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FEDERAL REGULATION OF COAL MINE WASTE DISPOSAL: A BLUEPRINT FOR DISASTER

THOMAS J. FITZGERALD*

INTRODUCTION

At 3:30 a.m. on Friday, December 18, 1981, an impoundment constructed by the Eastover Mining Company in a hollow on the Left Fork of Ages Creek, Ages, Kentucky, failed.¹ As a direct and proximate result of this failure, approximately 125,000 cubic yards of saturated coal refuse material traveled over 4,400 feet downstream to the community of Ages, killing one resident, Mrs. Nellie Ball Woolum; destroying three houses, and damaging thirty others.²

The proximate or "legal" cause of the accident, according to the Mine Safety and Health Administration (MSHA) Report on the impoundment failure, was a failure occasioned by a "large quantity of water trapped within the pile."³ This article focuses on the two federal regulatory agencies which had the duty to exercise jurisdiction over the coal mine waste structure at Ages, Kentucky, yet failed. There is a different kind of "failure"—it is a failure of regulatory will and a confusion in statutory mandate that might have detected problems before the collapse of the Ages impoundment; a failure that is yet unresolved, and which invites further loss of life and property. It is a case of not-so-benign neglect.

This article will attempt to focus on the relationship of the Mine Safety and Health Administration (MSHA) and the Office of Surface Mining (OSM), regarding jurisdiction over coal waste structures. The tragedy at Ages is a case study that illuminates the problem, and so is our point of departure and of reference. Lest the reader think that the incident was an isolated one; the disaster at Buffalo Creek⁴ stands as a chilling reminder that until the regulatory status quo is drastically altered, the area of surface coal waste impoundments remains an invitation to disaster.

I. MINE SAFETY AND HEALTH ADMINISTRATION

A. MSHA's Jurisdiction over Impoundments

The Mine Safety and Health Administration is one of two federal agencies with jurisdiction over the construction and placement of structures for

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¹ MSHA, U.S. DEPT OF LABOR, REPORT OF INVESTIGATION OF IMPOUNDMENT ACCIDENT, Barbourville, Ky. (1982).

² *Id.* at 3.

³ *Id.* at 6.

⁴ A coal refuse retaining dam near the mouth of Middle Fork, Saunders, Logan County, West Virginia, failed at 8 a.m., Saturday, February 26, 1972; the resulting flooding killed 125 persons, destroyed 502 houses, 42 mobile homes, damaged 580 others, and left over 4,000 persons homeless. The dam was the property of the Buffalo Mining Company, a Division of the Pittston Company.

the storage and disposal of coal mine-related wastes.⁵ The Federal Coal Mine Health and Safety Act of 1969⁶ empowered the Secretary of the Interior to promulgate health and safety standards in order to improve coal mining conditions and practices with the goal of reducing coal-related deaths and injuries. That mandate included the authority to set new health and safety standards for surface work areas of underground mines.⁷ Both coal refuse piles and retaining dams were explicitly covered in the Department of the Interior's 1972 Bureau of Mines' regulations.⁸ However a 1972 study⁹ showed that until the Buffalo Creek dam disaster¹⁰ there was widespread disregard for enforcing the waste pile impoundment regulations within the Bureau of Mines.

The reason for the Bureau of Mines' enforcement failure was attributed to a narrow view of its jurisdiction over off-site surface coal waste disposal.¹¹ The statement of then-Director of the Bureau of Mines, Elbert Osborn, before the U.S. Senate Subcommittee on Buffalo Creek on May 31, 1972, bears out this narrow perception of the Bureau's jurisdiction:

Very basically, the Federal Coal Mine Health and Safety Act of 1969 does not give the Bureau of Mines the legal authority to protect the public from hazards arising in a coal mine. *Without additional statutory authority*, mandatory safety standards regarding retention dams on coal mine property, and enforcement of these standards *can only apply to the prevention of hazards to miners on the property.*¹²

TASK FORCE TO STUDY COAL WASTE HAZARDS, U.S. DEPT OF INTERIOR, PRELIMINARY ANALYSIS OF THE COAL REFUSE DAM FAILURE AT SAUNDERS, WEST VIRGINIA, FEBRUARY 20, 1972 (1972) [hereinafter cited as PRELIMINARY ANALYSIS].

⁵ See *infra* notes 7-8 and accompanying text. The Office of Surface Mining Reclamation and Enforcement derives authority over coal waste processing banks and impoundments pursuant to section 701(28), of the Surface Mining Control & Reclamation Act of 1977. 30 U.S.C. §§ 1201(28) (Supp. V 1981).

⁶ 30 U.S.C. §§ 801-962 (1976 & Supp. V 1981).

⁷ 30 U.S.C. § 811(i) (1970). Proposed mandatory health and safety standards for surface work areas of underground coal mines were mandated to be published by December 30, 1970. The Act did not define the scope of "surface work areas of underground mines." The regulations were published in final form on May 22, 1971. 36 Fed. Reg. 9,364 (1971) (codified at 30 C.F.R. §§ 77-77.1916 (1972)) (current version at 30 C.F.R. §§ 77-77.1916 (1982)).

⁸ See 30 C.F.R. §§ 77.214-16 (1972) (current version at 30 C.F.R. §§ 77.214 to -216-5 (1982)). The Bureau of Mines regulations governing refuse pile and retaining dam construction comprised one-half of one page of the 1972 bound volume of 30 C.F.R. The standards lacked design criteria and consisted solely of general statements of goals. The sole regulation governing retaining dam construction, inspection and records required merely that: "If failure of a water or silt retaining dam will create a hazard, it shall be of substantial construction and shall be inspected at least once each week." 30 C.F.R. § 77.216(a) (1972).

⁹ APPALACHIAN RESEARCH AND DEFENSE FUND, INC., CHARLESTON, WEST VIRGINIA, DISPOSING OF THE COAL WASTE DISPOSAL PROBLEM 48 (1972) [hereinafter cited as APPALACHIAN RESEARCH AND DEFENSE FUND].

