401 KAR 61:080. Steel plants using existing basic oxygen process furnaces.

RELATES TO: KRS Chapter 224
STATUTORY AUTHORITY: KRS 224.10-100
CERTIFICATION STATEMENT:
NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the Environmental and Public Protection Cabinet to prescribe administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides for control of emissions from steel plants using existing basic oxygen process furnaces.

Section 1. Applicability. Provisions of this administrative regulation are applicable to the following affected facilities commenced before the classification date defined below: basic oxygen process furnaces, associated metallurgical equipment, and dust-handling equipment.

Section 2. Definitions. As used in this administrative regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010.

(1) "Basic oxygen process furnaces (BOPF)" means any furnace producing steel by charging scrap steel, hot metal and flux materials into a vessel and introducing a high volume of an oxygen-rich gas.

(2) "Dust-handling equipment" means any equipment used to handle particulate matter collected by a control device for a BOPF and/or associated equipment subject to this administrative regulation.

(3) "Control device" means the air pollution control equipment used to remove from the effluent gas stream, particulate matter generated by a BOPF and/or associated equipment.

(4) "Steel production cycle" means the operations required to produce each batch of steel and includes the following major functions: scrap preheating, scrap charging, hot metal charging, oxygen blowing, dumping slag and tapping.

(5) "Charge" means the addition of steel scrap, molten iron and other materials into a BOPF.

(6) "Tap" means the pouring of molten steel from a BOPF.

(7) "Shop" means the building or bay which houses one (1) or more BOPFs and associated metallurgical equipment.

(8) "Classification date" means June 11, 1973.

(9) "Associated metallurgical equipment" means process equipment located in the shop used in conjunction with external desulfurization of molten iron, hot metal transfer, and transfer of slag and kish.

Section 3. Standard for Particulate Matter.

(1) No owner or operator subject to the provisions of this administrative regulation shall cause to be discharged into the atmosphere any gases which exceed a maximum particulate concentration of 0.030 gr/dscf from the control device associated with the BOPF as measured only during the main oxygen blowing period.

(2) No owner or operator shall cause to be discharged into the atmosphere any gases which exceed a maximum particulate concentration of 0.010 gr/dscf from a control device associated with any other BOPF associated metallurgical equipment as measured only during operation of such equipment.

(3) No owner or operator shall cause to be discharged into the atmosphere any gases which exit from a control device and exhibit an opacity of twenty (20) percent or more.

(4) No owner or operator shall cause to be discharged into the atmosphere any gases which exit from a shop, due to operations of a BOPF and/or associated metallurgical equipment, and exhibit opacity of twenty (20) percent or more for more than eleven (11) times as observed at fifteen (15) second intervals over a period of any sixty (60) consecutive minutes. Reference Method 9 of Appendix A to 40 CFR 60, filed by

reference in 401 KAR 50:015 and supplemented by the procedures in Section 5(4) of this administrative regulation, shall be used for determining opacity in this subsection, except for averaging time and number of observations.

(5) No owner or operator subject to the provisions of this administrative regulation shall cause to be discharged into the atmosphere from dust-handling equipment any gases which exhibit ten (10) percent opacity or greater.

Section 4. Monitoring of Operations. The owner or operator of an affected facility shall maintain a single time-measuring instrument which shall be used in recording daily the time and duration of each steel production cycle, and the time and duration of any diversion of exhaust gases from the main stack servicing the BOPF.

Section 5. Test Methods and Procedures.

(1) Reference methods in Appendix A of 40 CFR 60, except as provided under 401 KAR 50:045, shall be used to determine compliance with the standards prescribed under Section 3 of this administrative regulation as follows:

(a) Reference Method 5 for the concentration of particulate matter and associated moisture content;

(b) Reference Method 1 for sample and velocity traverses;

(c) Reference Method 2 for velocity and volumetric flow rate;

(d) Reference Method 3 for gas analysis; and

(e) Reference Method 9 for opacity determination for emissions discharged through a control device and from dust-handling equipment. For the purpose of this administrative regulation, opacity observation taken at fifteen (15) second intervals immediately before and after a diversion of exhaust gases from the control device stack may be considered to be consecutive for the purpose of computing an average opacity for a six (6) minute period. Observations taken during a diversion shall not be used in determining compliance with the opacity standard.

(2) For Reference Method 5, the sampling for each run shall continue for an integral number of cycles with total duration of at least sixty (60) minutes except that shorter sampling times when necessitated by process variables or other factors may be approved by the cabinet. The sampling rate shall be at least nine-tenths (0.9) dscm/hr (0.53 dscf/min). For the purpose of testing the control device associated with the BOPF a cycle shall start at the beginning of the primary oxygen blow and shall terminate at the end of the primary oxygen blow.

(3) Sampling of flue gases during each steel production cycle shall be discontinued whenever all flue gases are diverted from the stack and shall be resumed after each diversion period.

(4) For the purpose of determining opacity from a shop pursuant to Section 3(4) of this administrative regulation, the following procedures shall be used to supplement Method 9:

(a) In making observations of roof monitor emissions, the reader shall be positioned within a sector seventy (70) degrees either side of a line perpendicular to the long axis of the roof monitor. Within this sector the reader shall be positioned with the sun behind him and generally perpendicular to the axis of the plume that is being observed. On overcast days or if the plume is in a shadow, the reader need not follow the requirement about positioning his back to the sun.

(b) In making observations of emissions from other openings in the building, the reader shall be positioned within a sector seventy (70) degrees either side of a line perpendicular to the side of the building nearest which the emissions occur and with a clear view of the emissions. Within this sector the reader shall be positioned with the sun behind him and generally perpendicular to the axis of the plume that is being

observed. On overcast days, the reader need not follow the requirement about positioning his back to the sun.

(c) If emissions are being emitted from the roof monitor and other discharge points from the building, the reader shall read whichever plume is most opaque at the time of each reading.

Section 6. Compliance Timetable. The owner or operator of an affected facility shall demonstrate compliance with Section 3(1) of this administrative regulation on or before December 31, 1982. Compliance with all other provisions of this administrative regulation shall have been demonstrated on or before June 6, 1979.

Section 7. Alternate Emission Limitations. The owner or operator of an affected facility subject to this administrative regulation may propose an alternate plan pursuant to the requirements of 401 KAR 51:055 to meet the emissions limitations required by this administrative regulation.

(5 Ky.R. 491; 1057; eff. 6-6-1979; 9 Ky.R. 380; 922; eff. 3-2-1983; 10 Ky.R. 440; 1078; eff. 4-1-1984; TAm eff. 8-9-2007; Crt eff. 1-25-2019; Crt eff 1-20-2026.)