

WV OFFICE OF AIR QUALITY
45 CSR 25
PART B HAZARDOUS WASTE PERMIT APPLICATION

Waivers/Exemptions

BOILERS AND INDUSTRIAL FURNACES (BIFs); 40 CFR 266 Subpart H.

Waivers/Exemptions - If applying for a waiver or exemption, provide information demonstrating compliance with the requirements outlined below:

I. Waiver of DRE Trial Burn for Boilers - 266.110; 270.22(a)(2)(i); 266.104(a)(4).

A boiler that is not burning hazardous waste containing F020, F021, F022, F023, F026, and F027 and submits documentation that it operates under the following conditions is considered in compliance with the 266.104(a) DRE Standard and a DRE trial burn is waived:

- A. A minimum of 50% fuel fired to the boiler is fossil fuel, fuels derived from fossil fuels, tall oil, or other non-hazardous fuel with fossil fuel characteristics with Director's approval, with the firing rate determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired.
- B. Boiler load is not less than 40%.
- C. Primary and hazardous waste fuels have a minimum as-fired heating value of 8,000 Btu/lb.
- D. The device operates in conformance with the CO standard of 266.104(b)(1).
- E. The boiler is a nonstoker watertube boiler.
- F. The hazardous waste is fired directly into the primary fuel flame zone under the conditions specified in 266.110(1).

II. Low Risk Waste Exemption - 266.104(a)(5); 266.109(a); 270.22(a)(2)(ii)

The DRE Standard for a BIF may be waived provided the following information is documented and submitted:

- A. A minimum of 50% of the fuel fired to the device is fossil fuel, fuels derived from fossil fuels, tall oil, or other non-hazardous fuel with fossil fuel characteristics with Director's approval, with the firing rate determined on total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired.
- B. Primary and hazardous waste fuels have a minimum 8,000 Btu/lb as-fired heating value.
- C. The hazardous waste is fired directly into the fuel flame zone.
- D. The device operates in accordance with carbon monoxide controls provided by 266.104(b)(1).
- E. Hazardous waste burning will not pose unacceptable, adverse public health effects, as demonstrated in accordance with 266.109(a)(2).
 - 1. Results of analyses of each waste to be burned, including concentrations of Appendix VIII nonmetal constituents, except for those that would not reasonably be expected to be in the waste, explaining the basis for excluding any such nonmetals.
 - 2. Hazardous waste firing rate of each constituent identified above.
 - 3. Calculations of reasonable worst-case emission rates of each constituent

identified above, based on 99.9% DRE.

4. Results of emissions dispersion modeling for each Appendix VIII constituent identified above for all stacks (if multiple stacks).
5. Documentation that the maximum annual average ground level concentration of each constituent identified above does not exceed the allowable level established in Appendices IV or V of Part 266 (carcinogens must be summed).

III. Waiver of Particulate Matter Standard - 266.109(b); 270.22(a)(4)

The particulate matter standard of 266.105 and trial burn for PM may be waived if:

- A. The BIF complies with Tier I or Adjusted Tier I metals feed rate screening limits under 266.106(b) or (c) and submits documentation showing conformance with the trial burn waiver under Section 6-1a(4) below.
- B. The BIF meets the requirements of the low risk waste exemption under Section 6-1a(2) above.

IV. Waiver of Trial Burn for Metals - 266.106(b) and (c); 266.106(b)(3)-(5); 270.22(a)(3)

A trial burn is not required to demonstrate conformance with the metals standards if the BIF is operated under Tier I or adjusted Tier I metals feed rate screening limits and the following documentation is submitted:

- A. Feed rate of hazardous waste, other fuels, and industrial furnace feed stocks.
- B. Concentrations of each of the 10 toxic metals in the hazardous waste, other fuels, and industrial furnace feed stocks.
- C. Calculation of the total feed rate of each metal.
- D. Documentation of how the applicant will ensure the Tier I or Adjuster Tier I feed rate screening limits will not be exceeded during the averaging period under 266.106(b) or (c). See also Section 5-1g(e).
- E. Determination of the following:
 1. Terrain-adjusted effective stack height.
 2. Good engineering practice stack height.
 3. Terrain type.
 4. Land use.
- F. Compliance with 266.106(b)(6) for facilities with multiple stacks.
- G. Documentation that the facility does not fail the criteria provided by §266.106(b)(7) for eligibility to comply with the screening limits.
- H. Proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feed stocks.

