on the date the unit first produces electricity and continuing to qualify as a cogeneration unit throughout each calendar year ending after the later of 2005 or such 12-month period; and B.) Not supplying in 2005 or any calendar year thereafter more than one-third of the unit's potential electric output capacity or 219,000 Megawatt hours, whichever is greater, to any utility power distribution system for sale.

**Solid waste incineration** (40 CFR § 97.404(b)(2)(i) and 40 CFR § 97.704(b)(2)(i)): Any unit A.) Qualifying as a solid waste incineration unit throughout the later of 2005 or the 12-month period starting on the date the unit first produces electricity and continuing to qualify as a solid waste incineration unit throughout each calendar year ending after the later of 2005 or such 12-month period; and B.) With an average annual fuel consumption of fossil fuel for the first 3 consecutive calendar years of operation starting no earlier than 2005 of less than 20 percent (on a Btu basis) and an average annual fuel consumption of fossil fuel for any three consecutive calendar years thereafter of less than 20 percent (on a Btu basis).

**Note:** if any new or modified emissions unit is subject to CSAPR, you must include form GI-09K with your application.

**3n) Electric generating capacity (megawatts) --** Provide the nameplate generating capacity. This is mandatory for units subject to CSAPR only (boiler, combined cycle (boiler/gas turbine), turbine, duct burner, or incinerator).

**3o) SIC code --** Provide the SIC code for this emission unit if different from the primary SIC code for the stationary source. Otherwise leave this blank. Note that most emission units will not have a SIC code for that type of unit alone.

 As an example, a steam generating plant that provides process steam can be assigned its own SIC code even though it is part of a larger stationary source.

**3p) Status --** Provide the status of the emission unit as either active or inactive. If status is inactive, provide a removal date.

**3q) Removal date --** If status is inactive, provide a removal date.

**3r) Reason for changes/modification --** If you edit existing information, you must provide a reason for the changes or modification.