ENERGY AND ENVIRONMENT CABINET

Department for Environmental Protection

Division for Air Quality

(Amendment)

401 KAR 61:015. Existing indirect heat exchangers.

RELATES TO: KRS Chapter 224, 40 C.F.R. Part 60, Subpart D, Da, Db, Dc, Part 63, Subparts DDDDD, UUUUU, JJJJJJ

STATUTORY AUTHORITY: KRS 224.10-100

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(5) requires the [~~Environmental and Public Protection~~] cabinet to promulgate[~~prescribe~~] administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides for the control of emissions from existing indirect heat exchangers.

Section 1. [~~Applicability. The provisions of this administrative regulation shall apply to each affected facility commenced before the applicable classification date defined below.~~

~~Section 2.~~] Definitions. As used in this administrative regulation, all terms not defined in this section[~~herein~~] shall have the meaning given them in 401 KAR 50:010 and 401 KAR 50:025.

(1) "Affected facility" means an indirect heat exchanger having a heat input capacity of more than one (1) MMBTU/hr[~~million BTU per hour~~].

(2) [~~"Indirect heat exchanger" means any piece of equipment, apparatus, or contrivance used for the combustion of fuel in which the energy produced is transferred to its point of usage through a medium that does not come in contact with or add to the products of combustion.~~

~~(3)~~] "Classification date" means:

(a) August 17, 1971, for affected facilities with a capacity of more than 250 MMBTU/hr[~~million BTU per hour~~] heat input; or

(b) April 9, 1972, for affected facilities with a capacity of 250 MMBTU/hr[~~million BTU per hour~~] heat input or less.

(3) "Fuel" means any material combusted for the purpose of creating useful heat.

(4) "GCV" means gross calorific value.

(5) "Indirect heat exchanger" means a piece of equipment, apparatus, or contrivance used for the combustion of fuel in which the energy produced is transferred to its point of usage through a medium that does not come in contact with or add to the products of combustion.

(6) "Shutdown period" means the period:

(a) Beginning when, whichever occurs first:

1. The affected facility no longer supplies useful thermal energy for heating, cooling, process purposes, or generation of electricity; or

2. Fuel is not being combusted in the affected facility; and

(b) Ending when:

1. The affected facility no longer supplies useful thermal energy for heating, cooling, process purposes, or generation of electricity; and

2. Fuel is not being combusted in the affected facility.

(7) "Startup periods" means:

(a) Beginning with either:

1. The combustion of any fuel in an affected facility for the purpose of supplying useful thermal energy for heating, cooling, process purposes, or generation of electricity; or

2. The combustion of fuel in an affected facility for any purpose after a shutdown event; and

(b) Ending after the longest manufacturer-recommended time required to engage all control devices utilized by the affected facility applicable to the pollutant, not to exceed (4) four hours after any of the useful thermal energy from the affected facility is supplied for any purpose.

(8) "Useful thermal energy" means energy that meets the minimum operating temperature, flow, or pressure required by any energy use system that uses energy provided by the affected facility.

Section 2. Applicability. The provisions of this administrative regulation shall apply to each affected facility commenced before the applicable classification date.

Section 3. Method for Determining Allowable Emission Rates. (1) Except as established[~~provided~~] in subsection (3) of this section, the total rated heat input capacity of all affected facilities at a source, commenced before the applicable classification date within a source, shall be used as established[~~specified~~] in Sections 4 and 5 of this administrative regulation to determine the allowable emission rate in terms of lb/MMBTU[~~pounds of effluent per million BTU~~] heat input.

(2) The permitted allowable emission rate of an affected facility shall not be changed due to inclusion or shutdown of another affected facility at the source[~~At such time as any affected facility is assigned an allowable emission rate by the cabinet, at no time thereafter shall that rate be changed due to inclusion or shutdown of any affected facility at the source~~].

(3) A source may submit a request to the cabinet for approval of an allowable emission rate apportioned independent from individual heat input pursuant to this subsection.

(a) The following equation shall be used to determine the allowable emissions rate:

[~~(a) A source may petition the cabinet to establish an allowable emission rate which may be apportioned without regard to individual affected facility heat input provided that the conditions specified in paragraphs (b), (c), (d), and (e) of this subsection are met. Such allowable emission rate shall be determined according to the following equation:~~]

$$F = (AB + DE)/C$$

Where:

1. A = the allowable emission rate (in lb/MMBTU/hr heat[~~pounds per million BTU~~] input), as determined according to 401 KAR 59:015, Section 3(1);

2. B = the total rated heat input (in MMBTU/hr[~~millions of BTU per hour~~]) of all affected facilities commenced on or after the applicable classification date within a source, including those for which an application to construct, modify, or reconstruct has been submitted to the cabinet;

