FEDERAL LEGAL AND REGULATORY ISSUES AFFECTING THE PLACEMENT OF COAL COMBUSTION PRODUCTS IN MINES

Jim Roewer
Utility Solid Waste Activities Group
Washington, DC

Abstract

The U.S. Environment Protection Agency (EPA) has twice affirmed the nonhazardous regulatory status of utility Bevill wastes, or wastes from the combustion of coal and other fossil fuels: on August 9, 1993 EPA, and, most recently, on March 22, 2000.

Notwithstanding the fact that the agency did not make a finding that the management of coal combustion products (CCPs) in mines was in fact causing environmental harm, EPA announced, as part of the March 2000 regulatory determination, its intention to develop national regulations, under the Resource Conservation and Recovery Act (RCRA) or the Surface Mining Control and Reclamation Act (SMCRA) addressing the placement of CCPs in mines. EPA is in the process of information gathering to support regulatory decision-making and has scheduled formal proposal of regulations addressing mine placement of CCPs by March 2003; final rule would be published by August 2004.

This presentation will address the Federal legal and regulatory implications of the placement of CCPs in mines—current status and the development of future standards. In addition the legal/regulatory role of consensus standards addressing CCP utilization in mine applications will be discussed.

Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) establishes a regulatory regime for solid and hazardous wastes, ensuring their proper management to protect human health and the environment. As solid wastes, coal combustion products (CCPs) are subject to RCRA; however, CCPS, along with other high-volume, low-toxicity wastes (i.e., mining wastes, cement kiln dust, oil and gas exploration wastes) were identified as meriting special evaluation by EPA.

In 1978, EPA recognized that large volume wastes generated from the combustion of coal by electric utility power plants could require special treatment under the Resource Conservation and Recovery Act (RCRA). In October, 1980, Congress passed the Bevill Amendment to RCRA that restricted EPA's ability to regulate fly ash, bottom ash, boiler slag, and flue gas emission control waste generated from the combustion of coal or other fossil fuels as hazardous waste. The Bevill Amendment directed EPA to produce a report on the sources, volumes, management practices, and most importantly, an assessment of the potential danger to human health and the environment from wastes generated by the combustion of coal and other fossil fuels. Congress also directed EPA to make a regulatory determination six months after this report was to be issued:

> *[T]he Administrator shall, after public hearings and opportunity for comment, either determine to promulgate regulations under this subtitle [subtitle C] … or determine that such regulations are unwarranted.* (RCRA § 3001(b)(3)(C)).

In February, 1988, EPA published a Report to Congress (RTC) titled "Wastes from the Combustion of Coal by Electric Utility Power Plants." The RTC recommended preliminarily that high volume coal combustion wastes not be regulated as hazardous wastes under Subtitle C of RCRA, but indicated that EPA intended to consider whether low volume wastes exhibiting hazardous characteristics should be so regulated. In spite of the clear language of the Bevill Amendment, EPA never followed the RTC with a regulatory determination.

In 1991, a group called the Citizens Interested in the Bull Run, Inc. filed suit against EPA based on the absence of a final regulatory determination. The Court ordered EPA to make its final regulatory determination in two phases, one by August 1, 1993, for the four high volume waste streams from coal combustion (e.g., fly ash, bottom ash, boiler slag, and flue gas desulfurization wastes) and a second one by October 1, 1999, for all "remaining" utility fossil fuel combustion wastes—wastes from the combustion of oil and gas, wastes from coburning of coal with solid waste, and CCPs when comanaged with other utility waste streams.

On August 9, 1993, EPA published the phase one regulatory determination that concluded that regulation of the four large volume CCPs as hazardous was "unwarranted" under RCRA Subtitle C (58 Fed. Reg. 42466).

A second Report to Congress (RTC II) on the remaining utility Bevill wastes, "Wastes from the Combustion of Fossil Fuels," was issued on March 1, 1999. In RTC II, EPA identified areas of concern involving the specific management practices of coal combustion products, especially agricultural applications, mining applications, beneficial use applications, and the management of mill rejects or pyrites comingled with coal combustion products.

RTC II specifically recommended that:

- disposal of coal-fired comanaged wastes should remain exempt from RCRA Subtitle C;
- most beneficial uses of coal-fired comanaged wastes should remain exempt from RCRA Subtitle C;
- oil combustion wastes managed in lined units do not warrant regulation under RCRA Subtitle C;
- beneficial uses of oil combustion wastes should remain exempt from RCRA Subtitle C; and
- the Subtitle C exemption for natural gas combustors should remain in effect.

Each of these recommendations rests on well-documented Agency findings tied to "real world" data that show that:

- these wastes rarely exhibit the characteristics of hazardous waste;
- the trend among electric utilities is to install more environmental controls at waste management facilities, including liners, covers, and groundwater monitoring;
- there are few documented cases of proven damage to the environment caused by fossil fuel combustion wastes, and these few cases all involve older, unlined management units, most of which no longer are receiving combustion wastes, and at which there were no adverse human health effects;
- electric utility companies have achieved an outstanding record of environmental regulatory compliance, with no major enforcement cases involving solid or hazardous waste at a utility facility in the five year period between 1992 and 1997; and
- States have developed a comprehensive body of regulations applicable to the waste management units in which utilities store and dispose of combustion wastes.

With regard to mine placement of CCPs, RTC II made no specific recommendations. In spite of finding no indications of environmental damage from mine placement activities, EPA indicated a general concern with placement of these materials in contact with the water table. EPA recognized that

> *under ideal circumstances, placement of wastes in mines should present no increased risks to human health and the environment relative to landfills. In fact, minefills could result in net environmental benefits relative to conventional landfills through avoided development of Greenfield space for UCCW disposal, improvement of disturbed mine lands through contouring, revegetation and reduced infiltration to mine workings, and abatement of acid mine drainage through neutralization and diversion.* (RTC II at 3-51).

