

SECTION .1400 – NITROGEN OXIDES

15A NCAC 02D .1401 DEFINITIONS

(a) For the purpose of this Section, in addition to the definitions in G.S. 143-212, G.S. 143-213, and 15A NCAC 02D .0101, the following definitions shall apply. If a term in this Rule is also defined at 15A NCAC 02D .0101, then the definition in this Rule controls.

- (1) "Acid Rain Program" means the federal program for the reduction of acid rain including 40 CFR Parts 72, 75, 76, and 77.
- (2) "Actual emissions" means for 15A NCAC 02D .1418, emissions of NO_x as measured and calculated pursuant to 40 CFR Part 75, Subpart H.
- (3) "Actual heat input" means for 15A NCAC 02D .1418, heat input as measured and calculated pursuant to 40 CFR Part 75, Subpart H.
- (4) "Averaging set of sources" means all the stationary sources included in an emissions averaging plan pursuant to 15A NCAC 02D .1410.
- (5) "Averaging source" means a stationary source that is included in an emissions averaging plan pursuant to 15A NCAC 02D .1410.
- (6) "Boiler" means an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.
- (7) "Combined cycle system" means a system consisting of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.
- (8) "Combustion turbine" means an enclosed fossil or other fuel-fired device that is comprised of a compressor, a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.
- (9) "Diesel engine" means a compression ignited two- or four-stroke engine in which liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition.
- (10) "Dual fuel engine" means a compression ignited stationary internal combustion engine that is burning liquid fuel and gaseous fuel simultaneously.
- (11) "EGU" or electric generating unit means a stationary, fossil fuel-fired boiler or combustion turbine that serves a generator with a nameplate capacity greater than 25 MWe producing electricity for sale at any time, except a large non-EGU.
- (12) "Emergency generator" means a stationary internal combustion engine used to generate electricity only during:
 - (A) the loss of primary power at the facility that is beyond the control of the owner or operator of the facility; or
 - (B) maintenance when maintenance is being performed on the power supply to equipment that is essential in protecting the environment or to such equipment itself.An emergency generator may be operated periodically to ensure that it will operate.
- (13) "Emergency use internal combustion engines" means stationary internal combustion engines used to drive pumps, aerators, and other equipment only during:
 - (A) the loss of primary power at the facility that is beyond the control of the owner or operator of the facility; or
 - (B) maintenance when maintenance is being performed on the power supply to equipment that is essential in protecting the environment or to such equipment itself.An emergency use internal combustion engine may be operated periodically to ensure that it will operate.
- (14) "Excess emissions" means an emission rate that exceeds the applicable limitation or standard; for the purposes of this definition, NO_x emitted by a source regulated by 15A NCAC 02D .1418 during the ozone season above its allocation are not considered excess emissions.
- (15) "Fossil fuel fired" means:
 - (A) For sources that began operation before January 1, 1996, where fossil fuel combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during 1995, or, if a source had no heat input in 1995, during the last year of operation of the unit before 1995;

- (B) For sources that began operation on or after January 1, 1996 and before January 1, 1997, where fossil fuel combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during 1996; or
- (C) For sources that began operation on or after January 1, 1997:
 - (i) Where fossil fuel combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during any year; or
 - (ii) Where fossil fuel combusted either alone or in combination with any other fuel, is projected to comprise more than 50 percent of the annual heat input on a Btu basis during any year, provided that the unit shall be "fossil fuel-fired" as of the date, during such year, on which the source begins combusting fossil fuel.
- (16) "Indirect-fired process heater" means an enclosed device using controlled flame where the device's primary purpose is to transfer heat by indirect heat exchange to a process fluid, a process material that is not a fluid, or a heat transfer material, instead of steam, for use in a process.
- (17) "Large non-EGU" or large non-electric generating unit means a stationary fossil fuel fired boiler or combustion turbine with a maximum heat input greater than 250 MMBtu/hr that either:
 - (A) does not serve at any time a generator producing electricity for sale; or
 - (B) serves at any time a generator producing electricity for sale and qualifies under 40 CFR 72.6(b)(4), that addresses certain cogeneration facilities, as an unaffected unit for purposes of the Acid Rain Program.
- (18) "Lean-burn internal combustion engine" means a spark ignition internal combustion engine originally designed and manufactured to operate with an exhaust oxygen concentration greater than one percent.
- (19) "NOx" means nitrogen oxides.
- (20) "NOx SIP Call control period" for the purposes of the NOx SIP Call budgets in 15A NCAC 02D .1425 means the period May 1 through the end of September 30.
- (21) "Ozone season" means the period beginning May 1 and ending September 30.
- (22) "Potential emissions" means the quantity of NOx that would be emitted at the maximum capacity of a stationary source to emit NOx under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit NOx shall be treated as a part of its design if the limitation is federally enforceable. Such physical or operational limitations include air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed.
- (23) "Projected seasonal energy input" means the maximum design heat input per hour times 3300 hours.
- (24) "Projected seasonal energy output" means the maximum design energy output per hour times 3300 hours.
- (25) "Reasonable assurance" means a demonstration to the Director that a method, procedure, or technique is possible and practical for a source or facility under the expected operating conditions.
- (26) "Reasonably Available Control Technology" or "RACT" means the lowest emission limitation for NOx that a particular source can meet by the application of control technology that is reasonably available considering technological and economic feasibility.
- (27) "Reasonable effort" means the proper installation of technology designed to meet the requirements of 15A NCAC 02D .1407, .1408, or .1409 and the utilization of this technology according to the manufacturer's recommendations or other similar guidance for not less than six months, in an effort to meet the applicable limitation for a source.
- (28) "Rich-burn internal combustion engine" means a spark ignition internal combustion engine originally designed and manufactured to operate with an exhaust oxygen concentration less than or equal to one percent.
- (29) "Seasonal energy input" means the total energy input of a combustion source during the period beginning May 1 and ending September 30.
- (30) "Seasonal energy output" means the total energy output of a combustion source during the period beginning May 1 and ending September 30.
- (31) "Shutdown" means the cessation of operation of a source or its emission control equipment.

- (32) "Source" means a stationary boiler, combustion turbine, combined cycle system, reciprocating internal combustion engine, indirect-fired process heater, or a stationary article, machine, process equipment, or other contrivance, or combination thereof, from which NO_x emanate or are emitted.
- (33) "Startup" means the commencement of operation of any source that has shutdown or ceased operation for a period sufficient to cause temperature, pressure, process, chemical, or pollution control device imbalance that would result in excess emissions.
- (34) "Stationary internal combustion engine" means a reciprocating internal combustion engine that is not self-propelled; however, it may be mounted on a vehicle for portability.

(b) Whenever reference is made to the Code of Federal Regulations in this Section, the definitions in the Code of Federal Regulations shall apply unless specifically stated otherwise in a particular rule in this Section.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(a)(7); 143-215.107(a)(10);
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 18, 2002;
Readopted Eff. October 1, 2020;
Amended Eff. May 1, 2022.*