3. C = the total rated heat input (in MMBTU/hr[~~millions of BTU per hour~~]) of all affected facilities within a source, including those for which an application to construct, modify, or reconstruct has been submitted to the cabinet;

4. D = the total emission rate (in lb/MMBTU[~~pounds per million BTU~~] input) as determined according to subsection (1) of this section;

5. E = the total rated heat input (in MMBTU/hr[~~millions of BTU per hour~~]) of all affected facilities commenced before the applicable classification date; and

6. F = the alternate allowable emission rate (in lb/MMBTU[~~pounds per actual million BTU~~] input).

(b) In determining an alternative allowable emission rate for sulfur dioxide, the formula established in paragraph (a) of this subsection shall utilize values for allowable emissions rates for affected facilities stated in terms of total rated heat input capacity based on the use of the same

fuel category (solid, liquid, or gaseous fuel) which shall be determined by utilizing the formulas established in Section 5 of this administrative regulation.

(c) The total emissions in lb/hr from all affected facilities at the source subject to this administrative regulation divided by the total actual heat input expressed in MMBTU/hr of the affected facilities shall not exceed the alternate allowable emission rate as determined in paragraph (a) of this subsection.

(d)[~~(b) At no time shall the owner or operator of the source allow the total emissions (in pounds per hour) from all affected facilities within the source divided by the total actual heat input (in millions of BTU per hour) of all affected facilities within the source to exceed the alternate allowable emission rate as determined by paragraph (a) of this subsection.~~]

~~(c)~~] At no time shall the owner or operator of any source subject to federal new source performance standards allow the emissions from any affected facility commenced on or after the applicable classification date to exceed the allowable emission rate determined by use of that affected facility's rated heat input (instead of the heat input as determined by subsection (1) of this section) as established[~~specified~~] in 401 KAR 59:015, Sections 4 and 5.

(e)1. The source shall demonstrate compliance with this subsection by conducting a performance test pursuant to 401 KAR 50:45 for each affected facility subject to this administrative regulation.

2. The source shall demonstrate that compliance with this subsection shall be maintained on a continuous basis.[~~(d) The owner or operator of the source must demonstrate compliance with this subsection by conducting a performance test according to 401 KAR 50:045 on each affected facility under such conditions as may be specified by the cabinet.~~

~~(e) Upon petition, the cabinet will establish an alternate emission rate in accordance with this subsection if the owner or operator demonstrates to the cabinet's satisfaction that the source will maintain compliance with this subsection on a continual basis.~~]

Section 4. Standard for Particulate Matter. (1) Except as established[~~provided for~~] in Sections[~~Section~~] 3(3) and 9 of this administrative regulation, an affected facility subject to this administrative regulation shall not cause emissions of particulate matter in excess of[~~no owner or operator of an affected facility subject to the provisions of this administrative regulation shall cause to be discharged into the atmosphere from that affected facility~~]:

(a)[~~(1) Particulate matter in excess of~~] That established[~~specified~~] in Appendix A of this administrative regulation;

(b)[~~(2) Emissions which exhibit~~] Greater than twenty (20) percent opacity in regions classified as Priority I, pursuant to Appendix A of this administrative regulation, with respect to particulate matter, except that, for:

1.[~~(a) That, for~~] Cyclone or pulverized fired indirect heat exchangers, a maximum of forty (40) percent opacity shall be permissible for not more than one (1) six (6) minute period in any sixty (60) consecutive minutes;

2.[~~(b) That, for~~] Stoker fired indirect heat exchangers, a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning the fire box or blowing soot and, for indirect heat exchangers with stationary grates, a maximum of forty (40) percent opacity shall be permissible during cleaning of the grates for not more than three (3) consecutive minutes in any sixty (60) consecutive minutes for each section of grates that are cleaned; and

3.[~~(c) For~~] Emissions from an indirect heat exchanger during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations;[~~.~~]

(c)[~~(3) Emissions which exhibit~~] Greater than forty (40) percent opacity in regions classified as Priority II or III with respect to particulate matter except that, for:

1.[~~(a) That, for~~] Cyclone or pulverized fired indirect heat exchangers, a maximum of sixty (60) percent opacity shall be permissible for not more than one (1) six (6) minute period in any sixty (60) consecutive minutes;

2.[~~(b) That, for~~] Stoker fired indirect heat exchangers, a maximum of sixty (60) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning the fire box or blowing soot and, for indirect heat exchangers with stationary grates, a maximum of sixty (60) percent opacity shall be permissible during cleaning of the grates for not more than three (3) consecutive minutes in any sixty (60) consecutive minutes for each section of grates that are cleaned; and

