

United States
Environmental Protection
Agency

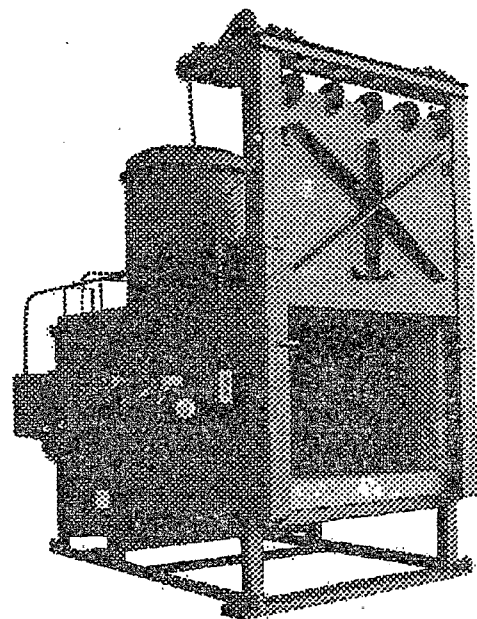
EPA-456-F-00-004
November 2000

Office of Air Quality Planning & Standards (MD-12)



EPA

**New Regulation Controlling
Emissions from Secondary
Aluminum Production
(Sweat Furnace Operations)**



EPA'S NEW REGULATION CONTROLLING EMISS



■ The U.S. Environmental Protection Agency (EPA) has issued national regulations to control air emissions from secondary aluminum production facilities. These facilities include aluminum scrap shredders, thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, group 2 furnaces (processing clean charge only and no reactive fluxing), sweat furnaces, dross-only furnaces, and rotary dross coolers.

This brochure presents a summary of the requirements of the standard for owners and operators of sweat furnaces only (i.e., emission limits, performance testing, and operating and monitoring requirements). The full regulation appeared in the March 23, 2000, edition of the Federal Register [Vol. 65, No. 57, beginning on page 15690].

GENERAL INFORMATION

■ What is a sweat furnace?

A sweat furnace is a unit designed and used exclusively to reclaim aluminum from scrap that contains substantial quantities of iron by using heat to separate the low melting point aluminum from the scrap while the higher melting point iron remains in solid form. These units are also commonly known as dry hearth furnaces.

■ Where are sweat furnaces located?

Due to their small size and portability, sweat furnaces are common in many industries.

They are used to process scrap that cannot be processed in other furnaces. For example, scrap yards use sweat furnaces to reclaim aluminum from many forms of scrap (sheet and cast aluminum), and automotive salvage yards use them to reclaim aluminum from unusable auto parts (such as, transmissions).

■ Why are sweat furnaces included in the regulation?

The Clean Air Act directs EPA to regulate emissions of 188 toxic chemicals, which include organic hazardous air pollutants (HAPs), inorganic gaseous HAPs (hydrogen chloride, hydrogen fluoride and chlorine), and particulate HAP metals. Some of these pollutants, including dioxins are known to, or suspected of, causing cancer, and all are harmful to humans.

The secondary aluminum regulation helps protect public health by requiring that you reduce air emissions from your sweat furnace to comply with the national limits.

EPA estimates that with full compliance with this rule, nationwide toxic emissions would be reduced by about 12,400 tons per year (11,300 megagrams/year). Emissions of other pollutants, such as particulate matter and volatile organic compounds, would also be reduced.

■ When must I meet these standards?

If your operation is an existing source (a sweat furnace that began construction or reconstruction prior to February 11, 1999), then you must be in compliance no later than March 24, 2003. On the other hand, if you operate a new source

DNS FROM SWEAT FURNACE OPERATIONS

(constructed or reconstructed after February 11, 1999), then you must have complied by March 23, 2000, or upon startup, whichever is later.

■ How much will it cost?

Estimates of the average cost for adding an afterburner to a sweat furnace to control dioxin/furan (D/F) emissions range from \$8,000 to \$58,000, depending on the size of the furnace.

■ What happens if I don't comply?

If you fail to comply with the requirements of the rule, you could face legal action under the Clean Air Act. You may be assessed civil penalties of \$25,000 per day for non-compliance.

SWEAT FURNACE REQUIREMENTS

■ Does this regulation apply to me?

The secondary aluminum production regulation applies to ALL sweat furnace operations regardless of their location and size.

■ What emission limits must sweat furnaces meet?

If you are an owner/operator of a sweat furnace, you must control the dioxin /furan (D/F) emissions from each sweat furnace to 0.80 nanogram of D/F toxic equivalent per dry standard cubic meter (3.5×10^{-10} grain per dry standard cubic foot) at 11 percent oxygen.

