United States
Environmental Protection
Agency

Solid Waste and
Emergency Response
(OS-305)

EPA/530-SW-91-063
August 1991

Office of Solid Waste

EPA

Environmental Fact Sheet

REGULATIONS FOR BURNING HAZARDOUS WASTE IN BOILERS AND INDUSTRIAL FURNACES AMENDED

INTRODUCTION

On February 21, 1991 (56 FR 7134), the Environmental Protection Agency (EPA) published a final rule that expands controls on hazardous waste combustion by regulating air emissions from the burning of hazardous waste in boilers and industrial furnaces (BIF). In particular, the rule controls emissions of toxic organic compounds, toxic metals, hydrogen chloride, chlorine gas, and particulate matter from those boilers and industrial furnaces burning hazardous waste. In addition, the rule subjects owners and operators of these devices to the general facility standards applicable to hazardous waste treatment, storage, and disposal facilities.

A technical amendment to the final boiler and industrial furnace rule is required to clarify the regulation and to correct certain provisions that could result in unintended consequences. The technical amendment is effective the same day as the final rule, August 21, 1991.

SUMMARY

BIFs Operating in Interim Status Prior to August 21, 1991 May Continue Burning Low-Heating-Value Waste Prior to Certification of Compliance.

In general, the BIF rule allows facilities to burn low-heating-value wastes (waste with a heating value of less than 5,000 Btu/b) only after certification of compliance with the interim status standards. This restriction inadvertently precluded BIFs that were already burning low-heating-value wastes (by complying with the RCRA

standards for incinerators or thermal treatment units prior to the effective date of the BIF rule) from continuing to do so. The Agency did not intend to penalize facilities operating within existing rules. Therefore, the final rule is amended to allow those facilities to continue their normal practices of burning low-heating- value wastes during interim status. On the effective date of the BIF rule (August 21, 1991), the BIF interim status standards supersede the incinerator or thermal treatment standards for such BIF facilities, which require these facilities to comply with the provisions of the BIF regulations, including certification of precompliance.

HAFs Burning Low-Heating-Value Wastes as an Ingredient Prior to February 21, 1991 May Continue to Do So Prior to Certification of Compliance.

Some halogen acid furnaces (HAFs) burn low-heating-value, halogen-bearing hazardous waste as an ingredient to produce halogen acid product. These halogen-bearing hazardous wastes were eligible excluded from the definition of solid waste when recycled as an ingredient in a production process. EPA determined that the wastes are inherently waste-like when fed to a HAF, and listed them as solid wastes in the BIF rule. Therefore, on August 21, 1991, these wastes are fully regulated hazardous wastes, rather than excluded materials. Because EPA did not intend to disrupt ongoing legitimate recycling operations, the final BIF rule is amended to allow HAFs that were burning low-heating-value wastes as an ingredient on February 21, 1991 to continue to do so prior to certification of compliance.

Demonstration of Burning as an Ingredient or for Metals Recovery Is Based on Evaluation of As-Fired, Not As-Generated, Waste.

The BIF final rule established criteria for determining whether a waste is burned solely as an ingredient or for metals recovery for the purposes of eligibility for certain exemptions. These criteria were inadvertently applied to as-generated waste, rather than as-fired waste. This could, in effect, preclude pretreatment to destroy or remove toxic constituents present in the waste. The exemption criteria apply to as-fired waste, provided the waste is not treated by blending or other dilution to meet the criteria limits. The owner/operator also must maintain documentation of the destruction of toxics that has been achieved by any

A BIF Correspondence File, Not the Operating Record, Must Be Made Available to the Public at the Facility Site.

The requirement for owners/operators to maintain the "operating record" for public inspection is clarified. EPA intended for a record to be maintained that includes general information, such as all correspondence between the facility and federal, state, and local regulatory agencies. This record, termed the "BIF Correspondence File," must include copies of all certifications, notifications, and EPA and state site visit reports.

EPA May Approve on a Case-by-Case Basis the Use of Compliance Test Data from One Unit in Lieu of Testing a Similar On-Site Unit.

Upon written approval of the Director, interim status compliance testing requirements are revised to allow the submission of compliance test data for a similar on-site unit rather than actual testing of the unit. EPA recommends owners/operators to make such requests well in advance of the planned compliance test to allow sufficient time for EPA review and approval (or disapproval) of the plan. The request must be accompanied by a comparison of the design, operation, and maintenance units, as well as a description of the hazardous waste to be burned in each unit. Eligibility for this compliance test waiver is limited to similar on-site units.

A BIF Has Received the Known Final Volume of Hazardous Waste under Interim Status When It Misses a Certification Deadline.

If a facility misses any interim status compliance deadline (including certification of precompliance, compliance certification, and periodic recertifications), hazardous waste burning operations must stop. The owner/operator must apply for a Part B permit in order to start burning hazardous waste again. The date a BIF misses a compliance deadline is the same date that it receives the "known final volume of hazardous waste," and must comply with applicable closure requirements. T

Feedstreams May Be Analyzed Using Methods That Meet or Exceed the Method Performance Capabilities of SW-846 Methods.

The BIF rule is amended to allow owners and operators to use alternate methods to characterize the physical or chemical properties of their feedstreams, provided that the alternative methods meet or exceed the SW-846 performance capabilities. Owners and operators must clearly document the use of alternate methods in all notifications to the director, such asprecompliance certification or compliance test protocol.

Methods Are Recommended for Determining Chlorine Levels in Feedstreams and the Heating Value of Solid Feedstreams.

EPA recommends that facilities use a combination of existing American Society of Testing and Materials (ASTM) methods, existing SW-846 methods, and proposed SW-846 for analyzing chlorine, depending on the type of waste matrix. For the heating value of solid feedstreams, EPA recommends the use of ASTMaterials methods D-2015-77, D-3286-77, or D-808-81.

