

(Adopted May 5, 1989)(Amended December 21, 1990)

**RULE 429. START-UP AND SHUTDOWN EXEMPTION PROVISIONS
FOR OXIDES OF NITROGEN**

(a) Definitions

For the purpose of this rule, the following definitions shall apply:

- (1) BOILER means any combustion equipment fired with solid, liquid and/or gaseous fuel and used to produce steam.
- (2) GAS TURBINE is combustion equipment fired with solid, liquid and/or gaseous fuel and using a turbine to convert the energy derived from the combustion to produce mechanical energy to drive other equipment.
- (3) PROCESS HEATER means any combustion equipment fired with liquid and/or gaseous fuel and which transfers heat from combustion gases to process streams.
- (4) NITRIC ACID PRODUCTION UNIT means any facility producing nitric acid by either the pressure or atmospheric pressure process.
- (5) START-UP is that period of time during which a boiler, gas turbine, or process heater is heated to its normal temperature range from a cold or ambient temperature or a nitric acid plant whose decomposer is preheated and the period of time immediately following introduction of feedstocks that is required to meet stable operating conditions.
- (6) SHUTDOWN is that period of time during which a boiler, gas turbine, process heater or nitric acid production unit is allowed to cool from its normal temperature range to a cold or ambient temperature.
- (7) A SCHEDULED START-UP AND SHUTDOWN PAIR is a combination that is included in a schedule plan submitted to the Executive Officer by January 1 of each year.

(b) Applicability

- (1) During scheduled shutdowns and scheduled start-ups following scheduled shutdowns this rule shall provide an exemption from the oxides of nitrogen emission limits of the following rules:

Rule 1109 - Emissions of Oxides of Nitrogen from Boilers and
Process Heaters in Petroleum Refineries;

Rule 1134 - Emissions of Oxides of Nitrogen from Stationary Gas Turbines;

Rule 1146 - Emissions of Oxides of Nitrogen from Industrial Institutional and Commercial Boilers, Steam Generators and Process Heaters; and

Rule 1159 - Nitric Acid Units - Oxides of Nitrogen.

- (2) NO_x emissions in excess of rule specific emission limits shall be mitigated to the extent demonstrable.
- (3) Start-up or shutdown intervals may not last longer than is necessary to reach stable temperatures. In no case may the start-up or shutdown interval last longer than specified in the permit to operate. In the event that permit conditions do not specify a time limit, the start-up or shutdown may not exceed the following:
 - (A) Eight hours for boilers or process heaters of more than 40 MM Btu per hour of heat release per Rule 1109 - Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries and per Rule 1146 - Emissions of Oxides of Nitrogen from Industrial Institutional and Commercial Boilers, Steam Generators and Process Heaters. The number of scheduled start-ups/shutdowns allowed for each unit is a maximum of 10 per year.
 - (B) Six hours for boilers or process heaters of equal to or less than 40 MM Btu per hour of heat release per Rule 1146 - Emissions of Oxides of Nitrogen from Industrial Institutional and Commercial Boilers, Steam Generators and Process Heaters. The number of scheduled start-ups/shutdowns allowed for each unit is a maximum of 10 per month.
 - (C) Fifteen minutes for simple cycle stationary gas turbines and two hours for stationary combined cycle and cogeneration cycle gas turbines per Rule 1134 - Emissions of Oxides of Nitrogen from Stationary Gas Turbines. The number of scheduled start-ups/shutdowns allowed for each unit is a maximum of 10 per year.
 - (D) Following the introduction of, or the removal of, feedstocks from nitric acid production units for one hour plus the time required to preheat or to cool the decomposer per Rule 1159 - Nitric Acid Units - Oxides of Nitrogen. The number of scheduled start-ups/shutdowns allowed for each unit is a maximum of 10 per year.

(c) Notification

Prior notification of scheduled shutdowns and scheduled start-ups following scheduled shutdowns shall be made in a timely manner and form as specified by the Executive Officer. Shutdowns and start-ups must be scheduled in pairs with scheduled dates for each. Notification of scheduled start-ups and shutdowns is required only if an exemption from the emissions limit is required. This notification shall contain the following information:

- (1) Dates and times of the scheduled start-up and shutdown and its duration, and
- (2) Any other process variables that are appropriate as determined by the Executive Officer.

(d) Recordkeeping

Records shall be maintained and kept on-site and made available for two years indicating hour-by-hour firing rates, flue gas temperatures, NO_x emissions and such process variables that are appropriate as determined by the Executive Officer.

(e) Compliance Date

The provisions of this rule shall become effective on July 1, 1989.