As an alternative, you may operate and maintain an afterburner with a design residence time of 0.8* seconds or greater and an operating temperature of 1600 °F or greater. If you elect to

comply with these afterburner requirements, you would not be required to conduct emissions testing to show compliance with the emission limit.

■ What operating standards must I meet?

If you choose to install and operate an afterburner with a design residence time of 0.8* seconds or greater and an operating temperature of 1600 °F or greater, then you must maintain the average afterburner temperature at no less than 1600 °F. The afterburner must operate in accordance with your operation maintenance and monitoring plan.

However, even if you are using an afterburner, you can choose to comply with the emission limits by conducting an initial compliance test. In this case, you must then maintain the afterburner average operating temperature at the level established during the performance test.

■ When must I conduct performance tests?

If you choose to demonstrate compliance with the requirements of the regulation by conducting an initial compliance test, then the test must be conducted prior to the compliance deadline.

If you choose to comply with the alternative equipment standard, you are not required to conduct emission testing.

*The rule is being amended to reflect this time.

■ What test methods must I use in conducting performance tests?

The test method required to determine dioxin/furan (D/F) emissions is EPA Reference Method 23. This method and other test methods can be found in the Code of Federal Regulations (CFR), Appendix A, 40 CFR Part 60, or the Emissions Measurement Center (EMC) website at: <http://www.epa.gov/ttn/emc>

■ What are the monitoring requirements for afterburners?

You must operate a device that continuously monitors and records the afterburner operating temperature. This device must be installed at the exit of the afterburner's combustion zone, and it must record the temperature in 15 minute block averages and also determine and record the average temperature for each three-hour block period.

You must prepare and implement for each emission unit, a written Operation Maintenance and Monitoring (OM&M) plan, approved by your permitting authority, that shows how you are complying with the national standards.

You must also inspect each afterburner at least once a year and record the results of the inspection. Repairs must be completed in accordance with the OM&M plan. You must maintain files of all information (including all reports and notifications) for at least five years for each affected source with emissions controlled by an afterburner.

STATE OR LOCAL REQUIREMENTS

■ How does the new EPA regulation relate to state or local requirements?

Some state or local agencies have existing control requirements that you must continue to meet. Check with your state or local agency for the specific requirements that apply to your sweat furnace operation.

Most state and local permit authorities also have operating permit programs (a Clean Air Act requirement under Part 70) that you must comply with. However, under this new regulation for sweat furnaces, EPA has specified that the state or local permit authority has discretion to defer operating permits until December 9, 2004 for sweat furnace operations at area sources of HAPs (i.e., facilities that emit, or have the potential to emit considering controls, less than 10 tons per year of any individual HAP or less than 25 tons per year of any combination of HAPs). This deferral is not automatic, so you should check with your state or local agency to see if your operation has a deferral.

FOR MORE INFORMATION

■ Whom can you contact?

For more information, contact your state or local air pollution control agency, state Small Business Assistance Program (SBAP), or state Small Business Ombudsman (SBO). Remember, states and local agencies may have additional requirements. The State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) website is: <http://www.4cleanair.org/>

A list of the state SBAP and SBO contacts can be found at:

<http://www.epa.gov/ttn/sbap/offices.html>

You may also contact the EPA Regional Office in your state or territory.

EPA Regional Offices and Telephone Numbers

Region	States	Telephone
1	CT, ME, MA, NH, RI, VT	(617) 918-1314
2	NJ, NY, Puerto Rico, Virgin Islands	(212) 637-4023
3	DE, MD, PA, VA, WV, District of Columbia	(800) 438-2474
4	AL, FL, GA, KY, MS, NC, SC, TN	(404) 562-9131
5	IL, IN MI, WI MN, OH	(312) 353-6684 (312) 886-6794 (312) 353-9228
6	AR, LA, NM, OK, TX	(214) 665-7296
7	IA, KS, MO, NE	(913) 551-7566
8	CO, MT, ND, SD, UT, WY	(303) 312-6581
9	AZ, CA, HI, NV, American Samoa, Guam	(415) 744-1219
10	AK, ID, WA, OR	(206) 553-4273

This pamphlet is intended for general reference only; it is not a full and complete statement of the technical or legal requirements associated with the regulation. A copy of the rule can be obtained from the Federal Register or the EPA's Air Toxics Website (ATW) rule and implementation page for secondary aluminum at:

<http://www.epa.gov/ttn/uatw/alum2nd/alum2pg.htm>

If you need TTN assistance, call (919) 541-5384.