
EPA'S PROPOSED REGULATION OF COAL ASH

By Steven Burns and Mary Samuels*

On June 21, 2010, EPA published proposed regulations for the management of coal combustion byproducts (“CCBs”).¹ CCBs (which EPA refers to as “coal combustion residuals” or “CCRs”) are the materials that remain after coal is burned for electricity. CCBs include fly ash, fine particles that rise out of the top of the boiler; bottom ash, larger particles that drop to the bottom; and gypsum, the byproduct of flue gas desulfurization devices commonly known as “scrubbers.” CCBs are typically placed in a water solution to facilitate transport via pipelines, and at many plants, they are deposited in surface impoundments commonly referred to as “ash ponds” or “gypsum ponds.” At others, they are dried and “stacked” in landfills. Some CCBs can be essentially recycled as components in concrete, wallboard, and other products.

The Resource Conservation and Recovery Act (“RCRA”) is the primary federal statute governing waste disposal.² Under RCRA, discarded material may be either “hazardous waste” and subject to special regulatory provisions under RCRA Subtitle C, or “solid waste” and acceptable for placement in ordinary municipal landfills under RCRA Subtitle D. The so-called “Bevill Amendment” to RCRA provides that EPA may not regulate CCBs and certain other substances as hazardous waste unless and until EPA studies the issue, reports to Congress, and makes a formal determination that hazardous waste regulation under Subtitle C is warranted.³ CCBs may include trace quantities of metals—potentially including arsenic, cadmium, chromium, lead, and others—which occur naturally in coal but which are also known to be harmful if ingested in sufficient quantities. EPA prepared the studies and reports required by the Bevill Amendment and issued formal determinations in 1993 and 2000. EPA concluded that regulation of CCBs and other Bevill wastes under RCRA Subtitle C was *not* warranted. Rather, EPA found that regulation under the solid waste program under Subtitle D would provide an appropriate level of regulatory protection with much less expense.

However, in December 2008, an ash pond failure at the Tennessee Valley Authority’s (“TVA”) Kingston facility resulted in a massive spill of water-borne ash into the Emory River and across hundreds of acres of nearby property. The issue was still a hot topic a short time later when Lisa Jackson appeared before Chairman Barbara Boxer of the Senate Environment and Public Works Committee at the hearing to consider Ms. Jackson’s nomination to be the Administrator of EPA. Chairman Boxer demanded that Ms. Jackson take action, and in response, Ms. Jackson committed to inspect existing ash ponds and reevaluate EPA’s position on the regulation of CCBs. That led to the proposed rules now under consideration.

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EPA’s Proposed Regulations

In a somewhat unusual move, EPA presented two different regulatory options in its proposed rule, and requested comments on both. Under one option, EPA would treat CCBs as a “special waste” regulated pursuant to EPA’s hazardous waste authority under RCRA Subtitle C. The other option would rely on RCRA Subtitle D. Both proposals favor dry CCB management and aim to phase out ash ponds. Both would result in similar disposal facilities. However, the choice of whether to regulate under Subtitle C or Subtitle D of RCRA has important implications for EPA. Congress provided EPA direct enforcement authority under Subtitle C. EPA can approve a state program to regulate hazardous waste, but even in an EPA-approved state, EPA retains the power to bring enforcement actions. EPA’s role is much more limited under Subtitle D. EPA lacks direct enforcement authority except as necessary to address “an imminent and substantial endangerment to health or the environment.”⁴

The problem at TVA, which precipitated the intense interest in regulation of CCBs, was primarily the structural integrity of the ash pond at the Kingston plant. However, EPA’s discussion of structural integrity issues is strikingly thin, and most of EPA’s proposal has little to do with the factors that caused the Kingston facility to fail. Incidentally, EPA’s inspections of scores of ash ponds around the country have yet to find another Kingston-type situation. Available information indicates the factors present at Kingston are not typical across the industry. The incident was an extremely unfortunate anomaly.

A listing of CCBs under Subtitle C would impose a host of regulatory requirements and restrictions on the management of CCBs from the point of generation, through any process of transportation, up to and including disposal at an approved facility. A hazardous waste regulatory program must include such measures as limits on worker exposure, manifests for transportation, and facility-wide corrective action requirements in the event of a release. The requirements peculiar to Subtitle C would result in a program that is substantially more expensive than a Subtitle D program.

