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| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | ME-01Continuous monitoring system informationAir Quality Permit ProgramDoc Type: Permit Application |

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

Form ME-02 Monitor associations must also be submitted whenever this form is required.

**Table A. Data acquisition system (DAS)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **A1)** | **DAS ID** |     |     |     |     |
| **A2)** | **Manufacturer** |       |       |       |       |
| **A3)** | **Model number** |       |       |       |       |
| **A4)** | **Serial number** |       |       |       |       |
| **A5)** | **Description** |       |       |       |       |
| **A6)** | **Primary or Backup? (P or B)** |  |  |  |  |
| **A7)** | **Installation date (mm/dd/yyyy)** |       |       |       |       |
| **A8)** | **Status** |  |  |  |  |
| **A9)** | **Removed date (mm/dd/yyyy)** |       |       |       |       |

**Table B: Continuous monitors (MR)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **B1)** | **Monitor ID** |     |     |     |     |
| **B2)** | **Manufacturer\*** |       |       |       |       |
| **B3)** | **Model\*** |       |       |       |       |
| **B4)** | **Serial number\*** |       |       |       |       |

\*indicates only required for CEMS and COMS

**Table B: Continuous monitors (MR) *(continued)***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **B5)** | **Description** |       |       |       |       |
| **B6)** | **Type** |  |  |  |  |
| **B7)** | **Parameter monitored** |       |       |       |       |
| **B8)** | **Primary or Backup? (P or B)\*** |  |  |  |  |
| **B9)** | **Bypass capability? (Y/N)\*** |  |  |  |  |
| **B10)** | **Installation date (mm/dd/yyy)** |       |       |       |       |
| **B11)** | **Status** |  |  |  |  |
| **B12)** | **Removed date (mm/dd/yyy)** |       |       |       |       |
| **B13)** | **Certification date (mm/dd/yyy)\*** |       |       |       |       |
| **B14)** | **Certification basis\*** |       |       |       |       |
| **B15)** | **Span value (ppm)\*** |      |      |      |      |
| **B16)** | **System full-scale value (ppm)\*** |      |      |      |      |
| **B17)** | **Optical path length ratio\*** |      |      |      |      |

\*indicates only required for CEMS and COMS

Instructions for form ME-01

For the purposes of this form, monitoring equipment is not considered “continuous” unless it is associated with a data acquisition system. Do not include on this form non-continuous monitors (such as pressure drop gauges where the pressure drop is read by an operator and manually recorded). Unless otherwise directed for CEMS/COMS only information, all fields are **mandatory** except the Agency Interest ID number and Tempo SI ID number (if unknown). **If you submit your application with blank mandatory fields or attachments, it will be deemed incomplete and returned.**

**1a) AQ Facility ID number --** Fill in your Air Quality (AQ) Facility Identification (ID) number. This is the first eight digits of the permit number for all permits issued under the operating permit program.

**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 your facility name.

Table A. Data Acquisition Systems (DAS)

**A1) DAS ID number** – Assign a unique ID for the purposes of this application process and use it consistently throughout the application. Any ID assigned will most likely be different when the permit is issued. ID numbers must be unique for each piece of equipment and as shown on the Process Flow Diagram. For example, do not use the ID “0061” for a continuous opacity monitor and “0061” for a DAS.

For replacement DAS, reuse the DAS ID of the equipment being replaced and edit the existing fields.

**A2) Manufacturer** – Enter the manufacturer of the data acquisition system.

**A3) Model number** – Enter the model number of the data acquisition system.

**A4) Serial number** – Enter the serial number of the data acquisition system.

**A5) Description** – Provide a descriptive title in sufficient detail to identify this DAS at the facility, for example, Boiler 1 Emissions Monitors.

**A6) Primary or Backup?** – Indicate whether this is a primary system or a backup system.

**A7) Installation date** – Enter the date that the data acquisition system was installed or replaced.

**A8) Status** – Provide the status of the DAS as either active or inactive. If status is inactive, provide a removal date.

**A9) Removed date** – If status is inactive, provide date that the data acquisition system was removed. If the monitor was replaced, provide a replacement date in A7 and do not provide a removed date.

##### **Table B. Continuous monitors (MR)**

**B1) Monitor ID number** – Assign a unique ID for the purposes of this application process and use consistently throughout the application. Any ID assigned will most likely be different when the permit is issued. Each monitored parameter at your facility will have its own ID. For instance, a monitoring system may measure SO2 and NOx simultaneously but both pollutants would have separate Monitor IDs.

ID numbers must be unique for each piece of equipment and as shown on the Process Flow Diagram. For example, you may not use the ID “0061” for a continuous opacity monitor and “0061” for a DAS.

For replacement monitors, reuse the monitor ID of the equipment being replaced and edit the existing fields.

**B2) Manufacturer\*** (CEMS/COMS only) – Enter the manufacturer of the continuous monitor.

**B3) Model number\*** (CEMS/COMS only) – Enter the model number of the continuous monitor.

**B4) Serial number\*** (CEMS/COMS only) – Enter the serial number of the continuous monitor.

**B5) Monitor description** – Provide a descriptive title with sufficient detail to identify the monitor at the facility. For example, Boiler 1 NOx or Boiler 1 Scrubber Flow Rate.