¹⁰ See *supra* note 4.

¹¹ APPALACHIAN RESEARCH AND DEFENSE FUND *supra* note 9, at 50.

¹² *Id.*

Therefore, as early as 1972, Congress was aware that the Bureau of Mines, to which Congress had committed authority over surface coal waste disposal, did not perceive its responsibility as including the regulation of off-site coal waste disposal for the protection of the general public.

In 1973, the Mining Enforcement and Safety Administration (MESA) was established within the Department of the Interior as an independent agency.¹³ The Senate Report accompanying the 1977 amendments to the Act observed that the establishment of MESA as an agency independent of the Bureau of Mines was a response to congressional pressure. The pressure derived from the Buffalo Creek disaster and underground mine disasters at the Sunshine Silver Mine in May 1972, and the Blacksville mine in July 1972.¹⁴

MESA proposed revised rules governing Coal Mine and Plant Waste Dumps and Impoundments, on January 16, 1974.¹⁵ The rules continued to reflect the agency's refusal to address the problems of off-site processing waste disposal and its impact, being limited to protecting miners on the minesite.

W.A. Wahler and Associates, consultants to the U.S. Bureau of Mines and the Mining Enforcement and Safety Administration in the preparation of the proposed regulations, submitted comments on the regulations seven months after their consultation ended. The "Critical Review" of the proposed regulations submitted by W.A. Wahler focused on the regulatory confusion over the scope of protection to be afforded under the Act.

The Federal Coal Mine Health & Safety Law of 1969 only refers directly to safety of "miners on mine property" and not to "public safety." This appears to us to be a legislative flaw of serious inconvenience if not of serious hazard consequence. These proposed regulations . . . appear to have been written so as to give only the most limited or minimum interpretation of the 1969 Coal Mine Health and Safety Law regarding "only" miners on mine property rather than to include public safety in order to assure that the regulations have the authority of that law. This approach . . . may not fulfill the broader intent of Congress as Congress defined the law in public hearings following the failure of the Buffalo Creek Dam in 1972. . . .¹⁶

The comments thus recognized two potential areas of concern: first, the scope of statutory protection afforded by the Act, and the apparently broader intent of Congress after the 1972 Buffalo Creek dam collapse; and second, the

¹³ 38 Fed. Reg. 18,695-96 (1973).

¹⁴ S. REP. NO. 181, 95th Cong., 1st Sess. 4-5, *reprinted in* 1977 U.S. CODE CONG. & AD. NEWS 3401, 3404-05.

¹⁵ See 30 C.F.R. §§ 77.200 and 77.214-16 (1974) (superceded). While the 1974 proposed MESA regulations were more specific and contained more detailed performance standards for refuse pile and dam construction, the proposed rules in fact narrowed further the scope of the prior rules by expressly couching the standards in terms of protection only of the miner while on the minesite.

¹⁶ W.A. WAHLER AND ASSOCIATES, CRITICAL REVIEW, PROPOSED REGULATIONS COAL MINE AND PLANT WASTE DUMPS AND IMPOUNDMENTS, MESA 3 (1974).

conservative drafting of the regulations so as to clearly fall within the Act's scope, thereby avoiding an *ultra vires* challenge.

The Critical Review by W.A. Wahler queried: "Would not the interests of MESA, the coal mining industry, the mine workers, the Congress, and the public be better served if (sic) . . . improved legislation could permit these regulations to once-and-for-all serve the general need?"¹⁷ Notwithstanding the concerns of the consultants employed to assist in the preparation of the rules, the regulations became final on September 9, 1975, retaining the narrow goal of minimization of hazards and dangers to coal miners while on the minesite.¹⁸

The 1977 amendments to the Act created the Mine Safety & Health Administration in the Department of Labor. The amendments gave that Department the authority to "develop and promulgate improved mandatory health or safety standards to protect the health and safety of the Nation's coal or other miners."¹⁹ In deliberating the amendments, Congress acknowledged the uncertainty surrounding coal waste structures: "At Buffalo Creek, in February, 1972, 125 persons died when a dam burst sending a near tidal wave of murky water through the seventeen mile long valley, while the mining enforcement agency questioned its authority to regulate the coal mine impoundment dam in question."²⁰ The definition of "coal or other mine" was expanded by the amendments to explicitly include "other property including impoundments, retention dams and tailing ponds."²¹ The Senate Committee intended to resolve any question of the scope of authority to regulate such structures under the 1969 Act in favor of the "inclusion of" impoundments within the coverage of the Act.²²

In so amending the Act, however, the Congress failed to directly address the statutory language and resulting standards that had caused confusion within the Bureau of Mines. As early as 1972, the Bureau had stated that it perceived its jurisdiction as extending *only* to the protection of the miner

¹⁷ *Id.* at 4.

¹⁸ The narrow focus is reflected in various regulatory provisions: 30 C.F.R. § 77.215-3(a) (1982), which requires a refuse pile owner to construct or modify a refuse pile that presents a hazard in such a fashion so as to minimize danger to "the lives of miners;" 30 C.F.R. § 77.216(a)(3) which requires slurry dams to be designed and approved *only* if they meet a certain height or volume or "present a hazard to coal miners"; 30 C.F.R. § 77.216-3(b)(3) requires that in a potentially hazardous situation, the owner of the impoundment shall notify and prepare to evacuate *only* miners from mine property.

¹⁹ 30 U.S.C. § 801(g) (Supp. V 1981).

²⁰ S. REP. No. 181, 95th Cong., 1st Sess. 4, reprinted in 1977 U.S. CODE CONG. & AD. NEWS 3401, 3404.

²¹ 30 U.S.C. § 802(h)(1) (Supp. V 1981).

