

Utility Solid Waste Activities Group

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U S W A G

February 20, 2007

EPA Docket Center (6102T)
Docket ID No. EPA-HQ-OAR-2002-0051
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Docket ID No. EPA-HQ-OAR-2002-0051

Dear Sir or Madam:

The Utility Solid Waste Activities Group (“USWAG”)¹ submits these comments on EPA’s “National Emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry: Notice of Reconsideration” (hereinafter “notice of reconsideration”). *See* 71 Fed. Reg. 76553 (Dec. 20, 2006).

On December 20, 2006, EPA published a final rule entitled, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry” (hereinafter “final rule”). *See* 71 Fed. Reg. 76518 (Dec. 20, 2006). As part of that rule, EPA addressed two aspects of a proposal to ban the use of coal fly ash in cement kilns. First, the Agency rejected a proposal submitted by certain groups for a blanket ban on the use of all fly ash as a feedstock for cement production. *Id.* at 76522. The Agency explained that the effect of a total ban on the use of fly ash would significantly increase the quantity of fly ash requiring landfill disposal, adversely affect the environment due to increased mining for alternative raw materials, and reduce energy efficiencies at cement production facilities. *Id.* at 76522, 76525. Second, EPA adopted a prohibition on the use of fly ash in cement kilns where the fly ash mercury content has been increased through the use of activated carbon injection (“ACI”) or some other sorbent unless the kiln owner/operator can demonstrate no increase in mercury emissions from sorbent-injected over non-sorbent-injected fly ash or other feedstock. *Id.* at 76525, 76526. EPA acknowledged that its ban on sorbent-injected fly ash was based in part on the fact that widespread use of ACI or other sorbent-injection control technology is still many years in the future and EPA speculated that the industry could adapt to the ban or mitigate its consequences between now and when this technology becomes readily available. *Id.* at 76525.

¹ USWAG was formed in 1978, and is an association of approximately 80 energy industry operating companies and associations, including the Edison Electric Institute (“EEI”), the National Rural Electric Cooperative Association (“NRECA”), and the American Public Power Association (“APPA”). EEI is the principal national association of investor-owned electric power and light companies. NRECA is the national association of rural electric cooperatives. APPA is the national association of publicly owned electric utilities. Together, USWAG members represent more than 85% of the total electric generating capacity of the U.S., and service more than 95% of the nation’s consumers of electricity.

On the same day that EPA promulgated the final rule, EPA also published a notice of reconsideration of certain aspects of the final rule, including reconsideration of the “existing and new source standard banning cement kiln use of certain mercury-containing fly ash.” *Id.* at 76554. These comments support the Agency’s decision not to ban the use of *all* fly ash as feedstock in cement kilns (*Id.* at 76522, 76525), but respectfully urge the Agency to modify the ban on the use of fly ash as a feedstock in cement kilns where the mercury content has been enhanced through the use of ACI or any other sorbent. 40 C.F.R. § 63.1344(g); *see* 71 Fed. Reg. at 76525, 76526, 76539-40. We ask EPA to consider these comments in conjunction with our earlier comments dated February 23, 2006, on the proposed rule (70 Fed. Reg. 72330 (Dec. 2, 2005)) and USWAG’s supplemental comments dated August 1, 2006, in response to EPA’s reopening the comment period for the proposed rule (71 Fed. Reg. 40679 (July 18, 2006)).

I. USWAG Urges EPA to Adhere to Its Decision in the Final Rule Not to Adopt a Blanket Prohibition on the Use of Coal Fly Ash in Cement Kilns.

USWAG wishes to express its support for EPA’s conclusion in the final rule that there is no justification for a mercury emissions maximum achievable control technology (“MACT”) floor standard or beyond-the-floor MACT standard based on substituting other potential raw materials (such as shale or clay) for fly ash. *See* 71 Fed. Reg. at 76522, 76525. The advocates for a blanket ban on using fly ash in cement production have attempted to demonize fly ash as though fly ash is the sole or even principal source of mercury entering the kiln. That assumption is false. The administrative record contains a memorandum from EPA’s consultant stating that 60 to 70 percent of the estimated mercury entering kilns originates from limestone.² Other feedstocks also contribute to cement kilns’ mercury emissions.³ Furthermore, the administrative record demonstrates considerable variability with respect to the concentrations of mercury in fly ash and shale and clay, leading EPA to properly conclude that “[t]he statement that not using fly ash would reduce mercury emissions is not supported by existing data.” *Id.* at 76538. If EPA were to prohibit cement kilns from using all fly ash, there would be no rational basis for stopping there since many of the alternatives could similarly contribute to the kilns’ mercury emissions. To target one source and ignore all the others would be patently unfair and arbitrary. EPA would need to ban the use of all feedstock containing mercury. Such a draconian action, however, would clearly be disruptive to the cement industry (and could even bring cement production to a halt in the United States).

