|  |  |
| --- | --- |
| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | CH-19  Permit Action Emissions Screening  Air Quality Permit Program  Doc Type: Permit Application |

**Instructions on Page 3.**

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

Complete this form to calculate the hourly emission increases from your proposed project to determine if further evaluation of air quality impacts of the project is required.

**Part A. Determination of increases**

See instructions for calculating emissions. Make copies if more than four emission units are affected by the proposed change. Attach your calculations.

|  |  |  |  |
| --- | --- | --- | --- |
| **Emission Source:** |  |  |  |
| **Pollutant** | **After Change (lb/hr)** | **Before Change (lb/hr)** | **Net Change (lb/hr)** |
| **PM10** |  |  |  |
| **PM2.5** |  |  |  |
| **NOx** |  |  |  |
| **SO2** |  |  |  |
| **Lead** |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Emission Source:** |  |  |  |
| **Pollutant** | **After Change (lb/hr)** | **Before Change (lb/hr)** | **Net Change (lb/hr)** |
| **PM10** |  |  |  |
| **PM2.5** |  |  |  |
| **NOx** |  |  |  |
| **SO2** |  |  |  |
| **Lead** |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Emission Source:** |  |  |  |
| **Pollutant** | **After Change (lb/hr)** | **Before Change (lb/hr)** | **Net Change (lb/hr)** |
| **PM10** |  |  |  |
| **PM2.5** |  |  |  |
| **NOx** |  |  |  |
| **SO2** |  |  |  |
| **Lead** |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Emission Source:** |  |  |  |
| **Pollutant** | **After Change (lb/hr)** | **Before Change (lb/hr)** | **Net Change (lb/hr)** |
| **PM10** |  |  |  |
| **PM2.5** |  |  |  |
| **NOx** |  |  |  |
| **SO2** |  |  |  |
| **Lead** |  |  |  |

**Part B. Emergency Generators**

1. Does your project include emergency generators?

Yes. Go to question 4. Emission Source (EQUI #):

No. Continue on to Part C of this form.

1. Is the emergency generator >500hp? (Make a copy of this page if there is more than one emergency generator)

Yes. Go to question 5.

No. Go to question 6.

1. Have you received a determination from the air modeling inbox (AirModeling.PCA@state.mn.us) that this emergency generator may be omitted from this form based on the size and/or distance from the ambient boundary?

Yes. Attach a copy of the determination. Date of determination:       Go to question 6.

No. Continue on to Part C of this form, include this emergency generator emissions in all tables.

1. Review the Best Management Practices (BMP) in the instructions. Will the facility accept BMP requirements for the emergency generator? If so, these requirements will be included in the amended permit.

Yes. Do not include emissions increases from the emergency generator in Part C.

No. Continue on to Part C of this form, include the emissions from this emergency generator in all tables.

**Part C. Determination of applicability of process to evaluate project ambient air quality impacts**

(See instructions for calculating increases. Attach any additional calculations.)

**Total project emission changes by pollutant**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PM10** |  |  | **PM2.5** |  |
| **Source** | **Net increase (lb/hr)** |  | **Source** | **Net increase (lb/hr)** |
| Total Project Net Change |  |  | Total Project Net Change |  |
|  |  |  |  |  |
| **NOX** |  |  | **SO2** |  |
| **Source** | **Net increase (lb/hr)** |  | **Source** | **Net increase (lb/hr)** |
| Total Project Net Change |  |  | Total Project Net Change |  |
|  |  |  |  |  |
| **Lead** |  |  |  |  |
| **Source** | **Net increase (lb/hr)** |  |  |  |
| Total Project Net Change |  |  |  |  |

**Table 1: Pollutant thresholds**

|  |  |
| --- | --- |
| **Pollutant** | **Threshold** |
| PM10 | 3.42 lb/hr |
| PM2.5 | 2.28 lb/hr |
| NOx | 9.13 lb/hr |
| SO2 | 9.13 lb/hr |
| Lead | 0.11 lb/hr |

To determine if the project requires further evaluation for ambient air quality impacts, compare the net change in hourly emissions for the criteria pollutants to the thresholds in the instructions. If the totals for any single pollutant are above the thresholds in Table 1, then further evaluation will be required.

**7)** Does the net increase of any of the pollutants in Part C exceed the thresholds in Table 1?

Yes. Attach supporting calculations and complete form CH-20.

