

EPA Air Toxics Rules

Large Rule: Secondary Aluminum

Background

Section 112 of the Clean Air Act requires EPA to write technology-based standards for classes and categories of sources of listed hazardous pollutants. These National Emissions Standards for Hazardous Air Pollutants (NESHAPS) must be based on the maximum achievable control technology (MACT) for new and existing sources in the relevant category, taking into consideration the cost of achieving the emission reduction, any non-air quality health and environmental impacts, and energy requirements. The NESHAPS for the Secondary Aluminum Production category were some of the later NESHAPS that EPA promulgated, but they were important both because of the number of sources engaged in recycling aluminum (86 nationwide) and because of the toxicity of the hazardous air pollutants they emitted (2,3,7,8-TCDD, inorganic acid gas compounds like hydrogen chloride and hydrogen fluoride, and 11 nonvolatile hazardous metals).

Section 112(f) also requires EPA to promulgate standards addressing any “residual risk” that remains after sources have achieved MACT. The agency must determine whether emissions from MACT-controlled sources provide an “ample margin of safety” for non-carcinogens and reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than one in one million for carcinogens. If so, the agency must promulgate more stringent standards to protect the public health with an ample margin of safety.

Case

On March 23, 2000, EPA issued an NFRM establishing a NESHAPS for secondary aluminum facilities that required them to reduce emissions of HAPS using a combination of emission limitations and pollution prevention/work practice standards based on MACT floor controls. (65 FR 16590) Depending on the type of affected source, plants affected by the standards could achieve the proposed requirements by upgrading or installing a fabric filter or a lime-injected fabric filter. Alternatively, they could add a thermal incinerator (also known as an afterburner), a thermal incinerator followed by a lime-injected fabric filter, and/or apply pollution prevention techniques to limit the type of scrap charged and the type and amount of fluxing agents used.

A lengthy table provided specific emissions limitations or percentage reductions that sources in 14 separate subcategories would have to meet. An even lengthier table set out specific monitoring and reporting requirements for the sources. Still another table summarized operating requirements for affected facilities. The agency predicted that the standard would reduce hazardous air pollutant emissions by 70 percent from their current levels and would cost about \$148 million in capital expenditures and about \$68 million per year in operating

expenses. In developing the NESHAPS, EPA was assisted by a trade association for the aluminum industry called the Aluminum Association and a group of state and territorial air pollution program administrators. (65 FR 16590)

Issues specific to aluminum foundries and aluminum die casting facilities

On September 14, 2000, EPA published an Advance Notice of Proposed Rulemaking eliciting public comment on the agency's intention to propose amendments to the recently promulgated secondary aluminum NESHAPS to remove aluminum foundries and aluminum die casting facilities from the Secondary Aluminum Production source category. The agency also intended to make a new determination concerning maximum achievable control technology (MACT) requirements specifically for aluminum foundries and aluminum die casting facilities. In short, the agency was considering creating a new category for aluminum foundries and aluminum die casting facilities and promulgating new emissions limitations and pollution prevention/work practice standards for the new category based on a fresh MACT determination. (65 FR 55489)

The agency explained that "affected aluminum foundry operators and die casters have expressed the view that the information and assumptions upon which we relied when we promulgated the Secondary Aluminum Production NESHAP may be incomplete or may not adequately represent the processes and emissions at such facilities." The vast bulk of the operations of aluminum foundries and aluminum die casting facilities did not involve melting down and recasting used aluminum, but they did sometimes melt down internal scrap and product that was returned by customers, which were operations in which secondary aluminum producers also engaged. (67 FR, at 41119). During the earlier rulemaking, EPA made a commitment initiate a formal process to collect further information from the facilities in these industries on the activities in which they engaged and the potential of those activities to contribute to HAP emissions. It later entered into a settlement agreement in the litigation in which the two industries challenged the Secondary Aluminum Production NESHAP to ensure that the agency honored that commitment. The agency published a notice in the Federal Register on the same day (September 14) informing the public of the settlement and setting out the deadlines included in the settlement agreement for issuing the ANPR and the NPRM for the standard applicable to aluminum foundries and aluminum die casting facilities. The notice solicited public comments on the settlement. (65 FR 55524).

The ANPR was the first step in the agency's effort to collect further information on aluminum foundries and aluminum die casting facilities. The ANPR explained that the agency would give affected facilities a reasonable amount of time, in no event less than one year, to comply with any new standard, and they would likewise have a reasonable amount of time to come into compliance with the recently promulgated standard should the agency elect not to create a separate subcategory for aluminum foundries and aluminum die casting facilities. Implicit in this promise was the promise not to begin enforcing

the recently promulgated standard until the agency had completed the second round of rulemaking.