Those who have targeted fly ash as the culprit (whether in support of a blanket ban or some lesser prohibition) are looking for a scapegoat to divert the Agency’s attention from alternative remedies that would more fairly spread the burdens of limiting mercury emissions from cement kilns. As EPA correctly demonstrated, the use of fly ash as a feedstock in cement kilns has numerous environmental benefits that would be lost if EPA imposed a blanket ban:

² *See* Memorandum from Marion Deerhake, RTI, to Joe Wood, MICG/ESD/OAQPS/EPA, Subject: Use of “low-mercury” feed and fuel to reduce mercury emissions from portland cement manufacturing (June 28, 2004), p. 5.

³ *Id.* at 5-6.

(1) reduced emissions of total hydrocarbons, SO₂, NO_x, and CO₂;⁴ (2) avoided landfill disposal of fly ash; (3) reduced cement plant power and fuel consumption; and (4) avoided energy and air emissions associated with quarrying, milling, and transporting shale or clay. *See* 71 Fed. Reg. at 76522. Therefore, we urge EPA to stand by its decision not to ban all fly ash.

II. EPA Should Modify the Prohibition on the Use of Fly Ash from Utility Boilers with Activated Carbon Injection or Other Sorbent-Injection Controls.

There are a number of objections to the manner in which EPA imposed the ban on the use of fly ash in cement kilns from utility boilers using ACI or other sorbent-injection technologies. First, this particular prohibition came about as a result of “behind the scenes” discussions between agency staff and one affected industry sector without any consultation with the industry sector most affected by the ban – namely, the coal-burning power industry. USWAG is the primary industry spokesman for issues involving the beneficial use of fly ash and other coal combustion products and was never contacted or asked for its comments. The ban is currently in place despite the absence of any notice and opportunity for comment, a clear violation of the Clean Air Act (“CAA”). *See* CAA § 307(d).

Second, although EPA believed that it could safely impose the ban without any *immediate significant* impacts on anyone because, according to EPA, utilities will not be installing ACI or other forms of sorbent-injection until at least 2010 (*see* 71 Fed. Reg. at 76525), the manner in which EPA adopted the ban deprived it of crucial information on adverse effects of the ban likely to be felt as early as this year. A number of utilities are planning tests of ACI technology during 2007 and the fly ash generated by those boilers will no longer be eligible for cement production. Given the immediate loss of this option, this fly ash may instead require landfill disposal. Most utilities that generate fly ash have committed to EPA, as part of the Agency’s Coal Combustion Products Partnership (“C²P²”), to increase the beneficial use of fly ash. The ban makes it more difficult for these utilities to achieve the beneficial use goals for fly ash that EPA and the utility industry have jointly set for the industry. The hasty, backdoor manner in which EPA promulgated the ban is a textbook example of why agencies must provide an opportunity for comment *before* taking major regulatory action with adverse consequences on one or more stakeholders.

Third, the inflexible form of the ban – in effect, no exceptions regardless of the presence of emission control technologies at the kiln – shows how the ban in its present form amounts to regulatory overkill. Assuming for the sake of argument that there is justification for a ban on the use of mercury-enhanced fly ash in cement kilns with no emission control technologies, EPA failed to address the need for the prohibition at kilns with emission control technologies (*i.e.*, wet scrubbers, ACI, fabric filters, etc.). To be sure, the prohibition allows the kiln to demonstrate that the use of that fly ash will not result in an increase in mercury emissions over baseline emissions (*i.e.*, emissions not using the sorbent-injected fly ash). 40 C.F.R. § 63.1344(g); *see* 71 Fed. Reg. at 76525, 76526. But that puts the onus (and cost) of testing the emissions from the fly ash on the cement producer who can easily avoid that burden and cost by using alternative feedstock, possibly with higher mercury concentrations. There is little doubt that given the regulatory hurdles that sorbent-injected fly ash will have to surmount to escape the ban, the

⁴ The preamble to the final rule states that fly ash can reduce emissions of “carbon monoxide (CO₂).” This is obviously a typographical error. We assume EPA intended to write “carbon dioxide (CO₂).” The Agency should clarify its intent.

cement industry will treat fly ash from utility boilers with ACI or other sorbent injection technologies as “taboo” and the Agency’s and the industry’s goal of increased beneficial use of fly ash will be thwarted and landfill disposal will increase. It is unrealistic to expect the cement industry to spend resources testing sorbent-injected fly ash in the hope that its mercury emissions do not exceed baseline, especially if the kiln has already incurred the major expense of installing emission controls and no testing requirement applies to any other feedstock.

