401 KAR 51:160. NOx requirements for large utility and industrial boilers.

RELATES TO: KRS 224.10-100, 224.20-100, 224.20-110, 224.20-120, 40 C.F.R. 51.121, 51.122, 72.2, 75.1, 75.2, 75.4, 75.11-75.13, 75.17, 75.19, 75.20, 75.24, 75.70, 75.72, 75.74, 75.75, Part 96, 42 U.S.C. 7410

STATUTORY AUTHORITY: KRS 224.10-100(5), 224.20-110, 40 C.F.R. 51.121, 51.122, 72.2, 75.1, 75.2, 75.4, 75.11-75.13, 75.17, 75.19, 75.20, 75.24, 75.70, 75.72, 75.74, 75.75, Part 96, 42 U.S.C. 7410

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(5) requires the Environmental and Public Protection Cabinet to promulgate administrative regulations for the prevention, abatement, and control of air pollution. 42 U.S.C. 7410 requires each state to promulgate a plan which provides for implementation, maintenance, and enforcement of the national primary and secondary ambient air quality standard in each air quality control region within the state. This administrative regulation establishes requirements for the control of nitrogen oxides (NOx) emissions from large boilers and turbines used in power plants and other industrial applications, pursuant to the federal mandate published under the NOx SIP Call. This administrative regulation is not more stringent nor otherwise different than the provisions allowed under the federal mandate.

Section 1. Applicability. This administrative regulation shall apply to NOx budget units that are electric generating units or industrial boilers or turbines, except as provided in Section 2 of this administrative regulation.

Section 2. Exemptions. (1) Exemptions based on permit limitations. A NOx budget unit shall be exempt from Sections 3 to 7 of this administrative regulation if the owner or operator complies with this subsection.

(a) The source shall have a federally-enforceable permit issued by the cabinet containing conditions for the unit that:

1. Limit the unit’s NOx emissions during each control period beginning in 2004 to twenty-five (25) tons or less;

2. Restrict the unit to burning only natural gas or fuel oil during a control period in 2004 and each control period thereafter;

3. Restrict the unit's operation hours during each control period to the number calculated by dividing twenty-five (25) tons of potential NOx mass emissions by the unit's maximum potential hourly NOx mass emissions;

4. Require that the unit's potential NOx mass emissions shall be calculated pursuant to 40 C.F.R. 96.4(b)(1)(iii);

5. Require that the owner or operator of the unit shall retain at the source that includes the unit, for five (5) years, records demonstrating that the operating hours restriction, the fuel use restriction, and the other requirements of the permit related to these restrictions were met; and

6. Require that, by November 1 of each year for which the unit is subject to the federally-enforceable permit, the owner or operator of the unit, through the authorized account representative, shall:

a. Secure and transfer to an account established pursuant to 401 KAR 51:190, NOx allowances for each control period in an amount equal to the NOx emission limitation (in tons of NOx) under subparagraphs 1 and 3 of this paragraph upon which the unit's exemption is based; and

b. Report to the cabinet the unit's hours of operation (treating any partial hour of operation as a whole hour of operation) and the number of NOx allowances transferred pursuant to clause a of this subparagraph.

(b) A unit with an exemption based on permit limitations shall become subject to all the applicable provisions of this administrative regulation and shall be treated as commencing commercial operation on September 30 of any control period for which:

1. The fuel use restriction in paragraph (a)2 of this subsection or the operating hours restriction in paragraph (a)3 of this subsection is removed from the unit's federally-enforceable permit or otherwise becomes no longer applicable; or

2. The unit does not comply with the restrictions of this subsection.

(c) Units exempted under this subsection shall not receive a NOx allowance allocation under Section 4 of this administrative regulation.

(d) By November 30 of each year beginning in 2004, the cabinet shall report to the U.S. EPA:

1. The total NOx emission limitation (in tons of NOx) for all units exempted under this subsection; and

2. The total NOx allowances reported to the cabinet pursuant to paragraph (a)6b of this subsection.

(e) For units exempted under this subsection, the cabinet shall notify the U.S. EPA, in writing:

1. Of permit changes that remove a limit or render it no longer applicable; and

2. Any violation of a permit limit imposed pursuant to paragraph (a) of this subsection.

(2) Retired unit exemption.