3.[~~(c) For~~] Emissions from an indirect heat exchanger during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

(2)[~~(4)~~] The emission limitations contained in subsection (1)[~~other subsections~~] of this section shall not apply to any affected facility (with more than 250 MMBTU/hr[~~million BTU per hour~~] heat input capacity, which was in being or under construction before August 17, 1971, or any affected facility with 250 MMBTU/hr[~~million BTU per hour~~] capacity or less, which was in being

or under construction prior to April 9, 1972) if that affected facility was in compliance prior to April 9, 1972, with, or has a valid permit to operate within the provisions of the previous Kentucky Air Pollution Control Commission Regulation No. 7 [~~entitled "~~]Prevention and Control of Emissions of Particulate Matter from Combustion of Fuel in Indirect Heat Exchangers.[~~"~~] These affected facilities shall comply with the emission limitations in that administrative regulation except that replacement of the particulate emissions control device associated with the affected facility shall subject it to the standard contained in this section.

Section 5. Standard for Sulfur Dioxide. (1) Except as established in Sections[~~provided for in Section~~] 3(3) and 9 of this administrative regulation and subsection (5) of this section, an affected facility subject to this administrative regulation shall not cause emissions of gases that[~~no owner or operator of an affected facility subject to the provisions of this administrative regulation shall cause to be discharged into the atmosphere from that affected facility, any gases which~~] contain sulfur dioxide in excess of that established[~~specified~~] in Appendix B of this administrative regulation.

(2) If[~~When~~] different fuels are burned simultaneously in any combination, the applicable standard shall be determined by proration using the following formula:

Allowable Sulfur Dioxide Emission,

$$\frac{lb}{MMBTU} = \frac{[x(a) + y(b) + z(c)]}{x + y + z}$$

$$[\frac{lb}{MMBTU} = \frac{y(a)+z(b)}{(y+z)}]$$

Where:

(a) x is the percent of total heat input derived from liquid fuel;

(b) y is the percent of total heat input derived from [~~liquid or~~] gaseous fuel;

(c) z is the percent of total heat input derived from solid fuel;

(d) a is the allowable sulfur dioxide emission in lb/MMBTU[~~pounds per million BTU~~] heat input derived from liquid [~~or gaseous~~] fuel; [~~and~~]

(e) b is the allowable sulfur dioxide emissions in lb/MMBTU[~~pounds per million BTU~~] heat input derived from gaseous[~~solid~~] fuel; and

(f) c is the allowable sulfur dioxide emissions in lb/MMBTU heat input derived from solid fuel.

(3) Compliance shall be based on the total heat input from all fuels burned, including gaseous fuels.

(4) In counties classified as VA with respect to sulfur dioxide, for a source[~~sources~~] having a total heat input greater than 1500 MMBTU/hr[~~1,500,000,000 BTU per hour (1500 MM BTU/hr.)~~] as determined by Section 3(1) of this administrative regulation, an[~~no~~] owner or operator shall not allow the annual average sulfur dioxide emission rate from all existing and new affected facilities combined at the source to exceed six-tenths (0.60) pounds per million BTU.

(5) In counties classified as IA with respect to sulfur dioxide, at a source[~~sources~~] having a total rated heat input greater than 1500 MMBTU/hr[~~1,500,000,000 BTU per hour (1500 MM BTU/hr.)~~] as determined by Section 3(1) of this administrative regulation, the cabinet shall allow one (1) affected facility, as stated[~~specified~~] on the operating permit, to emit sulfur dioxide at a rate not to exceed a twenty-four (24) hour average of eight (8.0) lb/MMBTU[~~pounds per million BTU~~], during those periods of time when the affected facility is being operated for the purpose of generating high sulfur dioxide content flue gases for use in any experimental sulfur dioxide removal system.

Section 6. Monitoring of Operations. (1) The sulfur content of solid fuels, as burned, shall be determined in accordance with the methods specified by the cabinet.

(2) The sulfur content of liquid fuels, as burned, shall be determined in accordance with the methods specified by the cabinet.

(3) The rate of fuel burned for each fuel shall be measured daily or at shorter intervals and recorded. The heating value and ash content of fuels shall be ascertained at least once per week and recorded. If[~~Where~~] the indirect heat exchanger is used to generate electricity, the average electrical output and the minimum and maximum hourly generation rate shall be measured and recorded daily.

(4) The owner or operator of an[~~any~~] indirect heat exchanger of more than 250 MMBTU/hr[~~million BTU per hour~~] heat input subject to the provisions of this administrative regulation shall maintain a file of all measurements required by this administrative regulation and summarized monthly. The record of all measurements[~~any such measurement(s)~~] and summary shall be retained for at least two (2) years following the date of [~~such~~] measurements and summaries.