Nevertheless, under either regulatory proposal, the single biggest expenditure is likely to be the construction of new disposal facilities to meet the proposed structural standards, land disposal restrictions, and other requirements. Further, as EPA has acknowledged, any new facilities to contain CCBs would be substantially the same, regardless of whether EPA proceeds under Subtitles C and D. The primary protection against any unintended leaching is a liner, and EPA would require a modern liner either way. The primary way to detect leaching is to monitor strategically placed groundwater wells; again, groundwater monitoring would be required under both proposals.

EPA also discussed but did not formally propose a third option, designated “D Prime.” This option is substantially the

same as the Subtitle D proposal, but it would allow existing ash ponds to remain in operation for their useful life. Accordingly, under EPA's proposal, a utility is not permitted to gather and present evidence that an existing facility is safe and adequate notwithstanding an original design and construction that does not meet EPA's new standards, regardless of how the facility is actually performing.

EPA proposes to maintain the Bevill exemption for CCBs that are beneficially reused. For example, any fly ash used to make concrete or gypsum used for wallboard would not be subject to regulation as a waste under either Subtitle C or D.

Issues of Concern

Here are some aspects of EPA's proposal that have raised concerns among electric utilities, businesses that use CCBs for their products and processes, and state agencies.

- Federal attitude toward state regulators.

In the preamble to the proposed regulations, EPA was remarkably candid in asserting as a primary concern the fact that states would assume primary administrative authority under Subtitle D. EPA essentially assumes that state regulatory authority under Subtitle D would automatically result in higher noncompliance, and EPA uses that assumption in support of the Subtitle C proposal. This is in spite of the fact—again, as EPA admits in the proposed rule—that new disposal facilities would be constructed in substantially the same manner under both proposals. In other words, to the extent EPA has a problem with Subtitle D, it is not about the technology associated with disposal facilities. Rather, it is the fact that state governments would be in charge of administering the program instead of EPA.

Past questions about whether to apply hazardous waste regulations have typically focused substantially on the intrinsic characteristics of the substance at issue, and most hazardous wastes clearly exhibit toxicity or another of the hazardous characteristics. By contrast, here, EPA is faced with substantial evidence that coal ash and other CCBs do not typically exhibit toxic characteristics (as discussed further below). To support its Subtitle C proposal, EPA challenges the states' competence to administer a regulatory program and uses that point to support a stronger federal presence at the expense of state authority.

- Stigma against use or recycling of CCBs under a Subtitle C program.

Under all proposals, EPA proposes to retain the Bevill exemption for CCBs that are used beneficially, and EPA claims to support continued beneficial reuse and recycling of CCBs. EPA's stated intent is to allow recycling to continue (although even that is opposed by many environmental citizen groups).

However, those familiar with the beneficial reuse of CCBs—including utilities, construction-related businesses, agricultural interests, state transportation agencies, and even other federal agencies such as the Department of Energy and the Department of Transportation—have advocated forcefully against listing CCBs under Subtitle C. A primary concern is that hazardous waste regulation will create a stigma to beneficial

uses and expand litigation risk. Even if EPA chooses to call CCBs a "special" waste rather than hazardous, regulation under RCRA Subtitle C would clearly communicate the message that CCBs are hazardous, according to the federal government's environmental regulators. That may provide an easy target for the plaintiffs' bar, which can supplement whatever claims it can muster with EPA's determination that a hazardous waste program for CCBs is warranted. The comments from market participants and regulators familiar with beneficial uses have been virtually unanimous on this point, but in the preamble, EPA flatly states that it questions this argument.

EPA has demanded additional evidence of how stigma deters and diminishes the beneficial uses of CCBs, beyond the predictions and opinions of those with the greatest experience in the marketplace. That is a difficult task, since there has not in the past been a Subtitle C listing for CCBs. CCB users are concerned that no amount of evidence supporting predictions of stigma will be good enough for EPA.

Further, EPA has indicated that only "encapsulated" uses would be acceptable, but EPA does not define that concept. For example, in its preamble, EPA indicates that it may regard the placement of ash in a road embankment as an unencapsulated use, even though roads can be designed such that the ash would be contained within layers of other materials and not exposed to water flows.

- EPA's own test procedure demonstrates that CCBs are not hazardous for purposes of RCRA.