(a) A NOx budget unit shall be exempt from the requirements in Sections 3 to 7 of this administrative regulation on the date that the unit is permanently retired, if the following conditions are met:

1. Except as provided in paragraph (b) of this subsection, the retired unit shall not emit NOx on or after the day it is retired; and

2. Within thirty (30) days after the unit is retired, the NOx authorized account representative shall submit:

a. A letter to the cabinet and to the U.S. EPA describing the unit, the date of retirement, and the reason for retirement; and

b. An application for a permit revision that reflects the status of the retired unit pursuant to 401 KAR 52:020 or 401 KAR 52:030, as appropriate; and

3. Unless the unit has been physically removed, records to demonstrate that the unit has not been operated shall be:

a. Maintained on-site for five (5) years from the date of retirement; and

b. Made available to the cabinet or the U.S. EPA upon request.

(b) Operation of a retired unit shall not be resumed unless the owner or operator submits an application and receives a permit revision pursuant to 401 KAR 52:020 or 401 KAR 52:030, as appropriate, prior to commencing operation.

(c) A retired unit shall not be allowed to opt into 401 KAR 51:190, Banking and trading NOx allowances and shall not receive a NOx allowance allocation under Section 4 of this administrative regulation.

(d) NOx allowances made to a unit that later retires shall:

1. Remain with the unit until they are transferred or deducted; and

2. Cease to be allocated to the unit at the end of the allocation period.

(e) The cabinet shall notify the U.S. EPA, in writing, of units that are exempted under this subsection.

(3) Category exemption. A carbon monoxide boiler that is associated with fluidized catalytic cracking units (FCCU) at petroleum refineries shall be exempt from the requirements in Sections 3 to 7 of this administrative regulation.

Section 3. Compliance Requirements. (1) NOx budget emissions limitation requirements. Commencing with the later date of May 31, 2004, or the year the unit commences operation, the owner or operator of a NOx budget unit shall:

(a) Beginning May 1, 2003, and May 1 of each year thereafter, monitor the total NOx emissions during each control period as specified in 40 C.F.R. 96.70 to 96.76; and

(b) By November 30 of each year, hold NOx allowances available for compliance deductions in an amount at least equal to the total NOx emissions during the control period as specified in 401 KAR 51:190.

(2) NOx allowance provisions. NOx allowances shall be held in, deducted from, or transferred among the NOx compliance, overdraft, and general accounts as specified in 401 KAR 51:190 and this subsection.

(a) The NOx budget source shall establish a general account in the NOx allowance Tracking System (NATS) by submitting "EPA Form 7620-15, General Account information".

(b) NOx budget units shall transfer NOx allowances under the NOx Budget Trading Program from one (1) account to another in the NOx Allowance Tracking System (NATS) by submitting "EPA Form 7620-14".

(c) NOx allowances shall not be deducted for compliance with subsection (1) of this section for a control period prior to the year for which the NOx allowances were allocated.

(d) If the U.S. EPA records the allocation, transfer, or deduction of NOx allowances from the compliance or overdraft account of a NOx budget source, this action shall:

1. Automatically amend and become part of the NOx budget portion of the source’s permit; and

2. Require no further review.

(e) The owner or operator of a NOx budget unit having excess NOx emissions for each control period beginning in 2004, shall comply with 401 KAR 51:190.

(f) Allocated NOx allowances shall not constitute a property right.

(3) Recordkeeping and reporting requirements.

(a) The owner or operator of a NOx budget source shall maintain the following records:

1. The "Account Certificate of Representation" for the source’s NOx authorized account representative;

2. Emissions monitoring information as specified in 40 C.F.R. 96.70 to 96.76;

3. Copies of all reports, compliance certifications, and other submissions and records required by 401 KAR 51:190; and

4. Copies of documents used to complete permit revision applications or to demonstrate compliance with 401 KAR 51:190.

(b) These records shall be:

1. Used to demonstrate compliance with subsection (1) of this section;

2. Maintained on site for a period of five (5) years, unless a longer period is required by 40 C.F.R. 96.70 to 96.76 or the cabinet or the U.S. EPA requires an extended period for cause; and

3. Made available for inspection on request by the cabinet or the U.S. EPA.

(4) Computation of time.