**B6) Type** – Indicate if the monitor is continuous emissions monitor (CEMS), continuous opacity monitor (COMS)\*, or parametric monitor.

**B7) Parameter(s) monitored –** Indicate which parameter is monitored (e.g., sulfur dioxide (SO2), nitrogen oxides (NOX), carbon dioxide, air flow rate, pressure drop, etc.). If more than one parameter is monitored (e.g., SO2 and NOX monitors or SO2 and Air Flow Rate monitors), fill out a separate column of the table for each parameter. Each of the two columns would list the same monitor ID number.

Use one of the following options as the parameter monitored.

| **Parameters monitored – Parametric monitors** |
| --- |
| Air | Limestone, dry | Parametric oxygen\*\* | Steam flow |
| Parametric Ammonia | Limestone, wet | Parametric Particulate Matter\*\* | Sulfur content of fuel |
| Bag leak detector | Liquid flow rate | Parametric sulfur dioxide\*\* | Temperature |
| Carbon | Material usage | Operating hours | Total power input |
| Flame present | Moisture content | Retention time | Water pressure |
| Fuel usage | Parametric carbon dioxide\*\* | Secondary current | pH |
| Heat input | Parametric carbon monoxide\*\* | Secondary voltage |  |
| Hours | Parametric nitrogen oxides\*\* | Sorbent, dry |  |

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| --- |
| **Parameters monitored – CEMS/COMS** |
| Air flow rate | Lead compounds  | Non-methane hydrocarbons (NMHC) | Sulfur - total reduced compounds including H2S  |
| Ammonia | Mercury | Opacity\* | Sulfur dioxide |
| Carbon dioxide | Mercury additive | Oxygen | Total organic compounds |
| Carbon dioxide equivalent | Nitrogen dioxide | PM < 10 micron | Volatile organic compounds |
| Carbon monoxide  | Nitrogen oxides | PM < 2.5 micron |  |
| Hydrogen sulfide  | Nitrous oxide | Particulate matter |  |

 \* If your only “Parameter monitored” is *Opacity*, make sure the selected “Type” is *continuous opacity monitor (COMS)*.

 \*\* CEMS/COMS are for direct measurement of emissions. If your monitored Parameter predicts emissions of a pollutant, include the parameter as a Parametric monitor.

**B8) Primary or Backup?\*** (CEMS/COMS only) – Indicate whether this is a primary system or a backup system.

**B9) Bypass capability\*** (CEMS/COMS only) – Indicate whether or not there is a capability to bypass the monitor. For example, do you have an “emergency” stack that allows you to vent the flue gases before the reach the monitor? Indicate yes or no.

**B10) Installation date** – Enter the installation or replacement date of the monitor.

**B11) Status** – Provide the status of the continuous monitor as either active or inactive. If status is inactive, provide a removal date.

**B12) Removed date** – If status is inactive, provide date that the continuous monitor was removed. If the monitor was replaced, provide a replacement date in B10 and do not provide a removed date.

**B13) Certification date\*** (CEMS/COMS only) -- If your continuous monitor has been certified by the Minnesota Pollution Control Agency (MPCA), you will have received a letter of certification from the MPCA. Supply the test date found on the MPCA letter indicating certification. If your continuous monitor has not been certified as of the date of this permit application, write in “NA.”

**B14) Certification basis\*** (CEMS/COMS only) – Enter the regulation under which the continuous monitor was certified:

 40 CFR pt 60 (New Source Performance Standards)

 40 CFR pt 63 (National Emissions Standards for Hazardous Air Pollutants)

 40 CFR pt 64 (Compliance Assurance Monitoring)

 40 CFR pt 75 (Acid Rain program)

 Minn. R. 7017 (Monitoring and Testing Requirements)

**B15) Span value\* (CEMS only, units in ppm)**

 For gas monitors**,** span value means the upper limit of a gas concentration measurement range (in ppm). Span value is specified for certain applicable standards including select New Source Performance Standard subparts and performance specifications. When span values are not specified, calculate your span value by multiplying the gas concentration in ppm that corresponds approximately to your proposed emission limit by 1.5 and enter the result in this column. For diluent monitors with no emission limit, use the diluent upper bound value if defined in rule. If a diluent upper bound is not defined, select an appropriate span value based on expected diluent concentration.

**B16) System full-scale value\* (CEMS only, units in ppm)** – Full-Scale means the highest measurement that the monitor can read for a particular parameter.

**B17) Optical path length ratio (COMS only)** – Optical Path Length Ratio means the emission outlet path length (inside diameter of the stack at its exit) divided by the monitor path length. For single pass monitors, the monitor path length is equal to the inside diameter of the stack at the location of the monitor. For double pass monitoring systems monitor path length is equal to twice the inside diameter of the stack at the location of the monitor.