(5) The cabinet may require for an[~~any~~] indirect heat exchanger of less than 250 MMBTU/hr [~~million BTU per hour~~] heat input any or all the fuel monitoring required by this section.

(6) For an indirect heat exchanger that does not use a flue gas desulfurization device, a continuous monitoring system as established[~~specified~~] in 401 KAR 61:005 for measuring sulfur dioxide emissions is not required if the owner or operator monitors the[~~such~~] emissions by fuel sampling and analysis [~~pursuant to Section 7(6) of 401 KAR 59:015~~].

Section 7. Test Methods and Procedures. (1) Except as established[~~provided~~] in 401 KAR 50:045, performance tests used to demonstrate compliance with Sections 4 and 5 of this administrative regulation shall be conducted according to the following methods, incorporated [~~(filed~~] by reference in 401 KAR 50:015[~~)~~]:

(a) Reference Method 1 for the selection of sampling site and sample traverses;

(b) Reference Method 3 for gas analysis to be used when applying Reference Methods 5 and 6[~~, 6 and 7~~];

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

(d) Reference Method 6 for the concentration of sulfur dioxide; and

(e) Reference method 9 for visible emissions[~~Reference Method 7 for the concentration of nitrogen oxides~~].

(2) For Reference Method 5:

(a) [~~,~~] Reference Method 1 shall be used to select the sampling site and the number of traverse sampling points.

(b) The sampling time for each run shall be at least sixty (60) minutes and the minimum sampling volume shall be 0.85 dscm (thirty (30) dscf), except that smaller sampling times or volumes, if[~~when~~] necessitated by process variables or other factors, may be requested by the source[~~approved by the Cabinet~~].

(c) The probe and filter holder heating systems in the sampling train shall be set to provide a gas temperature not[~~no~~] greater than 160°C (320°F).

(3) For Reference Methods 6:

(a) [~~and 7,~~] The sampling site shall be the same as that selected for Reference Method 5.

(b) The sampling point in the duct shall be at the centroid of the cross section or at a point no closer to the walls than one (1) m (3.28 ft.).

(c) [~~For Reference Method 6,~~] The sample shall be extracted at a rate proportional to the gas velocity at the sampling point.

(d)[~~(4) For Reference Method 6,~~] The minimum sampling time shall be twenty (20) minutes and the minimum sampling volume shall be 0.02 dscm (0.71 dscf) for each sample.

(e) The arithmetic mean of two (2) samples shall constitute one (1) run.

(f) Samples shall be taken at approximately thirty (30) minute intervals.

(5)(a) [~~For Reference Method 7, each run shall consist of at least four (4) grab samples taken at approximately fifteen (15) minute intervals. The arithmetic mean of the samples shall constitute the run value.~~

~~(6)~~] For each run using the methods established[~~specified~~] by subsection (1)[~~(c), (d), and (e)~~] of this section, the emissions expressed in g/million cal (lb/MMBTU[~~lb/million BTU~~]) shall be determined by the following equation:

$$E = CF\frac{20.9}{20.9 - \%O2}$$

Where:

1. E = pollutant emission, g/million cal (lb/MMBTU[~~lb/million BTU~~]).

2. C = pollutant concentration, g/dscm (lb[~~.~~]/dscf) determined by Reference Method 5, or 6[~~or 7~~].

3. F = a factor as determined in 40 C.F.R. 60.45(f)[~~401 KAR 59:015, Section 7~~].

4. $\%O_2$ = oxygen content by volume (expressed as percent), dry basis.

Percent oxygen shall be determined by using the integrated or grab sampling and analysis procedures for Reference Method 3 as applicable. The sample shall be obtained as follows:

(b)[~~(a)~~] For determination of sulfur dioxide and nitrogen oxides emissions, the oxygen sample shall be obtained simultaneously at the same point for Reference Method 6 [~~and 7~~] determinations[~~, respectively. For Reference Method 7, the oxygen sample shall be obtained using the grab sampling and analysis procedures for Reference Method 3~~].

(c)[~~(b)~~] For determination of particulate emissions, the oxygen sample shall be obtained simultaneously by traversing the duct at the same sampling location used for each run of Reference Method 5 under subsection (2) of this section. Reference Method 1 shall be used for selection of the number of traverse points except that no more than twelve (12) sample points shall be[~~are~~] required.

(6) If[~~(7) When~~] combinations of fossil fuels are fired, the heat input, expressed in cal/hr. (BTU/hr.), shall be determined during each testing period by multiplying the gross calorific value of each fuel fired by the rate of each fuel burned. GVC[~~Gross calorific value~~] shall be determined in accordance with ASTM methods D2015-66(72) (solid fuels), D240-64(73) (liquid fuels), or D1826-64(70) (gaseous fuels), as applicable (ASTM designations incorporated[~~filed~~] by reference in 401 KAR 50:015). The rate of fuels burned during each testing period shall be determined by suitable methods and shall be confirmed by a material balance over the steam generation system.