(a) A time period scheduled to begin on the occurrence of an act or event shall begin on the day the act or event occurs.

(b) A time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs.

(c) If the final day of a time period falls on a weekend or state or federal holiday, the time period shall be extended to the next business day.

Section 4. Methodology for the Allocation and Sale of NOx Allowances. The number of NOx allowances to be allocated to each NOx budget unit by the cabinet and to be sold by the Commonwealth of Kentucky shall be determined pursuant to this section.

(1) The total number of NOx allowances shall be the number of NOx allowances assigned to Kentucky by the U.S. EPA and approved in Kentucky's State Implementation Plan (SIP).

(2) The total number of NOx allowances assigned to Kentucky shall be divided into separate pools as follows:

(a) The number of NOx allowances specified in Kentucky's approved SIP for electric generating units with:

1. Ninety-five (95) percent of this amount allocated for the 2004 to 2006 allocation period to units that commence commercial operation on or before May 1, 2001;

2. Five (5) percent of this amount for the 2004 to 2006 allocation period sold by the Commonwealth of Kentucky with the proceeds deposited in Kentucky's general fund;

3. Ninety-eight (98) percent of this amount allocated for each allocation period beginning with the 2007 to 2009 allocation period to units that commence commercial operation on or before May 1 of the year that is three (3) years before the first year of the applicable allocation period; and

4. Two (2) percent of this amount for each allocation period beginning with the 2007 to 2009 allocation period and each allocation period thereafter sold by the Commonwealth of Kentucky with the proceeds deposited in Kentucky's general fund; and

(b) The number of NOx allowances specified in Kentucky's approved SIP for industrial boilers or turbines with:

1. Ninety-eight (98) percent of this amount allocated for each allocation period to units that commence commercial operation on or before May 1 of the year that is three (3) years before the first year of the applicable allocation period; and

2. Two (2) percent of this amount allocated for each allocation period to NOx budget units that commence commercial operation after May 1 of the year that is three (3) years before the first year of the applicable allocation period and on or before May 1 of the applicable control period.

(3) The cabinet shall notify the U.S. EPA and NOx budget sources of the NOx allowances to be allocated and sold from the pools specified in subsection (2) of this section pursuant to Section 5(4) of this administrative regulation.

(4) For allocation of the pools specified in subsection (2)(a)1, 3 and (b) of this section, heat input, in MMBTU, of a NOx budget unit shall be determined from:

(a) The average of the two (2) highest amounts of the unit's heat input from the three (3) most recent control periods as determined in accordance with 40 C.F.R. Part 75 or 96.70 to 96.76 if the unit is subject to 40 C.F.R. Part 75; or

(b) The best available data reported to the cabinet for the unit if the unit is not otherwise subject to 40 C.F.R. Part 75.

(5) For electric generating units included in the pools specified in subsection (2)(a)1 and 3 of this section, the cabinet shall allocate NOx allowances to each NOx budget unit in an amount equal to the result obtained by:

(a) Multiplying 0.15 lb/MMBTU or the permit limit, whichever is less, by the heat input determined under Section 4(4) of this administrative regulation, rounded to the nearest whole NOx allowance as appropriate.

(b) If the initial total number of NOx allowances allocated for an allocation period to all NOx budget units in Kentucky included in the pools specified in subsection (2)(a)1 and 3 of this section does not equal ninety-five (95) percent for the 2004 to 2006 allocation period, or ninety-eight (98) percent for each allocation period thereafter, of the number of tons of NOx emissions in Kentucky's trading program budget apportioned to existing electric generating units, the cabinet shall:

1. Adjust the total number of NOx allowances allocated to all electric generating units in the applicable pool so that the total number of NOx allowances allocated equals ninety-five (95) percent for the 2004 to 2006 allocation period, or ninety-eight (98) percent for each allocation period thereafter, of the number of tons of NOx emissions in Kentucky's trading program budget apportioned to electric generating units; and

2. Make this adjustment by multiplying each unit's allocation by ninety-five (95) percent for the 2004 to 2006 allocation period, or ninety-eight (98) percent thereafter, of the number of tons of NOx emissions in Kentucky's trading program budget apportioned to electric generating units divided by the total number of NOx allowances allocated under paragraph (a) of this subsection, and rounding to the nearest whole NOx allowance as appropriate.