The agency made good on the promise in a notice published on the same day (September 14, 2000) that proposed to stay the applicability of the NESHAP for Secondary Aluminum Production as applied to aluminum foundries and aluminum die casting facilities for the duration of the rulemaking that it had just initiated with the ANPR. (65 FR 55491). The notice explained that “it would make no sense to require major and area sources at aluminum foundries and aluminum die casting facilities to continue to plan for compliance with the existing provisions of subpart RRR once EPA has made a new determination of MACT requirements for these facilities and has proposed to remove these facilities” from coverage of the existing standard. In any event, the agency believed that a new NESHAP could be promulgated for aluminum foundries and aluminum die casting facilities before any facility would be obligated to comply with the substantive provisions of the existing NESHAP.

As they began to prepare information for submission to EPA, the aluminum foundries and aluminum die casting facilities discovered that the rule “was not as sweeping in applicability as they had feared” and they agreed to explore an alternative approach to the settlement “based on clarifications of the current standards.” Under the new settlement, EPA agreed to proposed changes to the existing standard for Secondary Aluminum Production that would “permit customer returns without solid paints or coatings to be treated like internal scrap, and would permit facilities operated by the same company at different locations to be aggregated for purposes of determining what is internal scrap.” The agency also agreed to defer the compliance date for new sources constructed or reconstructed at existing aluminum die casters, aluminum foundries, and aluminum extruders until the compliance date for existing sources, so that the rulemaking on general applicability issues could be completed first. On June 14, 2002, EPA published a direct final rule accomplishing the promised compliance date deferral for new and reconstructed sources. (67 FR 41118). To cover its bases in the event that someone objected to the direct final rule, the agency on the same day published a NPRM proposing the changes that the direct final rule sought to implement. (67 FR 41136)

On the same day (June 14, 2002), EPA published a NPRM proposing to amend the applicability provisions of the Secondary Aluminum Production NESHAP for aluminum die casters, foundries, and extruders to fulfill its obligation under the settlement. The agency proposed to amend several definitions to make it clear that aluminum die casters, foundries, and extruders were not covered by the standard if they melted customer returns containing no paint or other solid coatings and to redefine “internal scrap” to include all scrap originating from aluminum castings or extrusions that remained at all times within the control of the company that produced the castings or extrusions, regardless of the location. (67 FR 41125). It also published a notice withdrawing the September 14, 2000 ANPR and proposal to stay the applicability of the NESHAP for Secondary Aluminum Production as applied to aluminum foundries and aluminum die casting facilities. (67 FR 41138)

After one commenter submitted adverse comments on the direct final rule deferring the compliance date for new sources, EPA withdrew that rule on August 13, 2002. But on September 24, 2002, EPA finalized the June 14, 2002 NPRM that it had published for just that eventuality. (67 FR 59787). Six weeks later, on November 8, 2002, EPA published a direct final rule correcting the effective date of the September 24, 2002 final rule from November 24, 2002 to the date of publication of the final rule (September 24, 2002), because the statute made the rule effective upon promulgation. (67 FR 68038)

Then, on December 30, 2002, EPA published a NFRM finalizing the June 14, 2002 proposal to implement the new settlement's agreement regarding consumer returns and internal scrap. (67 FR 79808)

Issues relevant to the entire secondary aluminum industry

EPA also entered into a settlement with the Aluminum Association, the other petitioner in the challenge to the Secondary Aluminum NESHAPS. That settlement required that EPA engage in another rulemaking to clarify and simplify the compliance dates and the timing of required performance tests in the standard and "defer certain early compliance obligations until after the substantive rulemaking can be completed." The agency accomplished the deferral in the June 14, 2002 direct final rule discussed above. (67 FR 41118)

In the same June 14, 2002 NPRM that proposed the applicability provisions of the Secondary Aluminum NESHAPS for aluminum die casters, foundries, and extruders, the agency also proposed several substantive changes to the NESHAPS aimed at implementing the separate settlement with the Aluminum Association. (67 FR 41125) The agency finalized the proposal on December 30, 2002 in the same NFRM that finalized the consumer returns and internal scrap provisions of the standard as it applied to aluminum die casters, foundries, and extruders. (67 FR 79808)

On September 3, 2004, EPA published a direct final rule making several changes to the Secondary Aluminum NESHAPS that the agency deemed to be uncontroversial. Some of these changes consisted of minor corrections of obvious errors in the December 30, 2002 publication, but some were clearly substantive in nature and aimed at addressing some internal inconsistencies in the standard. (69 FR 53981) Interestingly, EPA was apparently so confident that no one would object that it did not attempt to cover its bases by publishing a corresponding NPRM. Apparently, no one objected to the changes.

