

REGULATION 7.77 Standards of Performance for New Blast Furnace Casthouses

Air Pollution Control District of Jefferson County Jefferson County, Kentucky

Relates To: KRS Chapter 77 Air Pollution Control

Pursuant To: KRS Chapter 77 Air Pollution Control

Necessity and Function: KRS 77.180 provides that the Air Pollution Control Board may make and enforce all needful orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of emissions from new blast furnace casthouses.

SECTION 1 Applicability

This regulation applies to blast furnace casthouses commenced on or after the effective date of this regulation.

SECTION 2 Definitions

Terms used in this regulation not defined herein shall have the meaning given them in Regulation 1.02.

- 2.1 "Blast Furnace" means a furnace producing pig iron by introducing iron bearing materials, coke, and flux materials into a vessel and introducing heated combustion air to form a reducing gas which is passed counter current to the descending raw materials.
- 2.2 "Blast Furnace Casthouse" means the building or buildings which house the following:
 - 2.2.1 Casting of hot metal from a blast furnace from an opening at the bottom of the furnace through a runner into a torpedo car; or
 - 2.2.2 Casting of the slag from a blast furnace from an opening at the bottom of the furnace through runners into a slag ladle or slag pit.
- 2.3 "Control device" means the air pollution control equipment used to remove particulate matter generated in the blast furnace casthouses from the effluent gas stream.

SECTION 3 Standards for Particulate Matter

No owner or operator of a blast furnace casthouse subject to this regulation shall cause to be discharged into the atmosphere from the blast furnace casthouse any gases which:

- 3.1 Exhibit an average opacity in excess of 10%.
- 3.2 If such gases exit from a gas cleaner, no owner or operator subject to the provisions of this regulation shall cause to be discharged into the atmosphere any gases which:
 - 3.2.1 Contain particulate matter in excess of 0.010 gr/dscf as tested during casting of hot metal and/or slag; and
 - 3.2.2 Exhibit an average opacity in excess of 10%.

SECTION 4 Test Methods and Procedures

Reference test methods in 40 CFR Part 60 Appendix A shall be used to determine compliance with the standards prescribed in Section 3 as follows:

- 4.1 Reference Method 5 for the concentration of particulate matter and associated moisture content;
- 4.2 Reference Method 1 for sample and velocity traverses;
- 4.3 Reference Method 2 for velocity and volumetric flow rate;
- 4.4 Reference Method 3 for gas analysis; and
- 4.5 Reference method 9 for the determination of opacity.
- 4.6 For the purpose of determining compliance with Section 3, the following procedures shall be used to supplement Method 9:
 - 4.6.1 A series of consecutive observations taken at 15 second intervals shall be made during the entire period of the time that hot metal and slag are being cast. Compliance shall be based on a comparison of the standards in Section 3 with the highest average opacity occurring over any six consecutive minutes during the period of observation. If emissions are being emitted from the roof monitor or other discharge points from the building, the State of Kentucky currently certified opacity reader shall read and record all plume emission points with a minimum of one six-minute average reading record for each. The failure of single emission point to meet the standards in Section 3 will cause the entire casthouse to fail the standard.
 - 4.6.2 Method 9 shall be adhered to precisely in the observation and recording of all readings from all emission points.

SECTION 5 Variances

The District may grant a variance from the control requirements of this regulation. Requests for a variance shall be supported by adequate technical and economic documentation, provided that the alternative strategy shall result in an equivalent overall reduction in particulate emissions from the source as would be required by this regulation.

Adopted v1/10-20-93; effective 10-20-93.

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