Section 8. Compliance Timetable. (1) An affected facility[~~facilities~~] located in an area[~~areas~~] designated as attainment for sulfur dioxide or[~~and/or~~] particulate matter shall be in compliance as of June 6, 1979.

(2)(a) In Class IA counties, the owner or operator of any affected facility in any source with a[~~whose~~] total rated capacity of 16,000 MMBTU/hr[~~is sixteen thousand million BTU per hour (16,000 MM BTU/hr)~~] or more shall be required to [~~complete the following~~]:

1. Submit a final control plan for achieving compliance with this administrative regulation no later than May 1, 1978;

2. Award contracts for complying coal by January 1, 1979;

3. Initiate use of [~~such~~] complying coal on or before December 1, 1979; and

4. Demonstrate compliance by performance tests on or before October 1, 1981.

(b) In Class IVA counties designated as nonattainment for sulfur dioxide, the owner or operator of any affected facility in any source with a total rated capacity of greater than 1,500 MMBTU/hr[~~1,500,000,000 BTU per hour (1,500 MM BTU/hr)~~] but less than 21,000 MMBTU/hr[~~twenty-one thousand million BTU per hour (21,000 MM BTU/hr)~~] shall be required to [~~complete the following~~]:

1. Submit a final control plan for achieving compliance with this administrative regulation no later than May 1, 1979;

2. Award contracts for complying coal by August 1, 1979;

3. Initiate use of [~~such~~] complying coal on or before January 1, 1980; and

4. Demonstrate compliance by performance tests on or before March 1, 1980.

(c) In Class IVA counties designated as nonattainment for sulfur dioxide, the owner or operator of any affected facility in any source with a total rated capacity of greater than 21,000 MMBTU/hr[~~twenty-one thousand million BTU per hour (21,000 MM BTU/hr)~~] shall be required to [~~complete the following~~]:

1. Submit a control plan for flue gas desulfurization and initiate construction of a coal washing plant on or before June 1, 1978;

2. Issue invitations for bids for construction and installation of flue gas desulfurization equipment on or before October 1, 1978;

3. Award contract for construction and installation of flue gas desulfurization equipment on or before March 1, 1979;

4. Initiate construction of flue gas desulfurization equipment on or before December 1, 1979;

5. Complete construction of coal washing plant on or before December 1, 1980;

6. Complete construction of flue gas desulfurization equipment on or before June 1, 1982; and

7. Demonstrate compliance by performance tests on or before September 1, 1982.

Section 9. Standards During a Startup Period or a Shutdown Period. During a startup period or a shutdown period, an owner or operator shall comply with the work practice standards established in this section.

(1)(a) At all times, the owner or operator of each affected facility shall operate the affected facility and all applicable control devices in a manner consistent with good air pollution control practices for minimizing emissions;

(b) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility;

(c) All possible steps shall be taken by the owner or operator to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods;

(d) The actions, including duration of the startup period, of the owner or operator of each affected facility during startup periods and shutdown periods, shall be documented by signed, contemporaneous logs or other relevant evidence; and

(e) Startups and shutdowns shall be conducted according to either:

1. The manufacturer's recommended procedures; or

2. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the owner or operator of the affected facility; and

(2)(a) An affected facility subject to 40 C.F.R. 63.7500 shall meet the work practice standards established in Table 3 to Subpart DDDDD of 40 C.F.R. Part 63, as established in 401 KAR 63:002, Section 2(4)(iiii);

(b) An affected facility subject to 40 C.F.R. 63.9991 shall meet the work practice standards established in Table 3 to Subpart UUUUU of 40 C.F.R. Part 63, as established in 401 KAR 63:002, Section 2(4)(yyyy); or

(c) An affected facility subject to 40 C.F.R. 63.11201 shall meet the work practice standards established in Table 2 to Subpart JJJJJJ of 40 C.F.R. Part 63, as established in 401 KAR 63:002, Section 2(4)(jjjjj).

Section 10. Incorporation by Reference. (1) "Kentucky Air Pollution Control Commission Regulation No. 7 Prevention and Control of Emissions of Particulate Matter from Combustion of Fuel in Indirect Heat Exchangers" (November 1969), is incorporated by reference.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Air Quality, 300 Sower Boulevard, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m.