(6) For industrial boilers or turbines included in the pool specified in subsection (2)(b)1 of this section, the cabinet shall allocate NOx allowances to each NOx budget unit in an amount equal to the result obtained by:

(a) Multiplying 0.17 lb/MMBTU or the permit limit, whichever is less, by the heat input determined under subsection (4) of this section, rounded to the nearest whole NOx allowance as appropriate.

(b) If the initial total number of NOx allowances allocated for an allocation period to all NOx budget units in Kentucky included in the pool specified in subsection (2)(b)1 of this section does not equal ninety-eight (98) percent for each allocation period, of the number of tons of NOx emissions in Kentucky's trading program budget apportioned to existing industrial boilers or turbines, the cabinet shall:

1. Adjust the total number of NOx allowances allocated to all industrial boilers or turbines in the applicable pool so that the total number of NOx allowances allocated equals ninety-eight (98) percent for each allocation period, of the number of tons of NOx emissions in Kentucky's trading program budget apportioned to industrial boilers or turbines; and

2. Make this adjustment by multiplying each unit's allocation by ninety-eight (98) percent, of the number of tons of NOx emissions in Kentucky's trading program budget apportioned to industrial boilers or turbines divided by the total number of NOx allowances allocated under paragraph (a) of this subsection, and rounding to the nearest whole NOx allowance as appropriate.

(7)(a) The Commonwealth of Kentucky shall establish an account pursuant to 401 KAR 51:190 for the purpose of selling the NOx allowances in the pools specified in subsection (2)(a)2 and 4 of this section. The proceeds from the sale of the NOx allowances shall be deposited in the general fund of the Commonwealth of Kentucky.

(b) For NOx budget units included in the pool specified in subsection (2)(b)2 of this section, the cabinet shall allocate NOx allowances to each unit according to the following procedures:

1. The cabinet shall establish one (1) allocation set-aside for each control period. Each allocation set-aside shall be allocated NOx allowances equal to two (2) percent for each control period of the tons of NOx emissions in Kentucky's trading program budget, rounded to the nearest whole NOx allowance as appropriate.

2. The NOx authorized account representative may submit to the cabinet a request, in writing, to be allocated NOx allowances starting with the control period during which the NOx budget unit commences commercial operation, or is projected to commence commercial operation, and ending with the control period preceding the control period for which it will receive an allocation under subsection (2)(b)1 of this section. The request shall be in accordance with the following requirements:

a. The NOx allowance allocation request shall be submitted prior to May 1 of the first control period for which the NOx allowance allocation is requested and after the date on which the cabinet issues a permit to construct to the NOx budget unit; and

b. For a control period, the NOx authorized account representative may request NOx allowances in an amount that does not exceed 0.17 lb/MMBTU or the permitted limit, whichever is less, multiplied by the NOx budget unit's maximum design heat input in MMBTU/hr multiplied by the number of hours remaining in the control period starting with the first day in the control period on which the unit operated or is projected to operate.

3. The cabinet shall review, and allocate NOx allowances pursuant to, each NOx allowance allocation request in the order that the requests are received by the cabinet as of the close of business each day, with each consecutive day determining the order:

a. Upon receipt of the NOx allowance allocation request, the cabinet shall determine whether, and shall make any necessary adjustments to the request to ensure that the control period and the number of NOx allowances specified are consistent with the requirements of this subsection.

b. If the allocation set-aside for the control period for which NOx allowances are requested:

(i) Has an amount of NOx allowances not less than the number requested, as adjusted by the cabinet, the cabinet shall allocate the amount of the NOx allowances requested, as adjusted by the cabinet, to the NOx budget unit.

