

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

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

- I. Pretrial Burn Requirements for New BIFs - 270.66(b)(1); 270.66(b)(1)(i); 266.102(d)(4)(i); 266.102(e)**
- A. Time required to bring the new boiler or industrial furnace to a point of operational readiness for the trial burn must be the minimum necessary and cannot exceed 720 hours, or up to 1,440 hours if the applicant shows good cause for requiring an extension. The permit application must include:
1. A proposed start-up schedule for the BIF.
 2. A description of the system that will be used to monitor operating hours during the pretrial burn period.
- B. A statement must be submitted that stipulates the conditions necessary to operate in compliance with 266.104 through 266.107 standards and, at a minimum, include applicable operating restrictions in 266.102(e). (Note: if the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operating shall include those specified by the applicable provision of 266.104 through 266.107. See Section 6-1a.)
- II. Pretrial Burn Requirements for New BIFs - Organic Emissions Standards - 266.102(e)(2)**
- A. For conformance with organic emissions standards in 266.104, the statement must specify the following restrictions:
1. Composition of hazardous waste, including acceptable physical/chemical variations.
 2. Feed rate of hazardous waste and other fuels measured per 266.102(e)(6).
 3. Minimum device production rate when producing normal product measured per 266.102(e)(6).
 4. Maximum device production rate when producing normal product measured per 266.102(e)(6).
 5. Appropriate controls of the hazardous waste firing system.
 6. Allowable variation in boiler or industrial furnace system design or operating procedures. (Permit writer to specify in permit.)
 7. Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature per 266.102(e)(6).
 8. Appropriate indicator of combustion gas velocity measured per 266.102(e)(6).
 9. Such other operating requirements as are necessary to ensure that the DRE performance standard of 266.104(a) is met.
 10. Appropriate CO/HC limit(s) as follows:
 11. $CO \leq 100$ ppm when complying with 266.104(b)(1).
 12. CO limit based on test burn and $HC \leq 20$ ppm when complying with

- 266.104(c).
13. CO and HC limits from baseline test for furnaces with organic matter in raw material when complying with 266.104(f).
 14. For furnaces feeding other than ingredient at locations other than the hot end, the 20 ppm HC limit or baseline HC limit as described above applies irrespective of whether CO is \leq 100 ppm.
 15. Hazardous waste will not be fed to the device during startup/shutdown unless it is fed as an ingredient under Tier I/Adjusted Tier I standards or as a low-risk waste.
 16. For boilers and industrial furnaces equipped with dry PM control devices that operate within the 450-750° F temperature range and industrial furnaces operating under the alternative HC limit, the statement must include an evaluation of the site specific risks from emissions of dioxins and furans and demonstrate that the increased cancer risk to the MEI would not exceed 1 in 100,000.

III. Pretrial Burn Requirements for New BIFs - PM Emissions Standards - 266.105; 270.66(b)(1)(i)

- A. For conformance with the PM emissions standard in 266.105, the statement must specify the following restrictions:
1. Total ash feed rate from hazardous waste, other fuels, and industrial furnace feed stocks (except for cement kilns and lightweight aggregate kilns) measured per 266.102(e)(6).
 2. Maximum device production rate when producing normal product measured per 266.102(e)(6).
 3. Appropriate controls on hazardous waste firing system and air pollution control system.
 4. Allowable variation in boiler or industrial furnace system design or operating procedures. (Permit writer to specify in permit.)
 5. Such other operating requirements as are necessary to ensure that the particulate standard in 266.105 is met.

IV. Pretrial Burn Requirements for New BIFs - Metals Emissions Standards - 266.106; 270.66(b)(1)(i); 266.102(e)(4)(i); 266.106(b) or (c); 266.102(e)(4)(ii); 266.106(c) and (d)

For conformance with the metals emissions standards in 266.106, the statement must specify the applicable restrictions listed below. The facility must also demonstrate that planned feed rate or emission limits are within maximum allowable emission/feed rates. This demonstration must include a complete description of the determination of the maximum allowable emission/feed rate for each metal.