Certain Metal-Bearing Wastes Are Conditionally Exempt from the Demonstration of Burning Solely for Metal Recovery When Burned in a Metal Recovery Furnace.

The BIF rule is revised to conditionally exclude certain hazardous wastes used by the secondary lead and nickel-chromium smelting industry from regulation under this rule. Materials that are allowed for processing in exempt lead smelters and nickel-cadmium recovery furnaces are listed in new Appendices XI and XII to the rule, respectively. To ensure that these wastes are burned for metal recovery, the exemption is based on three requirements: (1) the waste must have recoverable levels of metal; (2) the lead, nichel, or chromium wastes must have been generated by the lead, nichel, chromium, or iron industry; and (3) the wastes containing more that 500 parts per million of toxic constituents must not exhibit the Toxicity Characteristic for any organic constituent, and they must not be listed as hazardous for an organic constituent.

Precious Metal Recovery Furnaces Are Not Regulated by the BIF Rule.

Precious metals are generally exempt from regulation, with the exception of certain tracking and recordkeeping requirements. The value of the precious metal in the waste provides a strong incentive for proper handling prior to and during the recycling operations to maximize recovery (production) of precious metals. Industrial furnaces engaged in legitimate precious metal recovery operations are not subject to regulation under the BIF rule.

Records Must Be Kept until Closure.

BIFs must comply with the appropriate recordkeeping requirements for permitted and interim status facilities that are applicable to other hazardous waste treatment, storage, and disposal facilities (TSDFs). Consequently, BIFs must retain their records until closure of the facility.

BIFs Must Comply with Operating Conditions and Emissions Standards upon Certification of Compliance.

The final rule requires owners and operators to establish limits on specific operating parameters in a certification of compliance and to operate under those limits during the remainder of interim status. The rule specifies that a compliance test must be conducted to document compliance with the emission standards, but does not state that the resulting emission standards must be adhered to during interim status. Both the operating limits established under the compliance test as well as the emission limits must be complied with during interim status.

Sample Compositing Procedures Are Clarified, and the Statistical Test Is Revised for Bevill Residues.

The Bevill residue test was established in order to determine whether the burning of hazardous wastes significantly affects the residue from so-called "Bevill" devices. Certain sampling and compositing considerations for the determination of baseline (without burning hazardous waste) concentrations are clarified. The baseline is to be determined from the analyses of 10 samples collected from 10 separate days of operation, using a sample compositing period not to exceed 24 hours. The statistical test used to compare the waste-derived residue to the baseline is changed so that the baseline is expressed as an upper tolerance limit rather than as a confidence interval about the mean. Conforming revisions are also being made to Section 7.0 of Appendix IX, Part 266, Methods Manual for Compliance with the BIF Regulations.

Restrictions on Hazardous Waste Firing Rate Are on a Mass or Heating Value Basis, whichever Results in a Lower Mass of Waste Fired.

The BIF rule is revised to base the firing rate on either the total heat input or the mass input, whichever results in the lower mass feed rate of hazardous waste. This will ensure, for example, that large quantities of low- heating-value waste cannot be burned under the restrictions.

Direct Transfer Operations May Comply with the Setback Requirements for Tanks in the NFPA Code, Rather than the 50-Foot Setback Requirement for Containers.

The requirement for direct transfer vehicles containing ignitable wastes be located at least 50 feet from the property line is amended. Since the purpose for the

setback was to provide for fire safety, EPA believes that it is reasonable for a facility to comply with the more flexible National Fire Protection Association's code. The selected location should be certified by the local fire marshall to verify that it is safe.

Furnaces May Feed Hazardous Waste at Locations Where Fuels Are Normally Fired, Without Complying with the Special Requirements of Section 266.103(a)(5).

The special requirements on industrial furnaces that fed hazardous waste at any location other than the "hot end" where products are normally discharged and where fuels are normally fired" are changed. The special requirements unintentionally applied to HAFs (and perhaps other furnaces) that feed wastes where fuels are normally fired but discharge products at another location. EPA believes that the interim status carbon monoxide standards will effectively control organic emissions from these devices without the need for the special restrictions. The special restrictions apply when hazardous waste is fed at any location other than the "hot end where products are normally discharged **or** where fuels are normally fired."

F032 May Be Burned during Interim Status, Even though It Is Listed for Containing Dioxin.

EPA did not intend for the 99.999 percent destruction and removal efficieny criteria to apply to wood preserving wastes (F032) . Because EPA considers F032 "toxic" rather than "acutely toxic," the restrictions on dioxin-listed wastes do not apply.

Certain Brominated Residuals Fed to a HAF Are Not Inherently Waste-Like.

The BIF rule is amended to indicate that the inherently waste-like designation of wastes fed to a HAF does not apply to brominated residuals fed to HAFs under certain conditions. Specifically, the materials must contain at least 45 percent bromine, contain less than one percent total Appendix VIII toxic organic compounds, and be processed continuously on-site in a HAF via direct conveyance (hard piping). Owners and operators of such a device must document to EPA that the inherently waste-like designation does not apply to their waste.

FOR MORE INFORMATION

For additional information or to order a copy of the *Federal Register* notice, contact the RCRA Hotline, Monday-Friday, 8:30 a.m. to 7:30 p.m. EST. The national, toll-free number is (800) 424-9346; TDD (800)

553-7672 (hearing impaired); in Washington, D.C., the number is (703) 920-9810, TDD (703) 486-3323.

Copies of documents applicable to this rulemaking may be obtained by writing: RCRA Information Center (RIC), U.S. Environmental Protection Agency, Office of Solid Waste (OS-305), 401 M Street SW, Washington, D.C. 20460.