**Section 217.381 Nitric Acid Manufacturing Processes**

a) New Weak Nitric Acid Processes. A person must not cause or allow the emission of nitrogen oxides into the atmosphere from any new weak nitric acid manufacturing process to exceed any of the following standards and limitations:

1) 0.75kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) (1.5lbs/T), on a 30-day rolling average basis, calculated from the quantity of NOx emitted per quantity of acid produced (100 percent acid basis) for each operating hour within the prior 30 operating days, and the average of those hourly values over the 30-day operating period;

2) Visible emissions greater than 5 percent opacity except during startup and shutdown;

3) During startup and shutdown, as defined in subsection (e), visible emissions must be controlled through:

A) Operating in a manner consistent with good air pollution control practices for minimizing emissions;

B) Maintaining a log of startup and shutdown events, including the dates, times, and durations of those events, quantity of acid produced during those events (lb/hr), and NOx emissions during those events (lb/hr). These records shall be submitted to the Agency upon request; and

C) Operating in compliance with written startup and shutdown procedures that are specifically developed to minimize startup and shutdown emissions, the duration of individual startups and shutdown, and the frequency of startups and shutdowns.

4) 0.05 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) from any acid storage tank vents (0.1 lbs/T).

5) In determining compliance with subsection (a)(1), during process operating periods where there is little or no acid production (e.g., startup or shutdown), the average hourly acid production rate must be determined from the data collected over the previous 30 days of normal acid production periods. For any hour in which subsection (a)(5) is utilized for compliance calculations, the owner or operator must maintain records of the quantity of acid produced within that hour.

b) Existing Weak Nitric Acid Processes. A person must not cause or allow the emission of nitrogen oxides into the atmosphere from any existing weak nitric acid manufacturing process to exceed any of the following standards and limitations:

1) 2.75 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) (5.5 lbs/T);

2) Visible emissions greater than 5 percent opacity;

3) 0.1 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) from any acid storage tank vents (0.2 lbs/T).

c) Concentrated Nitric Acid Processes. A person must not cause or allow the emission of nitrogen oxides into the atmosphere from any concentrated nitric acid manufacturing process to exceed any of the following standards and limitations:

1) 1.5 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) (3.0 lbs/T);

2) 225 ppm of nitrogen oxides (expressed as nitrogen dioxide) in any effluent gas stream emitted into the atmosphere;

3) Visible emissions greater than 5 percent opacity.

d) Nitric Acid Concentrating Processes. A person must not cause or allow the emission of nitrogen oxides into the atmosphere from any nitric acid concentrating process to exceed any of the following standards and limitations:

1) 1.5 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) (3.0 lbs/T);

2) Visible emissions greater than 5 percent opacity.

e) The following definitions apply to this Section:

1) "Operating Periods" means a period during which a process is producing nitric acid and nitrogen oxides are emitted. An operating period begins at the initiation of startup, ends at the completion of shutdown, and includes all periods of malfunction.

2) "Shutdown" means ceasing the nitric acid production operations of a process for any reason. Shutdown begins when ammonia is no longer being fed to the process and ends the earlier of three hours later or when compressed air is no longer being fed to the process.

3) "Startup" means the process of initiating the nitric acid production operations of a process. Startup begins one hour before ammonia is first fed to the process and ends no more than five hours after ammonia is first fed to the process.

(Source: Amended at 48 Ill. Reg. 13749, effective August 30, 2024)