On March 25, 2005, EPA published an NPRM proposing to exempt certain nonmajor area sources in five source categories from the permit requirements of Title V of the Clean Air Act on the ground that compliance with those requirements was "impracticable, infeasible, or unnecessarily burdensome" on the categories. One of the five categories was the Secondary Aluminum Production category. (70 FR 15250). On December 19, 2005, EPA published a NFRM finalizing the proposed exemptions. (70 FR 75320).

On October 3, 2005, EPA published another direct final rule correcting two typographical errors. (70 FR 57513). Because of the typographical errors in the

definition of “clean charge,” one could read the phrase “entirely free of paints, coatings, and lubricants” to apply to “molten aluminum, T-bar, sow, ingot, billet, pig, and alloying elements,” rather than just to “aluminum scrap” as the agency intended. The die casting industry raised this possibility with the agency because that industry routinely marked ingots, sows and the like with “paint, ink, and grease pen marking to identify specific alloys and batch numbers.” Since these minor markings would not result in significant emissions of HAPs, EPA meant to allow such markings in defining “clean charge.” The agency therefore revised the definition to include punctuation changes making that intent clear. Again, the agency covered its bases with a corresponding NPRM proposing the changes. (70 FR 57534), Apparently, no one objected to the changes, because the agency never finalized the proposal.

On February 14, 2012 EPA published a NPRM in fulfillment of EPA’s statutory responsibility to revisit its previous MACT determination for the Secondary Aluminum Production category and to undertake an analysis of the residual risk that remained after installation of MACT. (77 FR 8576). EPA’s analysis of the scientific information relevant to carcinogenic emissions concluded that the sources in the category did not pose a risk anywhere near the one in ten thousand risk that the agency used as a benchmark for setting residual risk standards. The agency therefore concluded that the residual risks were acceptable and that they provided an ample margin of safety. (77 FR, at 8595-96). The agency also conducted a technology review and concluded that it was unable to identify any control approaches that clearly reduced HAP emissions in a cost- effective manner relative to technologies that were available and considered by the EPA at the time it promulgated the NESHAP in 2000. (77 FR, at 8597). In short, no changes to the standard were necessary to address residual risk or technology development.

The agency did, however, propose some changes “to correct and clarify” several provisions in the rule. One major change, addressing the provisions in the standard governing emissions generated during startup, shutdown, and maintenance (SSM), came as a result of a D.C. Circuit decision vacating identical provisions in a generic rule addressing SSM. The agency proposed to amend the provision in the Secondary Aluminum rule to be consistent with the changes that it made to the general rule in response to the remand. In addition, the agency required electronic submission, instead of paper submission of all test results. Finally, the agency made 30 changes that it characterized as necessary to “correct errors in the rule and to help clarify the intent and implementation of the rule.” These changes stemmed from “recommendations and suggestions from individual representatives from state regulatory agencies and industry, as well as within EPA.” Several of these were quite clearly substantive in nature, and they apparently addressed questions or problems that arose as EPA was implementing the 2000 standard. (77 FR, at 8597-98). On March 23, 2012, the agency published a notice extending the comment period for the NPRM for fourteen days until April 13, 2012. (77 FR 16987).

General Thoughts

During the original rulemaking, aluminum foundries and aluminum die casting facilities apparently complained that EPA did not have sufficient information on their emissions of dioxin and other HAPs to support the emissions limitations and pollution reduction/work practice requirements in the final rule as it applied to them. During the process of finalizing the rule, EPA apparently agreed to revisit the requirements in a subsequent rulemaking. The final rule had been in effect for less than six months before EPA published an ANPR to get the reevaluation process started. One rather disturbing aspect of this process of amending the standard before it could affect any sources in the real world is the illusion of protection that it provided. Outsiders not intimately familiar with the behind-the-scenes negotiations that resulted in the consent decree would think that the agency had just taken steps to protect the environment from emissions from aluminum foundries and aluminum die casting facilities when in fact the rulemaking exercise did not provide that protection.

Another curious aspect of the exercise is the fact that EPA apparently knew that it was going to be amending the standard (presumably in the direction of less coverage) at the time that it finalized it. If the agency was so sure that its standard was not adequately supported in the record, why go forward with the regulation? Why not just delay the rulemaking (or a portion of the rulemaking) and carry on with that rulemaking as more information became available? Perhaps the agency was concerned about the low number of NESHAPS that it had been issuing and wanted to be able to add the Secondary Aluminum to the list of completed NESHAPS.