(ii) Has a smaller amount of NOx allowances than the number requested, as adjusted by the cabinet, the cabinet will deny in part the request and allocate only the remaining number of NOx allowances in the allocation set-aside to the NOx budget unit.

(iii) Once an allocation set-aside for a control period has been depleted of all NOx allowances, the cabinet shall deny, and shall not allocate any NOx allowances pursuant to a NOx allowance allocation request under which NOx allowances have not already been allocated for the control period.

4. Within sixty (60) days of receipt of a NOx allowance allocation request, the cabinet shall take appropriate action under this subsection and shall notify the U.S. EPA of the number of NOx allowances allocated for the control period to the NOx budget unit.

5. For a NOx budget unit that is allocated NOx allowances under this subparagraph, the U.S. EPA shall deduct NOx allowances to account for the actual utilization of the unit during the control period, and for any NOx allowances returned to Kentucky, the cabinet shall allocate to the NOx budget units in Kentucky using the following formula and rounding to the nearest whole NOx allowance as appropriate:

a. Unit's share of NOx allowances remaining in allocation set-aside equals total NOx allowances remaining in allocation set-aside multiplied by the quantity generated by dividing the unit's NOx allowance allocation by Kentucky's trading program budget excluding allocation set-aside;

b. If:

(i) Total NOx allowances remaining in allocation set-aside is the total number of NOx allowances remaining in the allocation set-aside for the control period to which the allocation set-aside applies;

(ii) Unit's NOx allowance allocation is the number of NOx allowances allocated under subsection (2)(b)2 of this section to the unit for the control period to which the allocation set-aside applies; and

(iii) State trading program budget excluding allocation set-aside is Kentucky's trading program budget for the control period to which the allocation set-aside applies multiplied by ninety-five (95) percent if the control period is in 2004, 2005, or 2006 or ninety-eight (98) percent if the control period is in any year thereafter, rounded to the nearest whole NOx allowance as appropriate.

(8) NOx allowances created pursuant to 401 KAR 51:180 for early reduction credits or emergency compliance shall not be included in the allocation or sale of the pools specified in this section.

Section 5. Allocation of NOx Allowances. (1) The cabinet shall determine the number of NOx allowances to be allocated to eligible NOx budget units for the allocation period beginning in 2004 and in each subsequent allocation period using the method described in Section 4 of this administrative regulation.

(2) A NOx budget unit that commences commercial operation on or before May 1 of the year that is three (3) years before the first year of the applicable allocation period shall be included in the applicable allocation pool as specified in Section 4(2)(a)1, 3, or (b)1 of this administrative regulation.

(3) If the U.S. EPA changes the number of NOx allowances assigned to Kentucky before the end of an allocation period, the cabinet shall reallocate the NOx allowances prior to the beginning of the next control period in the same ratio as the original allocation for that period.

(4) The cabinet shall notify the U.S. EPA and NOx budget sources of the NOx allowances to be allocated and sold by the Commonwealth of Kentucky pursuant to this section and Section 4 of this administrative regulation:

(a) For units that commence commercial operation on or before May 1 of the year that is three (3) years before the first year of the applicable allocation period:

1. Not later than sixty (60) days after the effective date of this administrative regulation for the allocation period beginning in 2004; and

2. By April 1 of the year that is three (3) years prior to the next allocation period; and

(b) By April 1 of each year, beginning in 2004, for units in the pool specified in Section 4(2)(b)2 of this administrative regulation that commence commercial operation after May 1 of the year that is three (3) years before the first year of the applicable allocation period and on or before May 1 of the applicable control period.

(5) Excess NOx allowances may be banked and traded according to 401 KAR 51:190.

Section 6. Application for NOx Budget Permit or Permit Revision. (1) The NOx authorized account representative of a NOx budget source shall submit an application to revise the source’s permit pursuant to 401 KAR 52:020 or 401 KAR 52:030, as appropriate, and this section. For this purpose, the source shall use:

(a) "Forms DEP7007A1 to DD, Permit Application to Construct or Operate an Air Contaminant Source," as applicable. Forms DEP7007A1 to DD are incorporated by reference in 401 KAR 52:050; and

(b) "Form DEP7007EE, NOx Budget Permit Application".

