APPENDIX 112T

SECONDARY ALUMINUM PRODUCTION FACILITIES
(40 CFR Subpart RRR)

CAA SECTION 112 NESHAP

REGULATION STATUS

The final rule for secondary aluminum production facilities was issued 23 Mar 00 (65 FR 15690). The HAPs emitted by these facilities that are regulated by this rule include organic HAPs, inorganic gaseous HAPs (hydrogen chloride, hydrogen fluoride, and chlorine), and particulate HAP metals. Some of these pollutants, including 2,3,7,8-tetrachlorodibenzo-p-dioxin, are known or suspected carcinogens and all can cause toxic effects in humans following sufficient exposure. Emissions of other pollutants include particulate matter and volatile organic compounds.

RULE SUMMARY

Applicability

The rule affects all Secondary Aluminum Production Facilities; both major and area HAP sources. However, the requirements for area sources are limited to emissions of dioxins and furans (D/F).

The rule potentially regulates secondary aluminum production facilities that:

1) use one or more of the following raw materials: clean charge, post-consumer scrap, aluminum scrap, ingots, foundry returns, dross, or molten metal; ***and***

2) perform one or more of the following processes: aluminum scrap shredding, scrap drying/delacquering/decoating, thermal chip drying, furnace operations (i.e., melting, holding, refining, fluxing, or alloying), in-line fluxing, or dross cooling.

Major Sources

At major HAP sources, the NESHAP regulates emissions from the following affected sources:

- Each new and existing aluminum scrap shredder
- Each new and existing thermal chip dryer
- Each new and existing scrap dryer/delacquering kiln/decoating kiln;
- Each new and existing group 2 furnace;
- Each new and existing sweat furnace;
- Each new and existing dross-only furnace;
- Each new and existing rotary dross cooler; and
- Each new and existing secondary aluminum processing unit.

Area Sources

At area HAP sources, the NESHAP limits dioxin and furan (D/F) emissions from the following affected sources:

- Each new and existing thermal chip dryer

- Each new and existing scrap dryer/delacquering kiln/decoating kiln
- Each new and existing sweat furnace
- Each new and existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge

Exemptions

The NESHAP does not apply to manufacturers of aluminum die castings, aluminum foundries, or aluminum extruders that melt no materials other than clean charge and materials generated within the facility and that also do not operate a thermal chip dryer, sweat furnace or scrap dryer/delacquering kiln/decoating kiln.

An EPA Fact Sheet discusses the fact that EPA is reevaluating how the NESHAP will affect aluminum foundries and aluminum extruders and plans to propose a stay on applicability of the NESHAP for aluminum foundries and aluminum extruders.

The NESHAP also does not apply to facilities and equipment used for research and development that are not used to produce a saleable product.

Key Definitions

Aluminum scrap shredder means a unit that crushes, grinds, or breaks aluminum scrap into a more uniform size prior to processing or charging to a scrap dryer/ delacquering kiln/decoating kiln, or furnace. A bale breaker is not an aluminum scrap shredder.

Clean charge means furnace charge materials including molten aluminum; T-bar; sow; ingot; billet; pig; alloying elements; uncoated/unpainted thermally dried aluminum chips; aluminum scrap dried at 343 C (650 F) or higher; aluminum scrap delacquered/decoated at 482 C (900 F) or higher; other oil- and lubricant-free unpainted/uncoated gates and risers; oil- and lubricant-free unpainted/uncoated aluminum scrap, shapes, or products (e.g., pistons) that have not undergone any process (e.g., machining, coating, painting, etc.) that would cause contamination of the aluminum (with oils, lubricants, coatings, or paints); and internal runaround.

Dross means the slags and skimmings from aluminum melting and refining operations consisting of fluxing agent(s), impurities, and/or oxidized and non-oxidized aluminum, from scrap aluminum charged into the furnace.

