

The Legal Intelligencer

THE OLDEST LAW JOURNAL IN THE UNITED STATES 1843-2009

PHILADELPHIA, FRIDAY, APRIL 8, 2011

An **ALM** Publication

ENVIRONMENTAL LAW

EPA Promulgates Long-Awaited Air Regulations for Combustion Units

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Special to the Legal

On March 21, the Environmental Protection Agency published four new final air quality regulations related to combustion units. Accounting for hundreds of pages in the Federal Register, these rules have a long and interesting history and have been much anticipated by industry, states and environmentalists.

These regulations are the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources for Industrial, Commercial, and Institutional Boilers and Process Heaters (the Boiler MACT); the NESHAP for Area Sources for Industrial, Commercial, and Institutional Boilers (the Area Source Rule); the Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources for Commercial and Industrial Solid Waste Incineration Units (the CISWI Rule); and the Identification of Non-Hazardous Secondary Materials that are Solid Waste (the Solid Waste Definition Rule) — collectively, the Final Rules.

The Final Rules are certain to have sweeping implications for some industrial and manufacturing facilities, particularly those that combust coal or secondary materials as fuel. The controversy surrounding these



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rulemakings began with a 2004 Boiler MACT and CISWI definitions rulemaking, which were appealed and subsequently vacated by the D.C. Circuit Court of Appeals in 2007, even after many boiler owners and operators had incurred significant costs in installing pollution control equipment to comply with the rules. In response to the court's vacatur and remand of these regulations, the EPA proposed a much more stringent revised version of the Boiler MACT, along with the Area Source Rule, the CISWI Rule, and the Solid Waste Definition Rule, in June 2010 (the Proposed Rules). Most notably, in addition to governing units burning coal and secondary

materials, the Proposed Rules would have imposed stringent emission limits on units burning biomass or oil, including some units located at non-industrial facilities.

The EPA received extensive comments on the Proposed Rules, and acknowledged publicly that the Proposed Rules had been based on incomplete data. Despite requesting an additional year to complete the final rulemaking, the court imposed the Feb. 21, 2011, deadline for finalization. Although the Final Rules incorporate the general regulatory framework from the Proposed Rules, the final regulations differ in several meaningful respects from their proposed counterparts, as discussed in this article.

BOILER MACT AND AREA SOURCE RULE

The final Boiler MACT and Area Source Rule reflect the EPA's review of industry comments regarding the technical and economic feasibility of meeting the emission standards included in the Proposed Rules. Unlike the Proposed Rules, the most significant impact of the final boiler rules falls on large boilers fired with coal or other solid fuels. The Boiler MACT applies to boilers and process heaters located at "major" sources of hazardous air pollutants (HAPs) — those facilities that have the potential to emit more than 10 tons per year of any single HAP or more than 25 tons per

year of any combination of HAPs.

Under the Boiler MACT, boilers are categorized by size (<10 MMBtu/hr heat input or ≥10 MMBtu/hr heat input), fuel type (coal, solid fuel, biomass, liquid fuel, gas) and fuel feed systems (stoker, fluidized bed, dutch oven/suspension burner, fuel cell). New and existing large boilers are subject to emission limits for particulate matter, hydrogen chloride, mercury, carbon monoxide and dioxins/furans. Small and limited use boilers are subject to a biennial tuneup, and all existing boilers are subject to an energy assessment. In direct response to commenters' concerns, the Boiler MACT includes an affirmative defense for exceedances occurring during malfunction scenarios. Also, the EPA promulgated work practice requirements in lieu of emission limits during startup and shutdown.

The Area Source Rule applies to boilers located at "area" sources — those facilities that have the potential to emit less than 10 tons per year of any individual HAP and less than 25 tons per year of any combination of HAPs. Typically, area sources include light industrial, commercial and institutional facilities. The final Area Source Rule is significantly revised from the Proposed Rule. Emission limits for carbon monoxide, particulate matter and mercury will apply to existing and new large coal-fired boilers. New large biomass and oil-fired boilers will be subject only to emission limits for particulate matter. By contrast, all existing biomass and oil-fired boilers, and small coal-fired boilers are not subject to emission limits and instead are subject to biennial tuneup requirements. Like the Boiler MACT, the Area Source Rule requires all existing boilers to undergo an energy assessment.

SOLID WASTE OR FUEL?

The EPA promulgated the Final Rules as a single regulatory package because of the interrelationship among the rules. Whereas the Boiler MACT and the Area Source Rule establish emission limits and other standards for boilers and process heaters

pursuant to Section 112 of the Clean Air Act (CAA), the CISWI Rule establishes emission standards and related requirements for solid waste incineration units pursuant to CAA Section 129. A determination of whether a combustion unit is subject to regulation as a

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boiler under Section 112, or, alternatively, as an incineration unit under Section 129, hinges on whether the combustion unit burns a fuel or a solid waste.

The Solid Waste Definition Rule provides a framework for determining whether non-hazardous secondary materials may be classified as fuel, or must be classified as solid waste. This categorization is critical to many facilities that combust secondary materials as fuel, because the CISWI standards are significantly more stringent than boiler and process heater standards. Simply, the Solid Waste Definition Rule is the starting point for evaluating the applicability of the Boiler MACT and the Area Source Rule versus the CISWI Rule.