²² S. REP. No. 181, 95th Cong., 1st Sess. 14, reprinted in 1977 U.S. CODE CONG. & AD. NEWS 3401, 3414.

while on the minesite.²³ The amended definition of "coal or other mine" failed to accomplish the goal of assuring that public safety be considered in the construction of such structures, since the new Mine Safety and Health Administration was not required to *act* upon the mandate by publishing new and more inclusive mandatory standards. In 1984, the regulations of the Mining Enforcement and Safety Administration published in 1975, with their limited focus of protecting only the miner on the minesite, still remain the last word. While the agency has recently opened substantial portions of the regulations for public comment,²⁴ the surface impoundment regulations remain unaltered as apparent afterthoughts of an agency which is still unclear regarding its mandate. Over a decade after Buffalo Creek, fully two years after Ages, MSHA views regulation of refuse piles and waste impoundments as a "damn fuzzy issue."²⁵ The irony of the statement is chilling.

B. MSHA and the Ages Failure

The MSHA regulations governing refuse piles are found at 30 C.F.R. §§ 77.214 and .215.²⁶ They require: compaction of waste material in two-foot lifts to minimize combustion; prevention of material shifting; construction to avoid impeding drainage or impounding water; and reporting, signs and markers, and certification.²⁷

Water, sediment or slurry impoundments and impounding structures are governed by 30 C.F.R. section 77.216.²⁸ However, plans for the "design, construction and maintenance of structures which impound water, sediment, or slurry" must be submitted for approval *only* if the structure meets certain minimum height or storage levels.²⁹ Thus, an impounding structure is regu-

²³ See *supra* note 12 and accompanying text.

²⁴ See 47 Fed. Reg. 30,025 (1982). MSHA specifically solicited comments with respect to possible regulatory action concerning standards for roof support, blasting and explosives, and ventilation requirements.

²⁵ Telephone conversation with Joseph Lamonica, Administrator for Coal Mine Safety and Health, Mine Safety and Health Administration, April 2, 1982.

²⁶ A "refuse pile" means a deposit of coal mine waste which may contain a mixture of coal, shale, claystone, siltstone, limestone, and related materials that are excavated during mining operations or separated from mined coal and disposed of on the surface as waste by-products of either coal mining or preparation operations. 30 C.F.R. § 77.217(e) (1982).

²⁷ 30 C.F.R. §§ 77.215 to -77.215-3 (1982).

²⁸ An "impounding structure" means a structure which is used to impound water, sediment or slurry, or any combination of such materials. 30 C.F.R. § 77.217(c) (1982). "Slurry" is undefined by the regulations, but generally refers to the by-product wastewater from coal preparation plants containing an average of 10% suspended coal and dirt particles. PRELIMINARY ANALYSIS, *supra* note 4, at 5-6.

²⁹ See 30 C.F.R. § 77.216 (1982). Plans are required for the design, construction and maintenance of impounding structures if such structure can: (1) impound to an elevation of five feet or more above the upstream toe and have a volume of 20 acre-feet or more; or (2) impound to an elevation of 20 feet or more above the upstream toe; or (3) present a hazard to coal miners.

lated only when: (a) the structure impounds to an elevation of five or more feet above the toe of the structure *and* has a storage volume capacity of 20 acre-feet or more,³⁰ or, (b) it impounds to an elevation of 20 feet or more, or, (c) it "presents a hazard to coal miners."³¹ The remainder of the regulations under section 77.216 are keyed to impounding structures meeting the criteria mentioned above. Hence, operators building structures not meeting the section 77.216(a)(1)-(3) elevation or storage volume thresholds are not required to submit any plans or foundation and stability analyses, site preparation methods, baseline hydrologic information, spillway design, or structure certification. Additionally, there is no requirement that impoundments be monitored for stability at seven day intervals. No standards are set for impounding structures outside of the section 77.216(a) criteria.

With this understanding of the structure of MSHA's coal waste regulations, it is perhaps easier to understand the apparently cursory review given the Ages impoundment plans. An inspection on January 29, 1981, by William C. Cannon of the MSHA Barbourville, Kentucky subdistrict, led to submission of a "construction plan for refuse dump at Brookside" by Mike Gambrel, Mine Engineer, Brookside No. 3 Mine on February 10, 1981.³² The plans were submitted pursuant to 30 C.F.R. § 77.215 (Refuse piles), and consisted of a one-page report meeting the section 77.215-2(b) reporting requirements, and six exhibits showing different sketches of the planned "dump." The plan called for construction of slurry ponds *within* the refuse pile. The report submitted by Eastover Mining Company stated that: "Slurry ponds will be constructed in the refuse pile. . . . The slurry ponds will not exceed 20 acre-foot in volume."³³ This method of design was described in the January 8, 1982, report from Robert L. Ferriter, Chief, Mine Waste and Construction Division, MSHA, to Roy L. Bernard, Director, Technical Support, MSHA in this fashion: "The method used to construct the refuse pile is a liberal extension of the 'rice paddy' technique whereby slurry material has been successfully disposed of within small shallow paddies incised into large deposits of coarse refuse."³⁴

Given this opinion of the Safety and Health Technology Center Mine Waste and Construction Division in the MSHA Denver office that this was a

³⁰ An "acre-foot" is a volumetric calculation of the quantity of water needed to cover an acre of land to the depth of one foot.

³¹ 30 C.F.R. §§ 77.216(a)(1)-(3) (1982).

³² From files of MSHA Barbourville Subdistrict, Barbourville, Ky.

³³ EASTOVER MINING CO., CONSTR. PLAN FOR REFUSE DUMP AT BROOKSIDE (February 10, 1981) (available at MSHA Barbourville, Ky. District 7 office).

³⁴ Memorandum from Robert L. Ferriter, Chief, Mine Waste and Construction Division, to Roy L. Bernard, Director, Technical Support, U.S. Department of Labor, Safety and Health Technology Center, MSHA, of Investigation of Refuse Pile Failure at Refuse Area No. 3, Brookside, Harlan County, Kentucky, January 8, 1982, at 4 [hereinafter cited as Ferriter Memorandum].