APPENDIX A TO 401 KAR 61:015 ALLOWABLE PARTICULATE EMISSION RATES			
For sources having a total heat input capacity (as determined by Section 3(1) of:	The standard (in pounds per million BTU actual heat input) is (based upon the Priority classification with respect to particulates of the region in which the source is located):		
(MM BTU/Hr.)	Priority I	Priority II	Priority III
10 or less	0.56	0.75	0.80
50	0.38	0.52	0.57
100	0.33	0.44	0.49
250	0.26	0.35	0.40
500	0.22	0.30	0.34
1000	0.19	0.26	0.30
2500	0.15	0.21	0.24
5000	0.13	0.18	0.21
7500	0.12	0.16	0.19
10000 or more	0.11	0.15	0.18

Interpolation of allowable emissions for intermediate heat input values not established[~~specified~~] above may be accompanied by use of the equations shown below for the appropriate heat input range [~~specified~~]. In all equations X = MMBTU/hr[~~millions of BTU per hour~~] heat input as determined by Section 3(1), and Y = allowable particulate emissions in pounds per MMBTU[~~million BTU~~] actual heat input.

Region Classification with respect to Particulate Matter	Range (MM BTU/Hr.)	Allowable (Lb.s/MM BTU)
Priority I	10 to 10,000	$Y = 0.9634 X^{-0.2356}$
Priority II	10 to 10,000	$Y = 1.2825 X^{-0.2330}$
Priority III	10 to 10,000	$Y = 1.3152 X^{-0.2159}$

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1 APPENDIX B TO 401 KAR 61:015

2 All standards are twenty-four (24) hour averages

For sources having a total heat input (as determined by Section 3(1) of: (MMBTU/hr)	The standard (in pounds per million BTU actual heat input) is (based upon the classification with respect to sulfur dioxide of the county in which the source is located):															
	CLASS I		CLASS IA		CLASS II		CLASS III		CLASS IV		CLASS IVA		CLASS V		CLASS VA	
	Liquid/ Gaseous Fuel	Solid Fuel	Liquid/ Gaseous Fuel	Solid Fuel	Liquid/ Gaseous Fuel	Solid Fuel	Liquid/ Gaseous Fuel	Solid Fuel	Liquid/ Gaseous Fuel	Solid Fuel	Liquid/ Gaseous Fuel	Solid Fuel	Liquid/ Gaseous Fuel	Solid Fuel	Liquid/ Gaseous Fuel	Solid Fuel
10 or less	3.0	5.0	3.0	5.0	4.0	6.0	4.6	7.0	5.4	8.0	5.4	8.0	6.0	9.0	6.0	9.0
50	1.5	2.4	1.5	3.9	2.4	3.7	3.2	4.8	4.3	6.4	4.3	6.4	4.9	7.3	4.9	7.3
100	1.2	1.8	1.2	3.6	2.0	3.0	2.7	4.1	4.0	5.9	4.0	5.9	4.5	6.7	4.5	6.7
150	1.0	1.5	1.0	3.3	1.8	2.7	2.5	3.7	3.7	5.6	3.7	5.6	4.3	6.4	4.3	6.4
200	0.9	1.3	0.9	3.2	1.6	2.5	2.3	3.5	3.6	5.4	3.6	5.4	4.1	6.2	4.1	6.2
250-1,500	0.8	1.2	0.8	3.1	1.5	2.3	2.2	3.3	3.5	5.2	3.5	5.2	4.0	6.0	4.0	6.0
Greater than 1,500 but less than 21,000	0.8	1.2	0.8	1.2	1.5	2.3	2.2	3.3	3.5	5.2	2.3	3.5	4.0	6.0	1.1	1.1

21,000 or more	0.8	1.2	0.8	1.2	1.5	2.3	2.2	3.3	3.5	5.2	2.1	3.1	4.0	6.0	1.1	1.1

Interpolation of allowable emissions for rated capacity values between 10 and 250 million BTU heat input may be accomplished by use of the equations shown below for the appropriate fuel [~~specified~~]. In all equations, Y = allowable sulfur dioxide emission in pounds per million BTU actual heat input, X = millions of BTU per hour heat input capacity rating as determined by Section 3(1).