- A. Tier I or Adjusted Tier I:
1. Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feed stocks measured per 266.102(e)(6).
 2. Total feed rate of hazardous waste measured per 266.102(e)(6).
 3. Metals sampling and analysis program for hazardous waste, other fuels, and industrial furnace feedstocks.

- B. Tier II or Tier III:
1. Maximum emission rate for each metal.
 2. Feed rate of total hazardous waste and pumpable hazardous waste measured per 266.102(e)(6).
 3. Feed rate of each metal in each of the following feed streams measured per 266.102(e)(6):
 4. Total feed streams.
 5. Total hazardous waste feed.
 6. Total pumpable hazardous waste feed.
 7. Total feed rate of chlorine/chloride in total feed streams measured per 266.102(e)(6).
 8. Maximum combustion gas temperature measured per 266.102(e)(6).
 9. Maximum flue gas temperature at the inlet to the PM air pollution control system measured per 266.102(e)(6).
 10. Maximum device production rate when producing normal product measured per 266.102(e)(6).
 11. Appropriate controls on operation and maintenance of the hazardous waste firing system and air pollution control system (APCS).
 12. Allowable variation in boiler or industrial furnace system design or operating procedures. (Permit writer to specify in permit.)
 13. Such other operating requirements as are necessary to ensure that the metals standards under 266.106(c) or (d) are met:
 14. Wet scrubbers/wet ionizing scrubbers:
 - a. Minimum liquid to flue gas ratio.
 - b. Minimum scrubber blowdown or maximum suspended solids content of scrubber water.
 - c. Minimum pH of scrubber water.
 15. Venturi scrubbers - Minimum differential gas pressure across the venturi.
 16. Dry scrubbers:
 - a. Minimum caustic feed rate.
 - b. Maximum flue gas flow rate.
 17. Wet ionizing scrubbers/electrostatic precipitators:
 - a. Minimum electrical power (kVA).
 - b. Maximum flue gas flow rate.
 18. Baghouses - Minimum pressure drop.

V. Pretrial Burn Requirements for New BIFs - Alternative Metals Approach - 266.102(e)(4)(iii); 266.106(f)

For conformance with the alternative metals approach, the statement must:

- A. Describe the approach which will be used to comply.
- B. Specify how the approach ensures compliance with the metals emissions standards of 266.106(c) or (d).
- C. Specify how the approach can be effectively implemented and monitored.
- D. Provide such other information as necessary to ensure that the

standards of 266.106(c) or (d) are met.

VI. Pretrial Burn Requirements for New BIFs - Hydrogen Chloride/Chlorine Emissions Standards - 266.107; 270.66(b)(1)(i); 266.102(e)(5)(i); 266.107(b)(1); 266.102(e)(5)(ii); 266.107(b)(2) or (c)

For conformance with hydrogen chloride/chlorine emissions standards in 266.107, the statement must specify the following applicable restrictions:

- A. Tier I or Adjusted Tier I:
 - 1. Feed rate of total chlorine/chloride in hazardous waste, other fuels, and industrial furnace feedstocks measured 266.102(e)(6).
 - 2. Feed rate of total hazardous waste measured per 266.102(e)(6).
 - 3. Sampling and analysis program for total chlorine/chloride for hazardous waste, other fuels, and industrial furnace feedstocks.
- B. Tier II and Tier III:
 - 1. Maximum emission rates of HCl and Cl₂.
 - 2. Feed rate of total hazardous waste measured per 266.102(e)(6).
 - 3. Total feed rate of chlorine/chloride in total feed streams measured per 266.102(e)(6).
 - 4. Maximum device production rate when producing normal product measured per 266.102(e)(6).
 - 5. Appropriate controls on operation and maintenance of hazardous waste firing system and APCS.
 - 6. Allowable variation in boiler or industrial furnace system design or operating procedures. (Permit writer to specify in permit.)
 - 7. Such other operating requirements as are necessary to ensure that the HCl and Cl₂ standards under §266.107(b)(2) or (c) are met.