“liberal extension” of a construction technique, one might expect that MSHA would have exercised its authority to require “other information pertaining to the stability of the pile.”³⁵ However, no stability analyses were requested. Furthermore, although the plan called for an *aggregate* impounding of a number of 10 foot ponds of slurry within the structure, *each* proposed impounding structure was viewed individually. Since none individually exceeded the 20 foot depth/20 acre-foot volume criteria of section 77.216, it did not trigger in-depth review under section 77.216.³⁶

The structure was constructed on the site of an “old refuse dump and small earth and rock-fill embankment.” It would have eventually attained a height of 212 feet above the downstream toe, and would have contained approximately 210,000 cubic yards (130 acre-feet) of material.³⁷ A diversion ditch was proposed to divert surface runoff above the proposed area; but there was no description of an underdrain for drainage in the area that might have an effect on the refuse pile/impoundment stability.

The inability of the MSHA regulations to adequately address the permitting, design and construction requirements of the Ages impoundment would seem to demand that the existing gap in the standards be closed. Moreover, it would suggest that the need for more meaningful and enforceable standards for permitting and design should be explored. No agency response has been forthcoming.

II. OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

A. OSM's Jurisdiction Over Impoundments

The Office of Surface Mining Reclamation and Enforcement (OSM) was established in the Department of Interior, in order to implement and administer the provisions of the Surface Mining Control and Reclamation Act of 1977.³⁸ The Act regulates surface coal mining and reclamation operations, which include traditional surface mining methods as well as the surface effects of underground coal mining operations and coal processing. The broad scope of coverage of mining-related activities and areas is consistent with expressed congressional intent to implement a “national system of coal mining

³⁵ 30 C.F.R. § 77.216-3(a)(18) (1982).

³⁶ The approval letter stated:

A review of this plan also indicates that the height of the dam for impounding the filter cake refuse or slurry will not exceed 10 feet in height or 20 acre feet of volume, therefore, the impoundment and impounding structure is below MSHA's minimum requirements as specified under Section 77.216 of the Code of Federal Regulations.

Letter of J.L. Spicer to Mike Gambrel, February 18, 1981.

³⁷ Ferriter Memorandum, *supra* note 34, at 2.

³⁸ 30 U.S.C. §§ 1201-1328 (Supp. V 1981).

regulation" to cover, inter alia, "all . . . the surface impacts from underground mines and coal processing."³⁹

The implementation of the Surface Mining Act is broken down into two phases. The first phase is an interim program under section 502,⁴⁰ during which time certain key environmental performance standards are enforced concurrently with the state regulatory authority. The second phase is a permanent program administered by a state or by the federal government, at which time the full gamut of performance standards and permit requirements is operative.⁴¹

The House Committee on Interior and Insular Affairs, which drafted the 1977 Act was keenly aware of the public hazards attendant to surface disposal of coal processing wastes. The House Report reflects this:

The necessity to include regulation of the surface effects of underground coal mining is also apparent to the Committee. The Buffalo Creek disaster, in which over 125 people were killed, resulted from the failure of an impoundment constructed from waste from an underground mine. Other hazards to the environment and human health and safety associated with underground mining include . . . spontaneous combustion of and long-term land and air pollution from the disposition of mining wastes.⁴²

Sections 515 and 516 of the Surface Mining Act contain the substantive environmental performance standards for surface and underground mining operators.⁴³ Provisions regarding coal waste disposal require that the Secretary of the Interior, with the written concurrence of the Chief of Engineers, U.S. Army Corps of Engineers, establish standards *and* criteria regulating "the design, location, construction, operation, maintenance, enlargement, modification, removal, and abandonment of new and existing coal mine waste piles."⁴⁴

The provisions of sections 515(b)(13) and 515(f) became operative during

³⁹ H. R. REP. No. 218, 95th Cong., 1st Sess. 57, reprinted in 1977 U.S. CODE CONG. & AD. NEWS 593, 595.

⁴⁰ 30 U.S.C. § 1252 (Supp. V 1981).

⁴¹ 30 U.S.C. § 1253 (Supp. V 1981).

⁴² H.R. REP. No. 218, 95th Cong., 1st Sess. 84, reprinted in 1977 U.S. CODE CONG. & AD. NEWS, 593, 621.

⁴³ 30 U.S.C. §§ 1265-66 (Supp. V 1981).

⁴⁴ The full text of the pertinent statutory sections reflects the congressional concern; specifying in a level of detail unparalleled elsewhere in the statute *what* the standards must include.

Section 515(b):

(11) with respect to surface disposal of mine wastes, tailings, coal processing wastes, and other wastes in areas other than mine working or excavations, stabilize all waste piles in designated areas through construction in compacted layers including the use of incombustible and impervious materials if necessary and assure the final contour of the waste

the initial regulatory program under section 502.⁴⁵ Pursuant to the requirements of section 501,⁴⁶ OSM promulgated regulations implementing the interim program on December 13, 1977, which included regulations that governed waste disposal and dams constructed of impounding waste material.⁴⁷

Regarding waste disposal in dry wastebanks or "fills," the interim program regulations of OSM required controlled transport and placement, underdrains, surface diversion of runoff away from the fill, material compaction and terracing.⁴⁸ With respect to dams constructed of waste material,⁴⁹ the regulations established a number of requirements for design as well as performance standards for construction, site preparation, stability, inspection and maintenance.⁵⁰

pile will be compatible with natural surroundings and that the site can and will be stabilized and revegetated according to the provisions of this Act;

. . .

(13) design, locate, construct, operate, maintain, enlarge, modify, and remove or abandon, in accordance with the standards and criteria developed pursuant to subsection (f) of this section, all existing and new coal mine waste piles consisting of mine wastes, tailings, coal processing wastes, or other liquid and solid wastes, and used either temporarily or permanently as dams or embankments;

Section 515:

(f) The Secretary, with the written concurrence of the Chief of Engineers, shall establish within one hundred and thirty-five days from the date of enactment, standards and criteria regulating the design, location, construction, operation, maintenance, enlargement, modification, removal and abandonment of new and existing coal mine waste piles referred to in section 515(b)(13) and section 516(b)(5). Such standards and criteria shall conform to the standards and criteria used by the Chief of Engineers to insure that flood control structures are safe and effectively perform their intended function. In addition to engineering and other technical specifications the standards and criteria developed pursuant to this subsection must include provisions for: review and approval of plans and specifications prior to construction, enlargement, modification, removal, or abandonment; performance of periodic inspections during construction; issuance of certificates of approval upon completion of construction; performance of periodic safety inspections; and issuance of notices for required remedial or maintenance work.