Analysis of CCBs indicates that they are not "hazardous" as that term is commonly understood for purposes of RCRA. No one questions the fact that metals such as arsenic or mercury occur naturally in coal and, therefore, are also present as a minute percentage of coal ash. Further, no one questions the epidemiological evidence that those and other metals can be harmful when ingested in sufficient quantities. That is not the issue in this rulemaking. The mere presence of a constituent of concern in any proportion does not automatically transform a substance into hazardous waste. Rather, the issue is whether a substance has the potential to leach and enter an environmental "receptor" or pathway by which the constituent of concern may travel to an organism or some other sensitive resource. Application of the EPA-approved Toxic Characteristic Leaching Procedure ("TCLP") is the usual method to determine whether a substance is to be treated as hazardous under RCRA. CCBs consistently pass the TCLP. They are not toxic according to EPA's usual measure of toxicity.

- Unnecessary cost.

Many industry participants already implement some of the requirements that likely would be included in new regulations. For example, it has become common in the industry to include liners in new CCB facilities, and a number of state programs require groundwater monitoring under current law.

However, EPA has proposed unreasonably inflexible requirements that will drive up costs substantially, without a commensurate increase in environmental protection. A prime example is an apparent regulatory preference toward phasing

out all existing facilities that do not meet the standards, including especially older ash ponds that were not built with modern liners. Most of these ponds were built decades ago, according to best industry practices at the time, before the techniques and materials typically applied today were available. At some of those facilities, groundwater monitoring and other forms of investigation may well identify issues in need of repair or even facilities that must be closed. On the other hand, many facilities are likely to be perfectly safe due to site-specific factors such as a facility's particular ash management practices or local geology and hydrology. For example, an ash pond may be sited above a layer of clay or some other impervious geological feature. If that clay layer is sufficient to prevent the leaching of any constituents of concern into groundwater, the fact that it is naturally occurring rather than artificially engineered is irrelevant.

Even if action may be advisable at *some* existing facilities, that does not justify mandatory, across-the-board facility retrofits and closure of *all* existing facilities. Indeed, if all utilities are subjected to the same retrofit and closure requirements at the same time, that will increase costs even more by artificially boosting short-term demand for scarce resources such as qualified people and equipment such as drilling rigs. There is no reason to increase the cost and logistical difficulty of addressing facilities that may truly require repair or closure by forcing those facilities to compete for scarce resources with others that can be shown to be perfectly safe. A more reasonable approach would be to gather more information and then make judgments as to what may be necessary on what schedule, based on hard data that accounts for site-specific considerations.

Another example is the application of mandatory, one-size-fits-all standards such as siting restrictions and groundwater monitoring regimens. For example, EPA is poised to require testing of a laundry list of parameters in the groundwater. A relatively straightforward analysis, based on factors such as the known content of the ash at a particular location or past monitoring results, may lead to the conclusion that continued monitoring of certain parameters serves no purpose. As another example, the potential for flooding or seismic activity in a particular area should be taken into account in the design of the facility. Those considerations require site-specific analysis and engineering, but where there are engineering solutions, such factors should not preclude the siting of a new facility or implementations of improvements at an existing facility.

In one respect, the regulatory process has apparently resulted in some improvements to the regulations. A review of the rulemaking record indicates EPA originally intended to propose a single regulatory approach—to regulate CCBs as hazardous under RCRA Subtitle C. To its credit, during interagency review, the Office of Management and Budget raised questions about the cost of the Subtitle C approach compared to Subtitle D, in light of the similar degrees of environmental protection. The fact that EPA issued two co-proposals appears to be a direct result of cost-benefit concerns raised by OMB and other federal agencies in the interagency review process.

• Impact on small businesses.

The Regulatory Flexibility Act requires consideration of the impacts of proposed regulations on small businesses. EPA limited its consideration to electric utilities that are also small businesses. Because EPA refuses to seriously consider the possibility that a Subtitle C listing could constrain the supply of CCBs, EPA has failed to evaluate the small businesses that work in construction, road-building, and other industries that rely on the beneficial reuse of CCBs.

Next Steps

The comment period for EPA's proposed regulations closed on November 19, 2010. EPA could issue final regulations as soon as mid-2011.

Endnotes

- 1 See 75 Fed. Reg. 35127 (June 21, 2010).
- 2 See 42 U.S.C. §§ 6901 *et seq.*
- 3 See *id.* § 6921(b)(3)(A)(i).
- 4 42 U.S.C. § 6973.