Dross-only furnace means a furnace, typically of rotary barrel design, dedicated to the reclamation of aluminum from dross formed during melting, holding, fluxing, or alloying operations carried out in other process units. Dross and salt flux are the sole feedstocks to this type of furnace.

Emission unit means a group 1 furnace or in-line fluxer at a secondary aluminum production facility.

Group 1 furnace means a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing.

Group 2 furnace means a furnace of any design that melts, holds, or processes only clean charge and that performs no fluxing or performs fluxing using only nonreactive, non-HAP-containing/non-HAP-generating gases or agents.

In-line fluxer means a device exterior to a furnace, located in a transfer line from a furnace, used to refine (flux) molten aluminum; also known as a flux box, degassing box, or demagging box.

Melting/holding furnace, or melter/holder, means a group 1 furnace that processes only clean charge, performs melting, holding, and fluxing functions, and does not transfer molten aluminum to or from another furnace.

Reactive fluxing means the use of any gas, liquid, or solid flux (other than cover flux) that results in a HAP emission. Argon and nitrogen are not reactive and do not produce HAPs.

Rotary dross cooler means a water-cooled rotary barrel device that accelerates cooling of dross.

Scrap dryer/delacquering kiln/decoating kiln means a unit used primarily to remove various organic contaminants such as oil, paint, lacquer, ink, plastic, and/or rubber from aluminum scrap (including used beverage containers) prior to melting.

Secondary aluminum processing unit (SAPU): An existing SAPU means all existing group 1 furnaces and all existing in-line fluxers within a secondary aluminum production facility. Each existing group 1 furnace or existing in-line fluxer is considered an emission unit within a secondary aluminum processing unit. A new SAPU means any combination of group 1 furnaces and in-line fluxers which are simultaneously constructed after February 11, 1999. Each of the group 1 furnaces or in-line fluxers within a new SAPU is considered an emission unit within that secondary aluminum processing unit.

Secondary aluminum production facility means any establishment using clean charge, post-consumer aluminum scrap, aluminum scrap, aluminum ingots, aluminum foundry returns, dross from aluminum production, or molten aluminum as the raw material and performing one or more of the following processes: scrap shredding, scrap drying/delacquering/decoating, thermal chip drying, furnace operations (i.e., melting, holding, refining, fluxing, or alloying), in-line fluxing, or

dross cooling. A secondary aluminum production facility may be independent or part of a primary aluminum production facility. A facility is a secondary aluminum production facility if it includes any of the affected sources listed in §63.1500(b) or (c). Aluminum die casting facilities, aluminum foundries and aluminum extrusion facilities that process no materials other than materials generated within the facility, or clean charge purchased or otherwise obtained from outside the facility, and that do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns are not secondary aluminum production facilities.

Sweat furnace means a furnace 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.

Thermal chip dryer means a device that uses heat to evaporate water, oil, or oil/water mixtures from unpainted/uncoated aluminum chips.

Title V

For area sources, this rule gives permitting authorities the discretion to defer Title V (Part 70 or 71) operating permits until 9 Dec 04. Although it is not guaranteed, most permitting authorities will grant the deferrals since they are still busy working on permits for major sources. In areas where there is no EPA approved Part 70 permit program, EPA will administer a Part 71 permit program. In these areas the EPA will definitely defer Title V permitting of area sources until 9 Dec 04.

Emission Limits

Table 1 of Subpart RRR shows the final emission limits.

Operating and Monitoring Requirements

Table 2 and Table 3 show the operating and monitoring requirements respectively.

Compliance Deadlines

Affected Source	Date Construction or Reconstruction Commenced	Compliance Deadline
Existing	≤11 Feb 99	23 Mar 03
New	>11 Feb 99	23 Mar 00 or Startup

MILITARY SOURCES

The HAP Subcommittee is not aware of any affected military units. If you identify an affected military source please inform a HAP Subcommittee member.

CONTACTS

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Military: HAP Subcommittee Contacts

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