(2) The application shall include the following information:

(a) The Office of Regulatory Information Systems (ORIS) or facility code assigned to the source by the Energy Information Administration;

(b) Identification of:

1. Each NOx budget unit at the source;
2. Each retired unit; and
3. Each unit exempted pursuant to Section 2(1) of this administrative regulation;
(c) A statement that explains if the unit is:
1. A unit described in Section 1 of this administrative regulation; or
2. An opt-in unit pursuant to 401 KAR 51:195;
(d) The applicable requirements of Section 3 of this administrative regulation; and
(e) For opt-in units, the following certification statement signed by the NOx authorized account representative: "I certify that each unit for which this permit application is submitted, pursuant to the opt-in provisions of 401 KAR 51:195, is operating; is not a NOx budget unit pursuant to 401 KAR 51:160, Section 1; and is not covered by a retired exemption unit that is in effect pursuant to 401 KAR 51:160, Section 2(2)."

Section 7. Compliance. (1) Compliance certification. On or before November 30 each year, beginning in 2004, the NOx authorized account representative shall submit a compliance certification report to the cabinet and to the U.S. EPA pursuant to 401 KAR 51:190.
(2) Reporting to the cabinet. Reports that are required to be submitted to the cabinet shall be mailed to:
(a) Manager, Permit Review Branch, Kentucky Division for Air Quality, 300 Sower Boulevard, Frankfort Kentucky 40601; and
(b) To the appropriate Regional Office of the Division for Air Quality listed in Section 8(2) of this administrative regulation.

Section 8. Incorporation by Reference. (1) The following material is incorporated by reference:
(a) "Form DEP7007EE, NOx Budget Permit Application", May 2002;
(b) "EPA Form 7620-14, Allowance Transfer", United States Environmental Protection Agency, OMB No. 2060-0445;
(c) "EPA Form 7620-15, General Account Information", United States Environmental Protection Agency, OMB No. 2060-0445; and
(d) "EPA Form 7620-16, Account Certificate of Representation", United States Environmental Protection Agency, OMB No. 2060-0445.
(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the following offices of the Division for Air Quality, Monday through Friday, 8 a.m. to 4:30 p.m.:
(a) The Division for Air Quality, 300 Sower Boulevard, Frankfort Kentucky 40601, (502) 564-3999; and
(b) The appropriate regional office of the Division for Air Quality as follows:
1. Ashland Regional Office, 1550 Wolohan Drive, Suite 1,, Ashland, Kentucky 41102, (606) 929-5285;
2. Bowling Green Regional Office, 2642 Russellville Road, Bowling Green, Kentucky 42101, (270) 746-7475;
3. Florence Regional Office, 8020 Veterans Memorial Drive, Suite 110, Florence, Kentucky 41042, (859) 525-4923;
4. Frankfort Regional Office, 300 Sower Boulevard, Frankfort Kentucky 40601, (502) 564-3358;
5. Hazard Regional Office, 233 Birch Street, Suite 2, Hazard, Kentucky 41701, (606) 435-6022;
6. London Regional Office, 875 S. Main Street, London, Kentucky 40741, (606) 330-2080;

7. Owensboro Regional Office, 3032 Alvey Park Drive, W., Suite 700, Owensboro, Kentucky 42303, (270) 687-7304; or

8. Paducah Regional Office, 130 Eagle Nest Drive, Paducah, Kentucky 42003, (270) 898-8468.

(3)(a) Copies of the Code of Federal Regulations (C.F.R.) and Federal Register (Fed. Reg.) are available for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

(b) Copies of Forms DEP7007EE-1 to EE-3 are available on the Internet at http://air.ky.gov. (27 Ky.R. 2606; 3276; 28 Ky.R. 373; eff. 8-15-2001; 29 Ky.R. 540; 1605; eff. 12-18-2002; 32 Ky.R. 724; 1233; eff. 2-3-2006; TAm eff. 5-20-2010; TAm eff. 9-16-2013; TAm eff. 7-8-2016; Crt eff. 7-30-2018.)