No. Attach supporting calculations. Done with this form.

# Instructions for Form CH-19

**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) AQ File number --** Fill in your AQ File Number. This number can be found in the “cc” line of correspondence from the Minnesota Pollution Control Agency (MPCA).

**2) Facility name --** Enter your facility name.

**Part A**

For permitting projects that affect hourly emission rates, use the following procedure to determine if further evaluation of ambient air quality impacts is required for your project.

Use the following procedure to determine the total emissions increases from the proposed change. Perform the analysis for nitrogen oxides (NOX), sulfur dioxide (SO2), particulate matter smaller than 10 microns (PM10), particulate matter smaller than 2.5 microns (PM2.5), and lead. Do not take air pollution control equipment into account except as allowed under Minn. R. 7007.1200, subp. 3 (copied below).

Please provide your maximum total project emission increases, emission decreases, and net change in pounds per hour (lbs/hour) for all pollutants listed in these instructions. Include emission decreases only if they are part of the current project. Emission decreases only result from physical or enforceable changes that are part of the current project (for example, “removal” of previously authorized but unbuilt equipment does not result in an emissions decrease).

Supporting calculations must be attached showing that the numbers reflect the maximum possible increases. Follow the instructions below for calculating emissions changes for the project:

Emissions changes must be calculated by comparing the hourly emission rate of the stationary source, at maximum physical capacity, before and after the proposed physical or operational change. The emission rate shall be expressed in pounds per hour.

A. When calculating emissions before and after the physical and operational change, physical and operational limitations and emission decreases will be considered only if they:

(1) Are or will be automatically required by an applicable requirement including parts 7011.0060 to 7011.0080;

(2) Are or will be automatically required by an existing permit;

(3) Are integral to the process;

(4) Are proposed as a permit term and condition in the application for a minor, moderate, or major modification under part 7007.1450 or 7007.1500; or

(5) Are calculated in records kept at the stationary source where reductions rendered the modification insignificant under part 7007.1250.

B. In cases where use of emission factors or related calculation methods clearly demonstrates whether or not the change will increase the emission level, the emission factors as defined in part 7005.0100, subpart 10a shall be used.

C. Material balances, continuous monitor data, or manual emissions tests may be used in cases where use of emission factors or related calculation methods under item B does not clearly demonstrate, to the MPCA's satisfaction, whether or not the change will increase the emission level, or where a permittee demonstrates to the MPCA's satisfaction that there are reasonable grounds to dispute the result obtained under item B. These methods may be used only to establish pre‑modification emission rates from which post-modification emission rates may be calculated. Tests shall be conducted under such conditions as the MPCA shall specify. At least three valid test runs must be conducted. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

**Part B**

For each emergency generator, answer the questions to determine if the emergency generator needs to be included in the summary tables in Part C. Specific Best Management Practice requirements will be determined during permit drafting and may include the following:

Best Management Practices for Internal Combustion Engines (ICE):

1. The Permittee shall only use [diesel fuel with a sulfur content of less than or equal to 15 ppm] [natural gas] in the emergency engines.

2. The Permittee may not install a rain cap on the emergency engine stack.

3. The Permittee shall make the test runs for each engine as short as allowed by insurance and building code considerations.

4. The testing for an emergency engine shall not occur while another emergency engine is being tested.

5. No testing shall be conducted on a day the Air Quality Index (AQI) or the forecasted AQI exceeds 90 unless the test cannot be deferred. For testing conducted on a day with the AQI above, 90, document the reason it was not possible to defer the test and any actions that were taken to limit emissions during the test with the testing records. The AQI and the forecasted AQI can be found on the MPCA website.

During every test of each emergency engine, record the following information:

* The unit that was tested;
* The date;
* The time the test started;
* The time the test was completed; and
* The Air Quality Index (AQI).

**Part C**

For each pollutant, enter each new, modified, changed, or debottlenecked unit that emits that pollutant, and the net hourly increase (net change) in emissions, as calculated in Part B, if applicable. Sum the entries for each pollutant to determine the total increase in hourly emissions due to the proposed change or modification. Please note that the terms ‘Net Change’ and ‘Net Increase’ used in Part A and C, are not equivalent to ‘Net Emissions Increase’ as defined at 40 CFR Section 52.21(b)(3).

If any single pollutant emissions increase is equal to or above the levels in Table, further evaluation of emission impacts is required. Complete form CH-20.