COUNTY CLASS	FUEL	ALLOWABLE (POUNDS/MMBTU)
I	Liquid/Gaseous	$Y = 7.7223 \quad X^{-0.4106}$
	Solid	$Y = 13.8781 \quad X^{-0.4434}$
IA	Liquid/Gaseous	$Y = 7.7223 \quad X^{-0.4106}$
	Solid	$Y = 7.0382 \quad X^{-0.1485}$
II	Liquid/Gaseous	$Y = 8.0681 \quad X^{-0.3047}$
	Solid	$Y = 11.9134 \quad X^{-0.2979}$
III	Liquid/Gaseous	$Y = 7.7966 \quad X^{-0.2291}$
	Solid	$Y = 11.9872 \quad X^{-0.2336}$
IV	Liquid/Gaseous	$Y = 7.3639 \quad X^{-0.1347}$
	Solid	$Y = 10.8875 \quad X^{-0.1338}$
IVA	Liquid/Gaseous	$Y = 7.3639 \quad X^{-0.1347}$
	Solid	$Y = 10.8875 \quad X^{-0.1338}$

V	Liquid/Gaseous	$Y = 8.0189 \quad X^{-0.1260}$
	Solid	$Y = 12.0284 \quad X^{-0.1260}$
VA	Liquid/Gaseous	$Y = 8.0189 \quad X^{-0.1260}$
	Solid	$Y = 12.0284 \quad X^{-0.1260}$

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401 KAR 61:015 approved for filing.

9/1/2017
Date

Charles G. Snavely, Secretary
Energy and Environment Cabinet

PUBLIC HEARING AND PUBLIC COMMENT PERIOD

A public hearing on this administrative regulation and the SIP Revision package for the amended administrative regulation will be held on October 30, 2017, at 10:00 a.m. (Eastern Time) in Conference Room 111 at 300 Sower Boulevard, Frankfort, Kentucky. Individuals interested in being heard at this hearing shall notify this agency in writing by October 24, 2017, five workdays prior to the hearing of their intent to attend. If no notification of intent to attend the hearing is received by that date, the hearing shall be cancelled, and notification of the cancellation shall be posted at http://air.ky.gov/pages/publicnoticesandhearings.aspx. A transcript of the public hearing will not be made unless a written request for a transcript is made. If you do not wish to be heard at the public hearing, you may submit written comments on the proposed administrative regulation. Written comments shall be accepted until October 31, 2017. Send written notification of intent to be heard at the public hearing or written comments on the proposed administrative regulation to the contact person.

This administrative regulation is contained in Kentucky's State Implementation Plan approved by US EPA. The SIP revision package for the amended regulation will be submitted to US EPA once the proposed amendments to this administrative regulation become effective.

The hearing facility is accessible to persons with disabilities. Requests for reasonable accommodations, including auxiliary aids and services necessary to participate in the hearing, may be made to the contact person at least five (5) workdays prior to the hearing.

CONTACT PERSON:

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REGULATORY IMPACT ANALYSIS AND TIERING STATEMENT

Administrative Regulation: 401 KAR 61:015
Contact person: Cassandra Jobe
Phone: (502) 782-6670
E-mail: Cassandra.Jobe@ky.gov

(1) Provide a brief summary of:

(a) What this administrative regulation does: This administrative regulation provides for the control of emissions of criteria pollutants from existing indirect heat exchangers.

(b) The necessity of this administrative regulation: This administrative regulation is necessary to control the air emissions of criteria pollutants from existing indirect heat exchangers. This administrative regulation is necessary for the Energy and Environment Cabinet (Cabinet) to protect human health and the environment by establishing emission limits for criteria pollutants for existing indirect heat exchangers.

(c) How this administrative regulation conforms to the content of the authorizing statutes: KRS 224.10-100(5) authorizes the Cabinet to promulgate administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides for the control of emissions from existing indirect heat exchangers. This administrative regulation is part of the Kentucky State Implementation Plan (SIP).

(d) How this administrative regulation currently assists or will assist in the effective administration of the statutes: This administrative regulation will enable the Cabinet to continue to implement and enforce the control of emissions from existing indirect heat exchangers, resulting in the protection of human health and the environment and attainment of the National Ambient Air Quality Standards (NAAQS).

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

(a) How the amendment will change this existing administrative regulation: This amendment establishes work practice standards for indirect heat exchangers, makes technical corrections to formulas, and removes duplicative requirements already covered by federal regulations.

(b) The necessity of the amendment to this administrative regulation: This amendment is necessary to control the emissions from existing indirect heat exchangers. The amendment provides clarity for regulated entities and removes duplicative requirements covered by federal regulations.

(c) How the amendment conforms to the content of the authorizing statutes: The amendment conforms to the content of the authorizing statute by providing for the control of emissions from existing indirect heat exchangers and removing duplicative requirements. The amendment also conforms to the content of the authorizing statute by establishing work practice standards for existing indirect heat exchangers.

(d) How the amendment will assist in the effective administration of statutes: The amendment establishes work practice standards for existing indirect heat exchangers and makes technical corrections to formulas within the administrative regulation.

(3) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation.
Owners and operators of existing indirect heat exchangers will be affected by this administrative regulation.