30 U.S.C. §§ 1265(b)(11), (13) and (f) (Supp. V 1981).

⁴⁵ 30 U.S.C. § 1252(c).

⁴⁶ 30 U.S.C. § 1251.

⁴⁷ 42 Fed. Reg. 62,639-62,716 (1977).

⁴⁸ 30 C.F.R. § 715.15 (1982).

⁴⁹ The applicability of 30 C.F.R. §§ 715.18 and 717.18 (1978) to dams impounding but not constructed of coal waste in the interim program regulations was successfully challenged. *In re Surface Mining Regulation Litigation*, 452 F. Supp. 327, 341 (D.D.C. 1978), *aff'd in part, rev'd in part*, 627 F.2d 1346 (D.C. Cir. 1980). However, the same provision was upheld in the face of judicial challenge in the permanent program regulations. *In re Permanent Surface Mining Regulation Litigation*, No. 79-1144, slip op. at 56 (D.D.C. Feb. 26, 1980).

⁵⁰ The interim regulations for dams required, *inter alia*; design based on at least a 100-year storm event; minimum safety factors for stability; investigations and site-specific testing for stability of foundations, dams and abutments; control of seepage through the dam and foundations; periodic inspection by engineers during and after construction; routine agency inspection of *all*

The OSM interim rules apply to all dams constructed of coal waste material,⁵¹ triggering the full plan and construction requirements of 30 C.F.R. § 715.18, as well as those of 30 C.F.R. § 77.216-2, even if the dam does not meet the size or other minimum criteria set out in MSHA's regulations.⁵² Pursuant to statutory directive, OSM's regulations are far more specific and inclusive than MSHA's in that OSM established design criteria, required frequent inspection by the permittee *and* the regulatory authority, and set forth enforceable performance standards.

B. *OSM and the Ages Failure*

As noted, the OSM regulations detail the substantive requirements for construction of coal waste dams with an eye towards public health and safety. But in the case of the Ages impoundment failure, they were of no value, since they were not enforced by the proper regulatory authorities: OSM and the Kentucky Department for Natural Resources and Environmental Protection.

Consonant with the provisions of section 502 of the Act,⁵³ whereby each coal state retained responsibility for permit issuance, the *plans* were to be reviewed by the state. However, in this case, no such review occurred.⁵⁴ The *construction* and *inspection* requirements were intended to be enforced, and the waste disposal sites thoroughly inspected, by both the state regulatory authority and the Office of Surface Mining.⁵⁵

dams; cleaning and maintenance of ditches and spillways, and engineering analysis that use of waste in the dam construction would not adversely affect stability. 30 C.F.R. § 715.18 (1982).

⁵¹ *Id.* at 715.18(a).

⁵² 30 C.F.R. § 77.216(a).

⁵³ 30 U.S.C. § 1252.

⁵⁴ The Kentucky Department for Natural Resources and Environmental Protection had, but failed to exercise, jurisdiction over the Ages impoundment under the provisions of SMCRA. Due to Departmental failure to require permits for coal processing plants in a timely fashion, and the ultimate "grandfathering in" of such facilities with a waiver from having to submit coal waste disposal information, Kentucky denied itself the information needed to ascertain the location and condition of the Ages impoundment. Though the impoundment was not pre-existing as of the passage of the Act (May 3, 1977) and in fact was constructed in 1981, it was treated as pre-existing and required to submit *no* plans, *no* safety or stability analyses, and to meet *no* design standards by OSM or the state.

The permit approval for the Eastover preparation plant which generated the waste, reflects the decision not to require technical drawings and plans. It defers to the review and approval of the "proper authority," completing the circle of neglect. OSM relied on the state regulatory authority to approve the plan, and upon MSHA to inspect. The state required minimal information for such operations and in so doing "grandfathered in" *new* (post-1978) dams and impoundments. The state relied on the "proper authority"—in this case the Mine Safety and Health Administration, whose standards were considered inapplicable to the structure, and which is *not* the "proper authority" under SMCRA.

⁵⁵ *See supra* note 29.

According to a spokesman for the Office of Surface Mining, OSM practice was to rely on MSHA's approval of the design as the indicator of safety and stability, even though MSHA did not require many of the parameters and precautions that OSM did.⁵⁶ OSM apparently limited review to off-site water quality and other parameters not directly related to fill/impoundment design or construction.⁵⁷ OSM regulations were far more precise and enforceable than MSHA's and OSM was explicitly mandated to cover design, stability and construction. Yet the deference shown to MSHA regarding these matters was the routine practice.⁵⁸

III. OSM, MSHA AND THE "NEW FEDERALISM:" BACKPEDALING TO DISASTER

A. Regulation Under the Surface Mining Act

The Office of Surface Mining published permanent program regulations on March 13, 1979.⁵⁹ These regulations become operative when a permanent state program incorporates rules consistent with the federal rules and is approved by OSM,⁶⁰ or a federal program for a state is implemented.⁶¹

The permanent program rules expanded on the interim criteria for surface disposal of coal waste in dry wastebanks,⁶² for example, refuse piles, implementing fully the provisions of section 515(f) of SMCRA.⁶³ The majority of the OSM provisions have no counterpart in MSHA regulations. The OSM regulations which do overlap MSHA's are more detailed and explicitly consider public health and safety, rather than protection of the on-site miner alone.

