

Nitric Acid Production

Subpart V, Greenhouse Gas Reporting Program



What Must Be Monitored?

For each nitric acid (HNO₃) train measure:

- ☐ Monthly HNO₃ production determined through sales records or by direct measurement using flow meters or weigh scales (tons of HNO₃ produced, 100% acid basis).
- ☐ Monthly HNO₃ production during which nitrous oxide (N₂O) abatement technology is operating determined through sales records or by direct measurement using flow meters or weigh scales (tons of HNO₃ produced, 100% acid basis).
- ☐ Number of operating hours in the calendar year.
- ☐ Number of times missing data procedures were followed.

If using the emission factor (EF) method, determine annual EF:

For each HNO₃ train, determine a site-specific EF by conducting a performance test annually and whenever the HNO₃ production process is changed. The general procedure is as follows:

- ☐ Conduct the performance test under normal process operating conditions without using N₂O abatement technology.
- ☐ Conduct at least three (3) 1-hour test runs.

For each test run:

- ☐ Determine N₂O emissions from the absorber tail gas vent of the HNO₃ train, using test methods specified in the rule.
- ☐ Measure the production rate (tons of HNO₃ produced/hour (hr), 100% acid basis) using either direct measurement (e.g., flow meters) of production and concentration or existing procedures used for accounting purposes (e.g., tank level and acid concentration measurements).

During each performance test, monitor:

- ☐ N₂O concentration per test run (parts per million (ppm)).
- ☐ Production rate per test run (tons of HNO₃ produced/hr).
- ☐ Volumetric flow rate of effluent gas (dry standard cubic feet (scf)/hr).

If an N₂O abatement technology is used, measure:

- ☐ Annual HNO₃ production during which N₂O abatement was used.
- ☐ Total annual HNO₃ production (tons of HNO₃ produced).
- ☐ Destruction efficiency (DE) of N₂O abatement technology (abatement device DE, percent of N₂O removed from air stream).
- ☐ Abatement utilization factor of each N₂O abatement technology.

Determine DE:

For each N₂O abatement technology, the DE must be determined using one of the following:

- ☐ The DE specified by the manufacturer.
- ☐ Calculate the DE using process knowledge.
- ☐ Conduct a performance test.



For More Information

For additional information and resources on Subpart V, please visit the [Subpart V webpage](#).

This monitoring checklist is provided solely for informational purposes. It does not replace the need to read and comply with the regulatory text contained in the rule. Rather, it is intended to help reporting facilities and suppliers understand key provisions of the GHGRP. It does not provide legal advice; have a legally binding effect; or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits with regard to any person or entity.