
ENVIRONMENTAL Fact Sheet



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ARD-63

2020

Summary of Emissions Data in an Annual Emission Statement

As required by the federal Clean Air Act, the New Hampshire Department of Environmental Services (NHDES) collects air emissions data from permitted facilities that emit air pollution. This data is used to track the department's progress towards meeting Clean Air Act mandates. The US Environmental Protection Agency's (EPA) Air Emissions Reporting Requirements, 40 CFR 51, states, at a minimum, which facilities must report and what air emissions data is required to be reported. NHDES' reporting requirements can be found in Env-A 900. The emissions data is also used to calculate the annual emissions fees. Find out more about emissions fees on the NHDES Air Compliance Reporting website and Fact Sheet ARD-64, "Calculating Annual Emission Fees."



What is the annual emission statement?

If the Air Resources Division issued a Title V permit, a State Permit to Operate or a Temporary Permit to a facility in accordance with Env-A 600, the facility is required to submit an annual emissions statement to NHDES. Each permitted facility reports the emissions generated from the devices or processes listed in the permit for each calendar year of operation. In addition, if a facility emits 10 tons or greater of nitrogen oxides (NO_x) or volatile organic compounds (VOCs) on a facility-wide basis during the calendar year, then the facility must also submit a NO_x or VOC emissions statement.



The annual emission reporting forms include locations for the facility to indicate the emission factors or methods it used for calculating its actual emissions. If the method is not included in the annual emissions statement, it must be included with the annual emissions payment.

How do I calculate my annual emissions?

Facility emissions are calculated based on actual fuel usages or process rates multiplied by an emission factor. An emission factor is a value that relates the quantity of a pollutant released to the atmosphere to a fuel usage or process rate. Emission factors are usually expressed as the weight of a pollutant divided by the weight, volume, or duration of the fuel usage or process. For example, emission factors can be expressed as pounds of particulate matter per every thousand gallons of fuel burned (lbs/Kgal) or pounds of particulate matter per every hour of operation (lbs/hr). Basic Information on emission factors and quantification can be found on EPA's Basic Information of Emission Factors and Quantification website. A list of EPA emission factors can be found at EPA's AP-42 Compilation of Air Emission Factors website.

How do I know what emission factor to use?

NHDES has a preferred hierarchy of emission factors to use to calculate the emissions, from most accurate (1) to least accurate (6), described below. Typically, the magnitude of the factor and the calculated emissions will increase as the factor become less accurate. However, if more accurate continuous emissions monitoring data or stack test data is available and shows more emissions were generated during the year than using a less accurate method of calculating the emissions, then the facility must use the more accurate means to calculate and report its emissions.

(1) **Emissions data from a certified CEM system** meeting the requirements of Env-A 808. The total annual emissions should include all available valid data collected for each pollutant by the CEM system during the year. For any periods of time when the CEM system did not collect valid hours of data, which might be due to analyzer or system calibrations, repairs or other QA activities, or failure to meet certain relative accuracy requirements, the facility should include substitute data as follows:

- a. Facilities that are subject to the Federal Acid Rain program (40 CFR 75) shall use the substitute data provided by the missing data subroutines in the Part 75 DAS software for any periods when there is no valid data collected by the CEM system.
- b. Facilities that are not subject to 40 CFR 75 shall use the method(s) it described in its CEM Monitoring Plan that was approved by ARD, and in accordance with Env-A 808.12, to fill in any periods of missing or invalid data.

(2) **Emission factors based on the most recently conducted compliance method stack test**, as long as the compliance method stack test was conducted under normal operating conditions, and it was observed and approved by NHDES pursuant to Env-A 802 or Env-A 809, or by EPA, in conjunction with the operating conditions specified in the permit for the device issued pursuant to Env-A 600.

- a. Note that stack test data can be applied forward until the next stack test, and applied backward at least for the calendar year in which the test was performed.
- c. In general, NHDES will require that a compliance stack test that is used to generate the emissions factors must have been conducted within the previous 10 years. This is so that the data can be considered representative of current emissions. If the stack test data is more

than 10 years old, NHDES will likely require the facility to conduct a new compliance test in order to use stack test-derived factors, since the accuracy of the original test data may no longer be representative of the type of device or the controls, and the due to the likelihood of degradation in performance and increase in emissions over time.

(3) **Emissions calculated from a mass balance** of the process, in conjunction with the operating conditions specified in the permit for the device issued pursuant to Env-A 600.

(4) **Emission factors based on alternate emissions data guaranteed by the manufacturer** of the device, certified by EPA as accurate for the device, or collected during a stack test of an identical device that was not observed by the department, that meets all other acceptance criteria specified in (2), above, in conjunction with the operating conditions specified in the permit for the device issued pursuant to Env-A 600.

(5) **AP-42**, Fifth Edition, "Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources", published in 1995 by the EPA, as supplemented from 1996 - 2000 and updated from 2001-2011, in conjunction with the operating conditions specified in the permit for the device issued pursuant to Env-A 600. If an AP-42 factor changes, the facility shall use the newest factor available to calculate its emissions, unless the new factor shows an emission or threshold exceedance, in which case the old factor should be used for the duration of the current permit.

(6) **Engineering calculations** that are representative of the actual emissions generated, in conjunction with the operating conditions specified in the permit for the device issued pursuant to Env-A 600.

What is the deadline for submitting my annual emissions statement?

Annual emission statements, including NO_x and VOC emission statements, must be received by NHDES by April 15 of the year following the year that emission occurred. Remember that the due date for these reports is the deadline for it being received at NHDES, not the deadline for having the report postmarked as being mailed.

If you have any questions, visit the NHDES Air Compliance Reporting website, email AirEmissions@des.nh.gov or contact NHDES at (603) 271-1370.