The OSM permanent program provisions governing coal waste dams and embankments⁶⁴ are similarly more inclusive, detailed and protective than the MSHA regulations.⁶⁵ One key difference in the 1979 OSM regulations is the

⁵⁶ Louisville Courier-Journal, Dec. 19, 1981, at A8, col. 4.

⁵⁷ According to Bill Bradford, OSM spokesman; "In practice, if an inspector (from OSM) believes a (dam or refuse pile) may be in danger, the agency notifies MSHA and requests that one of its engineers visit the site." *Id.*

⁵⁸ *See id.* *See also supra* note 28 and accompanying text.

⁵⁹ *See* 44 Fed. Reg. 14,901-15,463 (1979) (codified at 30 C.F.R. §§ 730-845.20 (1982)).

⁶⁰ 30 U.S.C. § 1253 (Supp. V 1981).

⁶¹ 30 U.S.C. § 1254.

⁶² 30 C.F.R. §§ 816.81-85, 816.91-93 (1982). The regulations require *inter alia*: the conducting of quarterly inspections by an engineer, including tests to evaluate any public hazard, emergency notification of the public, proper subdrainage systems, diversion of surface runoff, minimum safety factors for stability, four-foot cover of the fill, and compaction in 24-inch layers to attain 90% of maximum dry density to prevent combustion.

⁶³ 30 U.S.C. § 1265(f) (Supp. V 1981).

⁶⁴ 30 C.F.R. §§ 816.81-95 (1982).

⁶⁵ The 1979 coal waste dam and embankment rules require, *inter alia*: a demonstration that waste used in dam construction will be stable, and will not detrimentally affect water quality due

omission of the minimum size and storage criteria prescribed in the MSHA rule.⁶⁶ Therefore, under the OSM rules, all coal waste dams must meet the full gamut of dam and embankment criteria.

B. Regulatory Reform vs. Congressional Intent

1. Proposals to deregulate

The inability of the MSHA regulations to adequately control the construction of coal waste impoundments so as to protect life and property and the narrow jurisdictional focus reflected in the MSHA rules, suggest that the stronger, more broadly-aimed OSM regulations should be retained. However, as part of the Reagan Administration's "regulatory reform" effort, OSM has proposed a rewriting of the permanent program regulations to substantially coincide with the MSHA regulations.⁶⁷ The proffered intent was to "strengthen adherence" to the Surface Mining Act and to "eliminate duplication" with the MSHA regulations.⁶⁸

Those proffered goals are not sufficient, however. The question that must be addressed is what Congress intended the role of OSM to be regarding setting coal waste disposal standards. That role must be further examined in light of the role MSHA has played, or failed to play. From a posture of supplementation and increased public protection, OSM has shifted to an attitude of total deference.

to seepage; clearing and grubbing of sites prior to construction; diversion of drainage; three-foot of design freeboard to assure dam stability and prevent overtopping; a 1.5 static safety factor; foundation investigations and laboratory testing to stability of the dam during all increments of construction; spillways to protect against erosion and design to evacuate 90% of water stored from design storm event within 10 days.

⁶⁶ See 30 C.F.R. § 77.216(a) (1982).

⁶⁷ The Office of Surface Mining proposed revisions to the coal mine waste regulations on June 18, 1982. 47 Fed. Reg. 26,598 (1982). The proposed rules deferred totally to MSHA's standards in many key areas, including *inter alia*:

- elimination of design criteria;
- elimination of a static safety factor for slopes of less than 27 degrees;
- definitions, including the definition of an impounding structure at 30 C.F.R. § 77.216;
- elimination of inspections by engineers at critical construction phases;
- elimination of mandatory diversion of all surface drainage above the refuse pile or dam;
- elimination of the requirement that the structures be capable of controlling and passing drainage and rainfall from a 100-year design storm event;
- elimination of consideration of *public* health and safety in the placement of dams and fills;
- elimination of the requirement that waste material be transported and placed in a controlled fashion and compacted in two-foot lifts to achieve 90% compaction;
- deletion of the requirement of three feet of design freeboard to prevent dam overtopping and failure.

⁶⁸ See OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT, U.S. DEPT OF INTERIOR, PROPOSED REVISIONS TO THE PERMANENT PROGRAM REGULATIONS IMPLEMENTING SECTION 501(b) OF THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977—FINAL ENVIRONMENTAL STATEMENT I-1-2(1983).

2. Congressional intent under SMCRA

Reference is made to the Federal Coal Mine Health and Safety Act of 1969 in two portions of the text of the Surface Mining Control and Reclamation Act of 1977's text. Section 516 of SMCRA authorizes the Secretary of the Interior to promulgate rules directed towards the surface effects of underground operations, provided that:

Such rules and regulations shall not conflict with nor supercede any provision of the Federal Coal Mine Health and Safety Act of 1969 nor any regulation issued pursuant thereto, and shall not be promulgated until the Secretary has obtained the written concurrence of the head of the department which administers the Act.⁶⁹

The second reference to the 1969 Act is in section 702(a) of SMCRA, which states: "Nothing in this Act shall be construed as superceding, amending, modifying, or repealing . . . (2) the Federal Coal Mine Health and Safety Act of 1969. . . ."⁷⁰

OSM's current posture is that these statutory references preclude it from adopting any standards beyond those of MSHA where MSHA has promulgated a standard; for example, in the area of coal waste disposal.⁷¹ However, the legislative history, as well as the language of the environmental performance standards for coal waste disposal, strongly suggest otherwise. The record reflects a keen congressional awareness that the MESA/MSHA rules implementing the Federal Coal Mine Health and Safety Act of 1969 did not address the concerns of SMCRA.

The House Report specifically addressed the relationship it intended between the two laws in this way:

RELATION OF H.R. 2 TO OTHER LAWS

Certain aspects of coal mining operations are now subject to regulation under two major Federal programs—the Coal Mine Health and Safety Act of 1969 and the Federal Water Pollution Control Act.

Under the Coal Mine Health and Safety Act of 1969, as amended, the Secretary of Interior regulates certain health and safety aspects of both surface mines and surface activities of underground mines.