VII. Pretrial Burn Requirements for New BIFs - Fugitive Emissions - 266.102(e)(7)(i); 270.66(b)(1)(i)

The statement must thoroughly describe the method by which fugitive emissions will be controlled. Fugitive emissions must be controlled by:

- A. Totally sealing the combustion zone,
- B. Maintaining negative pressure in the combustion zone, or
- C. An alternative method demonstrated to provide control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

VIII. Pretrial Burn Requirements for New BIFs - Automatic Waste Feed Cutoff - 270.66(b)(1)(i); 266.102(e)(7)(ii); 266.102(e)(7)(iii); 270.66(b)(1)(i)

The statement must specify that the automatic waste feed cutoff will operate as follows:

- A. Hazardous waste feed will be cutoff when operating parameters deviate from those specified above for pretrial burn period. At a minimum, the automatic waste feed cutoff will be tied to all parameters listed under monitoring requirements in Section 6-1i.
- B. Minimum combustion chamber temperature will be maintained while

hazardous waste or its residues remain in the combustion chamber. A description of procedures and controls used to maintain the minimum combustion chamber temperature must be included.

- C. Exhaust gases will be ducted to the APCS while hazardous waste or its residues remain in the combustion chamber. A description should be provided with the engineering description. See Section 6-1c.
- D. Operating parameters will be monitored during the cutoff and hazardous waste feed will not be restarted until the parameters are within allowable limits. For parameters that may be measured on an instantaneous basis, the statement should propose a period of time after waste feed cutoff during which a parameter must not exceed the permit limit before hazardous waste feed may be restarted. The proposed period of time will be subject to the Director's approval.
- E. The statement must specify that the BIF will stop burning hazardous waste when changes in combustion properties or feed rates of hazardous waste, other fuels, or industrial furnace feedstocks, or changes in BIF design or operating conditions deviate from those specified above for the pretrial burn period.

IX. Pretrial Burn Requirements for New BIFs - Monitoring Requirements - 266.102(e)(8); 270.66(b)(1)(i); 266.102(e)(10)

The statement must specify that the following will be monitored and recorded when burning hazardous waste:

- A. All parameters listed under monitoring requirements in Section 7.3(i).
- B. Sampling and analysis of hazardous waste (and other fuels and feedstocks), residues, and exhaust emissions will be conducted as necessary to verify that the operating requirements achieve the applicable standards of 266.104 through 266.107.
- C. The BIF will be subject to thorough visual inspections when it contains hazardous waste (at least daily) for signs of leaks, spills, fugitive emissions, and tampering.
- D. Automatic waste feed cutoff system will be tested at least once every 7 days when hazardous waste is burned unless the applicant demonstrates that weekly inspections unduly upset operations. At a minimum, testing must be conducted once every 30 days. A description of automatic feed cutoff system testing procedures should be included.
- E. The statement must specify that operating records will be maintained until closure of the facility.

X. Post-Trial Burn Requirements for New BIFs - 270.66(b)(e)(ii); 266.102(d)(4)(iii); 266.102(e)

Post-trial burn requirements for new BIFs are the same as the pretrial burn requirements for new BIFs listed in Section 6-1b, with the following exceptions:

- A. The total length of time during which a facility may burn hazardous waste is not limited after the trial burn. Therefore, no documentation of total burning hours is required.

- B. For the pretrial burn period, a BIF must submit a statement that suggests the conditions necessary to operate in compliance with the standards of 266.104 through 266.107. For the post-trial burn period, a BIF must submit a statement that, based upon the results of the trial burn, identifies the conditions necessary to operate in compliance with the standards of 266.104 through 266.107.
- C. For the post-trial burn period, a BIF must submit a statement specifying that the BIF will stop burning hazardous waste when changes in combustion properties or feed rates of hazardous waste, other fuels, or industrial furnace feedstocks, or changes in BIF design or operating conditions deviate from those specified above for the post-trial burn period.