The solution to this flaw may be found in the original proposal for the partial ban submitted to EPA and the Office of Management and Budget by the Portland Cement Association (“PCA”). EPA should amend 40 C.F.R. § 63.1344(g) by adding in the first sentence of that section after the phrase “any other sorbent” the following language adapted from PCA’s proposal:

unless the facility desiring to use the fly ash is already subject to a mercury standard (either an emission or input limitation) or

(see PCA, “Overview of PCA Perspectives on Potential Changes to the Portland Cement NESHAP” (Nov. 30, 2006), p. 2). In addition, PCA’s language applying the ban only “if it will result in an increase of mercury input in the process” is an appropriate recognition that the ban makes no sense if fly ash substitutes for some other feedstock with equal or greater mercury content. We suggest that EPA insert this language in the rule as well. Thus, the amended section would read:

No kiln and in-line kiln/raw mill may use as a raw material or fuel any fly ash where the mercury content of the fly ash has been increased through the use of activated carbon, or any other sorbent if it will result in an increase of mercury input to the process unless the facility desiring to use the fly ash is already subject to a mercury standard (either an emission or input limitation) or unless the facility can demonstrate that the use of that fly ash will not result in an increase in mercury emissions over baseline emissions (i.e., emissions not using the fly ash). The facility has the burden of proving there has been no emissions increase over baseline.

A conforming amendment to 40 C.F.R. § 63.1350(o) would also be necessary under the approach we suggest. Section 63.1350(o) currently requires kiln owners and operators to obtain certification from the supplier of each shipment of fly ash demonstrating that “the fly ash was not derived from a source in which the use of activated carbon, or any other sorbent, is used as a method of mercury control.” The effect of these changes would be to allow kilns that have installed emission control devices to rely on them without additional testing, demonstrations, or certifications and would not penalize one feedstock from an industry sector – utilities that have installed ACI or other sorbent injection technologies – while giving favored treatment to other feedstocks that may contain higher mercury concentrations than fly ash.

Lastly, EPA assumes that the technology for collecting fly ash before the sorbents are injected into the flue gas stream (*e.g.*, EPRI’s TOXECON system) will work for all power plants and will be economically feasible. *See* 71 Fed. Reg. at 76525. TOXECON is a new technology that has not been broadly tested. For example, TOXECON has not been tested on power plants that burn medium and high sulfur bituminous coal. According to EPRI, there is some question whether TOXECON will be effective with these types of coal. EPRI has estimated that for a

power plant burning eastern low-sulfur (<1%) bituminous coal, the cost of employing TOXECON will be double that of standard ACI when amortized over the course of twenty years.⁵ The difference in capital costs is even greater. In 2004, EPA estimated that the capital costs for TOXECON were \$60/kW, compared to less than \$2/kW for standard ACI.⁶ According to EPRI, because of the escalation in the costs of concrete, steel, and labor, TOXECON's capital costs could now be as high as \$150/kW. Clearly, it would be speculative at best to view TOXECON as a practical solution.

An even more speculative suggestion by EPA is that "technology is being developed that would allow the mineral-rich portion of fly ash to be separated from the high carbon/high mercury portion." *Id.* There is nothing in the administrative record that identifies these technologies by name. We are aware of fly ash beneficiation technologies that remove carbon from fly ash so that it can be marketed for use in concrete. However, it is unclear whether these technologies can remove activated carbon containing adsorbed mercury. Nor has EPA documented the costs of these technologies.

EPA's assumptions are problematic and demonstrate that in its haste to publish the final rule, the Agency put little if any thought into the ban on sorbent-injected fly ash. The Agency is obviously aware of these blatant departures from sound administrative practice and should not have hastily put into effect the ban based on a very incomplete record. Although the notice of reconsideration does not cure these defects in the short-run, we nevertheless welcome the opportunity to comment and urge EPA to modify the ban in the manner we have outlined above.

In the meantime, if you have any questions or wish to discuss any of the suggestions we make in these comments, please feel free to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read 'James R. Roewer', with a long horizontal flourish extending to the right.

James R. Roewer
Executive Director

⁵ "Mercury Control Technology Selection Guide," EPRI Report #1012672 (Sept. 2006).

⁶ James Gallup, PhD, and Nick Hutson, PhD, U.S. EPA Office of Research & Development, "Getting Mercury Out of Coal Combustion Gases" (Oct. 6, 2004).