The implementation of this act, though, *has been directed at the protection of the miner while on the site of the mining operation.*

In several instances, H.R. 2 specifies that certain activities are to be conducted in such a way as to provide for the protection of the health or safety of the public—both on *and* off the minesite. For example, standards are set forth controlling the design, construction, and use of impoundments for the disposal

⁶⁹ 30 U.S.C. § 1266(a) (Supp. V 1981).

⁷⁰ 30 U.S.C. § 1292(a).

⁷¹ Letter of J.R. Harris, OSM Director, to Senator Walter D. Huddleston, November 8, 1982.

of mine wastes. Such provisions are *not duplicative* of the Coal Mine Health and Safety Act but *are supplementary to the authority* granted to the Secretary of Interior by that act.

* * * * *

The committee does not contemplate that any of the environmental protection standards or other provisions of this act be implemented in such a way as to endanger coal miners working underground nor to contravene the health and safety standards and other provisions of Coal Mine Health and Safety Act of 1969, as amended.⁷²

Congress, therefore, was clearly aware that under the Coal Mine Health and Safety Act, public health and safety were not directly addressed. The House Report explicitly states that SMCRA standards were to supplement the MSHA (formerly MESA) standards in order to "provide for the protection of the health or safety of the public—both on and off the minesite."⁷³

The House Report also suggests that MSHA's concurrence with OSM was for the *limited* purpose of assuring that the environmental standards designed to protect the public and environment did not unintentionally endanger the underground miner or undercut existing health and safety standards for underground operations. This inference is supported elsewhere in the House Committee Report, wherein it is stated that, "The Mine Enforcement Safety Administration is to concur in the issuance of [the regulations governing surface effects of underground operations] *in order to assure full coordination between the Office and MESA and the protection of the health and safety of miners*, both on and off the mine site."⁷⁴

The difference in inspection and enforcement provisions of SMCRA and the Coal Mine Health and Safety Act also reflect the broader intent of SMCRA. The Senate Committee discussed the contrast in this manner:

Generally the enforcement provisions of this bill have been modeled after the similar provisions of the Federal Coal Mine Health and Safety Act of 1969. Where the enforcement provisions of this bill depart from the 1969 Health and Safety Law, they do so either to improve enforcement or to accommodate the fact that this bill encourages the states to retain or develop regulatory author-

⁷² H.R. REP. NO. 218, 95th Cong., 1st Sess. 141-42, *reprinted in* 1977 U.S. CODE CONG. & AD. NEWS 593, 673-74 [emphasis added].

⁷³ *Id.*

⁷⁴ H.R. REP. NO. 218, 95th Cong., 1st Sess. 93, *reprinted in* 1977 U.S. CODE CONG. & AD. NEWS 593, 629.

See also the Conference Report, H.R. REP. NO. 493, 95th Cong., 1st Sess. *reprinted in* 1977 U.S. CODE CONG. & AD. NEWS 593, 740. The House Bill did not contain the section 516(a), 30 U.S.C. § 1266, language regarding the 1969 Act. The conference committee included the language in the final bill, with this explanation: "The implementation of these standards [section 516] is to be coordinated with MESA in order to assure that health and safety standards are not abridged." H.R. REP. NO. 493, 95th Cong., 1st Sess. 109, *reprinted in* 1977 U.S. CODE CONG. & AD. NEWS 593, 740.

ity over surface coal mining and reclamation operations, *and seeks to protect the environment and the public health and safety as opposed to the protection afforded the coal miner on coal mine property* by the Coal Mine Health and Safety Act.⁷⁵

Moreover, a reading of SMCRA itself belies the suggestion that OSM was intended to adopt or defer to MSHA regulations regarding coal waste disposal. SMCRA section 516(b)(5)⁷⁶ requires that underground operators design, locate, construct, operate, modify and abandon all existing and new waste piles and dams in accordance "with the standards and criteria developed pursuant to section 515(f)." Section 515(f)⁷⁷ explicitly required the Secretary of Interior and Office of Surface Mining to *establish* standards and *design criteria* for waste piles and dams, with the concurrence of the U.S. Army Corps of Engineers, rather than with MESA (MSHA). Section 515(f)⁷⁸ further lists provisions which must be included in such regulations, a number of which had and have no comparable counterpart under the Coal Mine Health and Safety Act. The House Report discussed the development of regulations under section 515(f),⁷⁹ leaving little doubt that, rather than incorporating the MESA regulations, OSM was to develop regulations providing necessary protection to the public and environment independently of MESA.⁸⁰ The Report stated:

SURFACE DISPOSAL OF MINE WASTES FROM PROCESSING PLANTS

With respect to surface disposal of mine wastes in *dry wastebanks* (not in embankments or impoundments), H.R. 2 requires operators to lay down and compact wastes in layers or lifts in order to prevent combustion, water pollution through leaching, and assure stability of the waste bank. . . . Waste banks are to be revegetated with a diverse and permanent vegetative cover capable of self-regeneration and plant succession and at least equal in extent to the cover of the natural vegetation of the area.

The committee also recognized the need to *establish* standards controlling the construction, use and abandonment of impoundments used for the disposal of liquid mine wastes and coal processing wastes.

In order to assure that mine waste impoundments used for the disposal of liquid or solid waste material from coal mines are constructed or have been constructed so as to safeguard the health and welfare of downstream populations, H.R. 2 gives the *Army Corps of Engineers* a role in *determining* the standards for construction, modification and abandonment of these impoundments.

Authority for the issuance of regulations and inspections of impound-

⁷⁵ S. REP. NO. 128, 95th Cong., 1st Sess. 58 (1977) (emphasis added).

⁷⁶ 30 U.S.C. § 1266(b)(5) (Supp. V 1981).

⁷⁷ 30 U.S.C. § 1265(f).

