



COALEX STATE COMPARISON REPORT - 245

December 1992

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No. 2 Hudson Hollow
Frankfort, Kentucky 40601

TOPIC: REGULATION OF ASH DISPOSAL

INQUIRY: Do IMCC member states' surface mining programs contain authority for regulating the disposal of fly ash, bottom ash, etc.? What enforcement problems have arisen? Please conduct a survey of IMCC member states.

SEARCH RESULTS: The IMCC distributed a questionnaire to member states. The questionnaire and a summary of the results of the six responses follow. Guidelines and policies for three states are attached. A copy of COALEX Comparison Report on fly ash disposal prepared in 1989 is also enclosed.

ATTACHMENTS

- A. INDIANA: Memorandum 92-1, "Disposal of Coal Combustion Waste on Surface Coal Mines" (June, 1992).
- B. OHIO: Policy/Procedure Directive, Permitting 92-2, "Permit to Install (PTI) Applications for Coal Waste Treatment of Disposal Facilities" (September, 1992).
- C. PENNSYLVANIA:
 - a. Summary of 7/4/92 Final Residual Waste Management Regulations Relative to Beneficial Use of Coal Ash at Coal Mining/Reclamation Activities.
 - b. Regulation Sec. 287.601 et seq. (July, 1992).
- D. STATE COMPARISON REPORT - 126, "Fly ash disposal" (September, 1989).

Research conducted by IMCC on behalf of Kentucky

ASH DISPOSAL QUESTIONNAIRE

1. Does your state's surface mining program contain authority for regulating the disposal of fly ash, bottom ash and scrubber sludge on surface mines?
2. If so, does your administration and enforcement grant from OSM fund the permitting and enforcement of ash disposal?



3. Have you promulgated any special regulations for ash disposal activity? If so please send us a copy.
4. Have any enforcement problems arise as a result of this disposal (e.g., dust, groundwater contamination, backfill stability)?
5. Have there been any problems with the public's perception of these disposal practices or of your mining agency's ability to control this disposal effectively?
6. Are there any particular pitfalls we should avoid?
7. Are there any particular approaches, procedural or technical, that you recommend?
8. Any other comments?

RESULTS OF THE SURVEY

ILLINOIS

1. SURFACE MINING PROGRAM'S AUTHORITY	Yes. Illinois Department of Mines & Minerals, Land Reclamation Division shares authority with Illinois Environmental Protection Agency.
2. DOES OSM GRANT FUND ASH DISPOSAL?	Yes.
3. HAVE YOU PROMULGATED SPECIAL REGULATIONS?	We have guidelines for disposal, but no regulations.
4. HAVE ANY ENFORCEMENT PROBLEMS ARISEN?	Few problems have arisen to date. The only violations that have occurred are from dust.
5. HAVE THERE BEEN ANY PUBLIC PERCEPTION PROBLEMS?	Public perception or opinion of fly ash is poor. There has been no serious question of regulatory authority to oversee or control disposal.
6. PITFALLS TO AVOID	<p>a. There have been a large number of applications and revisions to dispose. The processing of the applications has increased workloads considerably.</p> <p>b. Guard against operations becoming a "landfill".</p> <p>c. Once Illinois began accepting cash sources besides fluidized bed, several of the applications that we received showed the ash to have highly toxic levels (by RCRA standards) of metal which creates environmental and bonding problems.</p>
7. RECOMMENDED	We have developed policy and technical procedures to guard



APPROACHES	against the above.
8. ADDITIONAL COMMENTS	None.

INDIANA

1. SURFACE MINING PROGRAM'S AUTHORITY	Yes. The Division of Reclamation (DOR) was given approval by the Natural Resources Commission (governing body of the Department of Natural Resources) to administer the disposal of coal combustion waste on surface coal mines. Authority was granted in 1988 with the passage of P.L. 103 which exempted coal combustion waste (cow) from management by the Indiana Department of Environmental Management (state EPA equivalent) if the cow facility is regulated by IC 13-4.1 (ISMCR).
2. DOES OSM GRANT FUND ASH DISPOSAL?	The disposal of cow is considered to be a significant permit revision and incorporated into the existing mining permit. Since these activities are part of the mining and reclamation process, they are included in the coverage of OSM grants.
3. HAVE YOU PROMULGATED SPECIAL REGULATIONS?	No. A copy of guidelines are enclosed.
4. HAVE ANY ENFORCEMENT PROBLEMS ARISEN?	Two disposal sites currently exist in Indiana; however, these were initiated before the existing guidelines were in place. Dust problems were the only known problems encountered at one of the sites to date.
5. HAVE THERE BEEN ANY PUBLIC PERCEPTION PROBLEMS?	The Hoosier Environmental Council (HEC) and various other groups have taken a strong stand against cow disposal on mine sites. The contention is that without the promulgation of specific regulations, the guidelines are unenforceable. The Natural Resources' decision to adopt the regulatory approach (guidelines based on SMCRA regulation) defined in the attached memorandum is currently being appealed by HEC.
6. PITFALLS TO AVOID	Develop an integrated operations and testing plan before any program is initiated. Maintain consistency and thoroughness throughout the plan, but build in enough flexibility to deal with site specific conditions and problems as they arise.
7. RECOMMENDED APPROACHES	Develop a characterization and monitoring program that requires a minimum of quality assurance and quality control by using ASTM or EPA methods for analysis.
8. ADDITIONAL COMMENTS	The University of North Dakota is one of the leading authorities in this area and their assistance was vital to Indiana's regulatory approach. We suggest you contact Dr. Ray Butler at