However, EPA identified data gaps that it intended to address and therefore did not reach a firm recommendation.

On May 22, 2000, EPA concluded the Phase II Bevill regulatory determination, stating that fossil fuel combustion wastes "do not warrant regulation under Subtitle C of RCRA," thereby retaining the Bevill exemption under RCRA § 3001(b)(3)(C) (65 Fed. Reg. 32214). This determination reaffirmed the 1993 determination for coal combustion wastes and extended it to oil and gas combustion wastes as well as low volume wastes comanaged with high volume coal combustion wastes. Along with the nonhazardous Bevill Determination, EPA announced that it will develop national standards under RCRA Subtitle D to address coal combustion wastes disposed in landfills and surface impoundments or placed in mines. EPA provided an unqualified endorsement of all beneficial uses other than mine placement, and the Subtitle D regulations will not address those activities. In sum, EPA stated that

> *[a]fter considering all of the factors specified in RCRA Section 8002(n), we have decided . . . , that the decisive factors are trends in present disposal and utilization practices (Section 8002(n)(2)), and the current and potential utilization of the wastes (Section 8002(n)(8)), and the admonition against duplication of efforts by other federal and state agencies*. (65 Fed. Reg. 32217).

EPA acknowledges the potential benefits of mine placement, but is concerned that an alleged lack of adequate regulatory oversight could result in damage to human health and the environment. The bases for the determination to regulate mine placement under Subtitle D include:

- the potential to present a danger to human health and the environment "under certain circumstances"; and
- few States have comprehensive programs that specifically address the unique circumstances of mine filling.

Although EPA identified no damage cases related to mine placement, it remains concerned about placement of coal combustion wastes in contact with groundwater, but offers no explanation of the nature of its concern. The agency has expressed a concern that government oversight is necessary to ensure that mine placement of CCPs is conducted in a manner appropriate to protect human health and the environment.

Surface Mining Control and Reclamation Act (SMCRA)

In its effort to develop nonhazardous waste regulations applicable to mine placement, EPA will consider whether RCRA Subtitle D, the Surface Mining Control and Reclamation Act (SMCRA), or a combination of the two authorities would be most effective. Significantly, EPA acknowledges that SMCRA is "expressly designed to address environmental risks associated with coal mines." (65 Fed. Reg. 32217, 32232)

SMCRA establishes stringent national standards for coal mining and reclamation. In recognition of diverse mining conditions across the United States, the Congress intended that each individual State become the primary regulator to implement the regulatory program, in lieu of relying on a Federal agency to do so. The Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSM) is the Federal agency that oversees the work of the State agencies that are enforcing the Federal coal mining laws. Once a State regulatory agency receives authority from OSM to implement SMCRA, it has the option to enforce the Federal standards or to promulgate more stringent State standards.

It is important to recognize that SMCRA is not the only law with which a mine operator must comply; the Clean Air Act, the Clean Water Act, the Federal Coal Mine Safety and Health Act, the Endangered Species Act, the Fish and Wildlife Coordination Act, and the National Historic Preservation Act can all impact the permitting of any coal mining activity, including the mine placement of CCPs.

Regulations promulgated under SMCRA address permitting of mine operations, including;

- C public participation elements;
- C planning and enforcement, including site characterization and CCP-specific issues;
- C waste characteristics, including surface and groundwater monitoring and CCP analysis; and
- C design and operational elements, including closure and post-closure considerations.

OSM has encouraged the State regulatory authorities to develop initiatives to utilize CCPs in both the abandoned mine lands reclamation and in active mine reclamation, and many States have adopted policies or guidelines for the use and the management of CCPs at mine sites. These State policies or guidelines are implemented during the permit review process for an active mine site or in the design phase for abandoned mine site.

Industry's View of Mine Placement of CCPs

The electric utility industry supports the regulation of CCPs as federal nonhazardous wastes as determined by EPA as a result of the regulatory process established by the Bevill Amendment to RCRA. And the industry supports the regulation of CCP management under State regulatory authority. In addition, mine placement of CCPs should be regulated under SMCRA, with the specific regulatory authority exercised by State regulators.

If the agency establishes regulations addressing either CCP disposal, or the mine placement of CCPs, such measures should be performance-based standards that fill any defined gaps in State regulations rather than prescriptive Federal standards that overlay or supplant existing State programs. In the May 22, 2000 regulatory determination, EPA referred to language in the Bevill amendment admonishing against the imposition of regulations that would be a "duplication of efforts by other Federal and State agencies (65 Federal Register 32217)." It is critical that the agency not waste time and resources to develop duplicative regulations and instead rely on OSM and State regulatory authorities to ensure that CCP mine placement activities continue to be conducted in a protective manner.

James Roewer is the Executive Director of the Utility Solid Waste Activities Group (USWAG), where he is responsible for overall program management, including the addressing of solid and hazardous waste and toxic substance issues on behalf of the utility industry. He serves as the Chairman of ASTM Subcommittee E50.03 on Pollution Prevention/ Beneficial Use, and as a member of the Steering Committee of the Combustion By-Products Research Consortium. He has served as Senior Environmental Manager in the Energy Policy Department of the National Rural Electric Cooperative Association (NRECA); Environmental Scientist in the Natural Resources Section of EEI; Manager, State and Local Government Relations with the American Society of Mechanical Engineers; and Research Assistant with the Science Unit of the Illinois Legislative Research Service. He holds a Masters of Science in Environmental Science from the School of Public and Environmental Affairs at Indiana University, and a B.A. in Biology from Wittenberg University.