V. Waiver of Trial Burn for HCl/Cl₂ - 266.107(b)(1) and (c); 266.107(b)(3); 270.22(a)(5)

A BIF is not required to conduct a trial burn to demonstrate conformance with the HCl/Cl₂ standards if the BIF is operated under Tier I or adjusted Tier I feed rate screening limits for HCl/Cl₂ and the following documentation is submitted:

- A. Feed rate of hazardous waste, other fuels, and industrial furnace feed stocks.
- B. Levels of total chloride/chlorine in the feeds and the calculation of total feed rate of total chloride/chlorine.

- C. Documentation of how the applicant will ensure the Tier I or Adjusted Tier I feed rate screening limits will not be exceeded during the averaging period under 266.107(b)(1) or (c). (See also Section 5-1g(e).)
- D. Determination of the following:
 - 1. Terrain-adjusted effective stack height.
 - 2. Good engineering practice stack height.
 - 3. Terrain type.
 - 4. Land use.
- E. Compliance with 266.107(b)(4) for facilities with multiple stacks.
- F. Determination that the facility does not fail eligibility criteria under 266.107(b)(3) to comply with screening limits.
- G. Proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feed stocks

VI. Bevill Residues - 266.112 (8/27/91); Part 266, Appendices VII and IX; 270.22(f); 266.112(a); 266.112(b); 266.112(c)

Owners/operators claiming residues are excluded from regulation must submit the following applicable information to demonstrate conformance with 266.112:

- A. Boilers: Boilers must burn at least 50% coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal.
- B. Ore or Mineral Furnaces: Industrial furnaces subject to §261.4(b)(7) must process at least 50% by weight normal, nonhazardous raw materials.
- C. Cement Kilns: Cement kilns must process at least 50% by weight normal cement-production raw materials.
- D. Either of the following two criteria must be demonstrated to show that the hazardous waste does not significantly affect the residue:
 - 1. Comparison of Waste-Derived Residue with Normal Residue
 - a. The waste-derived residue does not contain Appendix VII, Part 261 constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste. Toxic constituents include Appendix VIII constituents in the waste and those Appendix VIII constituents that may be generated as products of incomplete combustion.
 - b. Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of 10 samples representing a minimum of 10 days of operation. Composite samples may be used to develop a sample for analysis provided that the compositing period does not exceed 24 hours. The upper tolerance limit (at 95% confidence with a 95% proportion of the sample distribution) of the concentration in the normal residue shall be considered the statistically-derived concentration in the normal residue. The baseline must be revised if changes in the raw material or fuel occur. The statistical procedures in "Statistical Methodology for Bevill Residue Determinations" in Appendix IX shall be used to determine upper tolerance limit.

- c. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residues. If so, the residue shall not be excluded from the definition of a hazardous waste. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period.
 - 2. Comparison of Waste-Derived Residue Concentrations with Health-Based Limits
 - a. The concentration of each nonmetal toxic constituent of concern in the waste-derived residue does not exceed the health based levels specified in Appendix VII of Part 266. If a health-based limit for a constituent of concern is not listed in Appendix VII of this part, then a limit of 0.002 micrograms per kilogram or the level of detection, whichever is higher, shall be used.
 - b. The concentration of each metal in an extract obtained using the Toxicity Characteristic Leaching Procedure of 261.24 does not exceed the levels specified in 266 Appendix VII.
 - c. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the health-based levels. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period.
- E. Documentation: Records sufficient to document the following shall be retained until closure of the BIF:
 - 1. Levels of Appendix VIII constituents that are present in the waste-derived residues.
 - 2. If the waste-derived residue is compared with normal residue:
 - 3. Levels of Appendix VIII constituents that are present in normal residues.
 - 4. Data and information obtained to determine if changes in raw materials or fuels would reduce the concentrations of toxic constituents of concern in the normal residue.