(4) Provide an analysis of how the entities identified in question (3) will be impacted by either the implementation of this administrative regulation, if new, or by the change, if it is an amendment, including:

(a) List the actions that each of the regulated entities identified in question (3) will have to take to comply with this administrative regulation or amendment: Regulated entities will use the corrected formulas and meet the work practice standards.

(b) In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (3): There is no additional cost to the regulated entities to comply with this amendment. This amendment will allow regulated entities to use the corrected formulas and comply with work practice standards.

(c) As a result of compliance, what benefits will accrue to the entities identified in question (3): As a result of compliance, the sources will be able to show they are meeting the work practice standards and will calculate emissions more accurately.

(5) Provide an estimate of how much it will cost to implement this administrative regulation:

(a) Initially: The Division for Air Quality will not incur any additional costs for the implementation of this administrative regulation initially.

(b) On a continuing basis: The Division for Air Quality will not incur any additional costs for the implementation of this administrative regulation on a continual basis.

(6) What is the source of the funding to be used for the implementation and enforcement of this administrative regulation: The Division for Air Quality's current operating budget will be used for the implementation and enforcement of the amendment to this administrative regulation.

(7) Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment. No increase in fees or funding is necessary to implement this administrative regulation.

(8) State whether or not this administrative regulation establishes any fees or directly or indirectly increases any fees. This administrative regulation does not establish any fees, nor does it directly or indirectly increase any fees.

(9) TIERING: Is tiering applied? (Explain why or why not) Yes. Emission limits for affected facilities apply based on the capacity of the existing indirect heat exchanger.

FISCAL NOTE ON STATE AND LOCAL GOVERNMENT

Administrative Regulation: 401 KAR 61:015
Contact person: Cassandra Jobe
Phone Number: (502) 782-6670
E-mail: Cassandra.Jobe@ky.gov

1. What units, parts or divisions of state or local government (including cities, counties, fire departments, or school districts) will be impacted by this administrative regulation?
   This administrative regulation has the potential to affect any unit, part, or division of state or local government operating an existing indirect heat exchanger. The Division for Air Quality will continue to permit sources in accordance with this administrative regulation.

2. Identify each state or federal statute or federal regulation that requires or authorizes action taken by the administrative regulation.
   KRS 224.10-100(5), 224.20-120, 42 U.S.C. 7410, 7411, and 40 C.F.R. Part 60

3. Estimate the effect of this administrative regulation on the expenditures and revenues of a state or local government agency (including cities, counties, fire departments, or school districts) for the first full year the regulation is to be in effect.
   (a) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for the first year?
   The proposed administrative regulation will not generate revenue in the first year.

   (b) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for subsequent years?
   The proposed administrative regulation will not generate revenue in subsequent years.

   (c) How much will it cost to administer this program for the first year?
   The Division for Air Quality's current operating budget will be used to administer this program for the first year.

   (d) How much will it cost to administer this program for subsequent years?
   The Division for Air Quality's operating budget will be used to administer this program for subsequent years.

   Note: If specific dollar estimates cannot be determined, provide a brief narrative to explain the fiscal impacts of the administrative regulation.

Revenues (+/-):	There is no known effect on current revenues.
Expenditures (+/-):	There is no known effect on current expenditures.
Other Explanation:	There is no further explanation.

FEDERAL MANDATE ANALYSIS COMPARISON

Administrative Regulation: 401 KAR 61:015
Contact person: Cassandra Jobe
Phone: (502) 782-6670
E-mail: Cassandra.Jobe@ky.gov

1. Federal statute or regulation constituting the federal mandate.
   The federal mandate for this administrative regulation is in 40 C.F.R. Part 60 and 42 U.S.C. 7411.

2. State compliance standards.
   This administrative regulation provides for the control of emissions from existing indirect heat exchangers.

3. Minimum or uniform standards contained in the federal mandate.
   42 U.S.C. 7411 requires that the U.S. EPA promulgate emission standards for existing stationary sources.

4. Will this administrative regulation impose stricter requirements, or additional or different responsibilities or requirements, than those required by the federal mandate?
   Yes. This administrative regulation establishes work practice standards that are not part of the federal mandate.

5. Justification for the imposition of the stricter standard, or additional or different responsibilities or requirements.
   The work practice standards were requested as an alternative way to address emissions, particularly during periods of startup and shutdown.

SUMMARY OF MATERIAL INCORPORATED BY REFERENCE

401 KAR 61:015

(1) Kentucky Air Pollution Control Commission Regulation No. 7 Prevention and Control of Emissions of Particulate Matter from Combustion of Fuel in Indirect Heat Exchangers is a regulation that became effective on November 27, 1969. This regulation was in effect prior to the current regulation and is used as a way for sources to comply with a requirement in order for the regulation not to apply retroactively.

This document consists of 4 pages.