The fate of the direct final rule that EPA promulgated on June 14, 2002 to implement the provision in the settlement aimed at deferring the compliance date for new sources constructed or reconstructed at existing aluminum die casters, aluminum foundries, and aluminum extruders until the compliance date for existing sources is a good example of how a single objector can force the agency to withdraw a direct final rule. Had EPA not withdrawn the direct final rule, that single objector could have challenged it in court on the ground that the agency did not follow notice and comment procedures in promulgating the rule and did not really have good cause avoid them. Recognizing this possibility, EPA covered its bases by publishing a NPRM proposing an identical rule and finalizing it after allowing 90 days for public comment. When agencies elect to employ direct final rules in situations in which they do not want to litigate the good cause issue, they are well advised to proceed as EPA did in this rulemaking by publishing a NPRM simultaneously with the direct final rule.

Another notable aspect of the rulemaking exercise as it applied to aluminum die casters, foundries, and extruders was the fact that EPA had to employ notice and comment rulemaking to implement two settlement agreements with the same parties. In the first settlement agreement, EPA agreed to create a new category for aluminum die casters and foundries and to write a separate NESHAPS for that category. After the agency initiated the process of accomplishing that task with an ANPR, the companies responding to EPA's information requests realized that the rule was not as restrictive as they thought,

and they agreed to a second settlement that displaced the earlier settlement and accomplished their goal of avoiding the standard's requirements by modifying some definitions to allow them to engage in some activities that secondary aluminum facilities perform (melting down scrap aluminum and reforming it) with respect to a company's internal scrap and customer returns without being considered a secondary aluminum facility. Something subtle happened in this second settlement -- the agency was no longer planning to write a NESHAP for a separate category of aluminum die casters and foundries, and it withdrew the ANPR stating that its intention to do so.

With respect to the rest of the secondary aluminum industry, the direct final rule published on June 14, 2002 simply implemented a settlement, but the rule did make some substantive changes to the performance testing requirements of the original standard. Apparently, no one objected to the agency's accomplishing substantive change through direct final rulemaking. Indeed, there is little evidence that environmental groups played any significant role in any of the iterations of this rulemaking.

The October 3, 2005 correction of "typographical errors" is a good illustration how dynamic rulemaking allows incremental policy development in situations in which the agency encounters unanticipated problems with the regulation as written. The EPA probably did not notice the subtle way in which the placement of a semi-colon could change the meaning of the regulation, most likely because it was unaware of the practice of die casters to mark ingots, etc. with paint, ink, and grease pen to identify specific alloys and batch numbers. The agency concluded that such minor markings, unlike the paint that accompanied recycled aluminum cans, would not result in the emissions of more than de minimis amounts of HAPs. So it decided to correct the "typographical error" through a direct final rule. Apparently, no one objected to this procedure.

The rulemaking that the agency initiated in February 2012 is an example of dynamic rulemaking required by statute. When it enacted the 1990 amendments, Congress wanted to ensure that EPA got MACT in place before it wasted any more time trying to calculate safe levels and ample margins of safety, but it wanted for the agency to require more from companies that complied with MACT but still posed unacceptable risks to public health. It therefore told EPA to conduct a second round of rulemaking to address residual risks. It also recognized that pollution control technologies can change quite rapidly, and it required EPA to reassess MACT periodically with an eye toward amending the standard if a better technology became available. EPA combined both of these functions into a single rulemaking in which it concluded that no changes to the standard were necessary. At the same time, it took the opportunity to make 30 "corrections" to the standard to address problems or ambiguities that had arisen with the standard. This aspect of the rulemaking was a good example of dynamic rulemaking for policy adjustments.

The "correction" of the SSM provisions of the standard was somewhat unique in that it was required by a judicial decision in litigation involving a different regulation. The SSM exemption in the Secondary Aluminum NESHAPS was apparently not challenged. EPA used the February 2012 rulemaking to fix

the Secondary Aluminum standard in the same way that it fixed the generic standard in response to the remand. This operation was very much like a rulemaking taken in response to a direct remand, but it actually came in response to a remand in a different case. The SSM provisions of the standard will presumably remain in place until the proposal is finalized, which means that emissions during SSM operations at secondary aluminum operations will apparently continue to be exempted, even though the D.C. Circuit in another case held (at the Sierra Club's behest) that the exemption was unlawful. *Sierra Club v. EPA*, 551 F.3 1019 (D.C. Cir. 2008)