Among the categories of non-hazardous secondary materials used as fuel addressed by the Solid Waste Definition Rule are secondary materials that remain within the control of the generator, certain scrap tires and resinated wood residuals that have not been discarded, and fuel or ingredient products that are produced from the processing of discarded

non-hazardous secondary materials. In order for any of these materials to be considered a non-waste when combusted, they must also meet the "legitimacy criteria," meaning the material must be managed as a valuable commodity, have a meaningful heating value, be used as a fuel in a combustion unit that recovers energy, and contain contaminants at levels comparable to or lower than those in traditional fuels that the combustion unit is designed to burn.

One of the key evaluative factors relied upon by the EPA in identifying certain non-hazardous secondary materials as solid waste is whether the material was at some point in time discarded or abandoned. Generally, the EPA takes the position that if a material has been previously discarded, then such material must be classified as a solid waste, unless the material is transformed into a non-waste fuel product at the point of combustion after "sufficient processing" and satisfies the legitimacy criteria.

The notion that a solid-waste can be transformed into a non-waste fuel product at the point of combustion should, in theory, allow affected facility owners and operators to avoid classification of their combustion units as incineration units and, in turn, applicability of the CISWI Rule. However, it may be difficult to determine under the rules whether certain materials have undergone sufficient processing to render them non-waste fuel products at the point of combustion. Specifically, the definition of the term "processing" does not expressly identify the specific processing activities that are required to effectively transform a solid waste into a fuel product; instead, this definition merely provides some examples of activities that the EPA views as processing.

While the EPA does offer some additional guidance on this topic, at least as to certain materials, within the preamble to the Solid Waste Definition Rule, the relevant language is not incorporated through the regulatory language itself. As a result, some facility owners and operators may be left with uncertainty when trying to assess the status

of materials being combusted.

The basic framework for the Solid Waste Definition Rule is consistent with that set forth in the proposed regulation. However, the final regulation does differ from the proposed rule in several meaningful ways. Notably, the EPA has changed its position as to the status of certain categories of scrap tires, resinated wood residuals and coal refuse that has previously been discarded (i.e., legacy coal refuse). Under the final regulation, scrap tires that are removed from vehicles and managed and collected under the oversight of an established tire collection program are not considered solid waste when subsequently used as fuel in a combustion unit. Similarly, resinated wood residuals burned in combustion units are not considered solid waste, regardless of whether the materials are within the control of the generator. Finally, legacy coal refuse that is processed in the same manner as virgin coal is considered sufficiently processed and, therefore, a fuel product at the point of combustion.

CISWI RULE

If a non-hazardous secondary material has been determined to be a solid waste under the Resource Conservation and Recovery Act, and such material cannot be sufficiently processed to transform that material into a non-waste fuel at the point of combustion, then the CISWI Rule may apply. The CISWI Rule establishes four categories of solid waste incineration units for purposes of applying the emission limits and other standards under the regulation: incinerators designed to burn discarded waste materials; units designed for heat recovery that combust solid waste materials (i.e., energy recovery units that would be

boilers or process heaters if they did not burn solid waste); waste burning kilns; and small remote incinerators. The CISWI Rule applies if any quantity of solid waste is combusted, even in combination with other materials that have been classified as non-waste fuel products.

The CISWI Rule establishes emission limits for a number of pollutants, including hydrogen chloride, nitrogen oxides, sulfur dioxides, carbon monoxide, mercury and lead, among others. The CISWI Rule also includes various testing and monitoring requirements, including annual inspection requirements for add-on pollution control equipment and parametric monitoring. For certain subcategories, annual emissions testing and continuous emissions monitoring (CEM) is also required.

Among the key revisions to the CISWI Rule is that the EPA opted to further subcategorize the category for energy recovery units (ERUs), which many commenters argued was overly broad. Specifically, the EPA recognized that there are generally significant design and operational differences between units that burn coal, biomass, liquid and gaseous fuels, and as a result, the EPA has subcategorized ERUs based on unit design in order to account for these differences.

Accordingly, the CISWI Rule establishes different emission limits for ERUs that burn solid wastes with other solid fuels, versus ERUs that are designed to burn liquid waste with liquid or gaseous fuels. Further still, the EPA distinguishes between solid-waste/solid-fuel burning ERUs based on whether they burn coal or biomass, establishing distinct emission limits for these subcategories for NO_x, SO₂ and CO. ERUs that burn at least 10 percent coal on an annual heat input basis

are categorized as being in the solid fuel/coal subcategory. The remaining solid-burning ERUs are in the biomass subcategory.

LOOKING AHEAD

Simultaneously with the promulgation of the Final Rules, the EPA released a Notice of Reconsideration, which identifies certain aspects of the Boiler MACT, the Area Source Rule, and the CISWI Rule that the EPA has already determined it will reconsider, even in the absence of the filing of any petition for reconsideration by an interested party. Among the topics that the EPA will reconsider are the revisions to the proposed subcategories of units in the Boiler MACT, the establishment of standards for biomass and oil-fired area source boilers based on generally available control technology, the revision of the proposed subcategory for ERUs under the CISWI Rule, and the establishment of a definition of “homogenous waste” in the CISWI Rule. Clearly, the proposed reconsideration is an indication that the EPA has some unfinished business with the Final Rules.

Although it is atypical for the EPA to announce a reconsideration proceeding simultaneously with the promulgation of a regulation, such step does not preclude any interested persons from filing a petition for reconsideration of any of the Final Rules. Such petitions are due within 60 days from the date of publication of the Final Rules in the Federal Register, or May 20, 2011. •

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