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ H.R. REP. NO. 218, 95th Cong., 1st Sess. 125, reprinted in 1977 U.S. CODE CONG. & AD. NEWS 593, 657.

ments rests with the Secretary of Interior; however, such regulations should be developed by the Chief of Engineers. It is the intent of the conferees that the safety, engineering and design standards of the *Corps of Engineers* will apply, through the rules and regulations of the Secretary to such structures and waste disposal banks which may serve as temporary or permanent impoundments. However, it is not the intent that the Chief of Engineers must therefore monitor or sign off on every such structure. That duty belongs to the Secretary of Interior, who may utilize appropriate skilled personnel from other Federal agencies as provided for in title II. Concurrence of the Chief of Engineers is intended to also include his approval of the system of inspection and his participation in the training of inspectors to bring about competent and adequate enforcement of the standards.

All aspects of surveillance which do not require the actual physical inspection of individual sites would properly fall within the purview of the Chief of Engineers. Thus, the corps' experience and expertise in the area of design, construction, maintenance, et cetera, which were utilized for carrying out the congressionally authorized surveys of mine waste embankments in West Virginia following the disastrous failure of the mine waste impoundments on Buffalo Creek, is to be applied in order to prevent similar accidents in the future. In so doing, however, an unnecessary duplication of effort by two Federal agencies and the costly drain upon available manpower is to be avoided.⁸¹

Thus, Congress intended primary responsibility for development of coal dam standards to rest with the U.S. Army Corps of Engineers, and that the safety, design and engineering standards of the Corps are to apply, because of the Corps' experience in dam construction with an eye towards "safeguard[ing] the health and welfare of downstream populations."⁸² The Secretary was to be cognizant of MSHA's role in protecting underground miners on the minesite, but the Secretary was to establish standards and design requirements under the guidance and tutelage of the U.S. Army Corps of Engineers independently of the MSHA standards.⁸³

In the face of the clear thrust of the legislative record, the OSM proposal to revise its regulations "to follow the definitions and requirements of the

⁸¹ *Id.*

⁸² *Id.*

⁸³ The clause of section 702(a)(3), 30 U.S.C. § 1292(a)(3), relied upon by OSM as mandating the deferential approach, was construed in the context of the relation of the Water Pollution Control Act and SMCRA regulations in *In re Surface Mining Regulation Litigation*, 627 F.2d 1346 (D.C. Cir. 1980). The court noted that where the other Act and its underlying regulatory scheme are silent so as to constitute an "absence of regulation" or a "regulatory gap," the Secretary may fill that gap with more stringent requirements. *Id.* at 1367. MSHA's regulations and organic statute expressly limit jurisdiction to protection of the miner on the minesite, and the legislative history strongly supports congressional intent to fill the regulatory void caused by MSHA's limited jurisdictional focus. The OSM argument is therefore specious with regard to public protection, since section 702(a)(3) presents no impediment to regulation of coal waste disposal.

Mine Safety and Health Administration (MSHA) rules regarding coal refuse piles and impounding structures"⁸⁴ is legally and practically suspect.

IV. COAL WASTE DISPOSAL IN 1984: A BLUEPRINT FOR DISASTER

In the preceding pages the lack of interaction and clarity between two federal agencies which bear varying degrees of responsibility for the safe and prudent surface disposal of coal mining wastes has been explored. The tragedies which have occurred at Ages and Buffalo Creek demonstrate the devastating toll that this confusion has taken on the public. In 1984, the question is still unanswered as to who will lead in protecting the public health and safety with regard to coal refuse impoundments.

The Mine Safety and Health Administration (MSHA) *still* views its role as limited and subservient to that of OSM with respect to public health and safety. The Secretary of Labor, Raymond Donovan, summarized the relationship in this fashion:

In essence, the Congressional intent expressed in this legislative history to the Surface Mining Act appears to direct MSHA to consider primarily the health and safety of the miners on mine property while directing the Office of Surface Mining to be primarily concerned with the protection of the environment and the public.⁸⁵

The statement reflects MSHA's understanding that OSM is the primary agency, based on MSHA's reading of SMCRA and the legislative history. It is an invitation to OSM to take the lead in public protection.

The OSM response, as has been stated, is to promulgate regulations to follow those of MSHA. Moreover, the U.S. Army Corps has not been actively involved in development of the new proposed OSM coal waste rules, for OSM interprets the SMCRA to require only the concurrence of the Army Corps of Engineers, rather than having the Corps "determine" those standards along with the Secretary of the Interior.⁸⁶

Two years after Ages, no Memorandum of Understanding has been drafted among the two agencies on a national or state level to clarify their respective roles.⁸⁷

An adequate solution to the coal waste disposal problem is of necessity multifaceted. First, a Memorandum of Understanding among the Office of Surface Mining, MSHA, and their state counterparts, must be drafted to en-

⁸⁴ 47 Fed. Reg. 26,593 (1982).

⁸⁵ Letter from Raymond Donovan to Senator Walter D. Huddleston 3 (October 26, 1982) (available in Senator Huddleston's office, Washington, D.C.).

⁸⁶ Letter from OSM Director Harris to Senator Walter D. Huddleston (November 8, 1982) (available in Senator Huddleston's office, Washington, D.C.).

⁸⁷ *Id.*

sure maximum sharing and coordination of information gathered on existing and proposed surface refuse disposal areas. Second, the Memorandum must clarify that OSM is the lead agency in protecting against public hazards from waste disposal; and concomitant with that, OSM must restore to its refuse disposal regulations the degree of specificity and scope that they had prior to embarking on the "regulatory reform" effort. Finally, a joint interagency effort among OSM, MSHA and the U.S. Army Corps of Engineers to inventory existing waste disposal sites, particularly in steep-sloped areas or where public safety is implicated, should be undertaken.

The state of regulation of coal waste structures is one of statutory confusion, failure of the regulatory will, and lack of impetus for reform. It is a case of the blind leading the blind; it is a blueprint for disaster. Unless substantial regulatory reform occurs within OSM, and between the two agencies, to clarify the lead agency and to assure the safe design and construction of coal waste structures in order to protect the public-at-large, it will remain so.