	5000 for more information.
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MISSOURI

1. SURFACE MINING PROGRAM'S AUTHORITY	<p>Yes and no.</p> <p>a. OSM stated in a recent oversight that states must regulate the disposal of fly ash as a mining waste. However, Missouri argued that the disposal of fly ash was not covered by SMCRA because the waste was generated outside of the mine. OSM later agreed with Missouri. The only aspect of fly ash disposal regulated by Missouri's coal program is where fly ash disposal conflicts with the company's compliance with the other performance standards such as achieving revegetation success.</p> <p>b. The only type of fly ash disposal allowed on mine sites without a landfill [? word only partially legible] permit is a low-tonnage disposal that is distributed throughout the mine site as a mixture with the spoil. Because the solid waste program has determined that these types of disposal activities have no significant potential of causing impacts, the activity is exempted from permitting requirements of the solid waste law.</p>
2. DOES OSM GRANT FUND ASH DISPOSAL?	The solid waste program does not provide any supplemental funding for our review of fly ash disposal plans. The total amount of time allocated to the task is not significant enough to warrant separating it from our normal coal duties.
3. HAVE YOU PROMULGATED SPECIAL REGULATIONS?	No. All rules relative to fly ash disposal are promulgated through the solid waste program. Although all actions involving the disposal of fly ash at mine sites are reviewed by the coal program, all final decisions are coordinated through the solid waste program. Also, any enforcement actions relating to solid waste laws will be handled by the solid waste program.
4. HAVE ANY ENFORCEMENT PROBLEMS ARISEN?	No.
5. HAVE THERE BEEN ANY PUBLIC PERCEPTION PROBLEMS?	No. However, some concerns have been voiced over the dust created during fly ash disposal at landfills.
6. PITFALLS TO AVOID	States should be alert to whether fly ash disposal is causing a conflict with other performance standards. Also, states should avoid allowing OSM to convince them that fly ash is a waste regulated under the surface mining laws.
7. RECOMMENDED	In Missouri, the coal program has volunteered to administer



APPROACHES	both the reclamation and solid waste laws governing the disposal of fly ash at mine sites. This has been accomplished through a Memorandum of Understanding between the two separate programs. This allows the operator to coordinate with one group and expedite the review and issuance of the permit.
8. ADDITIONAL COMMENTS	Questions concerning the level of review required for fly ash disposal plans should be directed to Martha Kipper [? or Hopper] of the Land Reclamation program at (314) 751-4041.

OHIO

1. SURFACE MINING PROGRAM'S AUTHORITY	While the Division of Reclamation (DOR) acknowledges the lack of direct statutory authority over disposal of waste material in general, we do have the authority to regulate all mining-related activities on an active coal permit. In light of this authority, DOR requires detailed waste disposal plans as part of the coal mining permit which are then enforceable by our inspection staff.
2. DOES OSM GRANT FUND ASH DISPOSAL?	Not applicable.
3. HAVE YOU PROMULGATED SPECIAL REGULATIONS?	DOR has not promulgated special regulations specific to waste disposal; however, we do use statutory language relating to protection of the hydrologic balance and water resources as the basis for the coal waste policy/procedure directive (Permitting 92-2, effective 9/1/92, copy attached) and the fly ash/nonoil waste disposal guidelines (copy attached). DOR developed these documents in order to allow our inspection staff enforcement capabilities over what we perceive to be mining-related activities on active coal permits.
4. HAVE ANY ENFORCEMENT PROBLEMS ARISEN?	No. Non-remedial, long-term, or otherwise significant violations have been found to be connected to waste disposal activities.
5. HAVE THERE BEEN ANY PUBLIC PERCEPTION PROBLEMS?	Public perception has not been a problem other than the appearance of the importation of "out-of-state" waste. This issue has arisen with haul-backs of ash as part of Ohio coal contracts. Problems associated with disposal of these materials have been with the definition of coal waste, the permitting process and the inter-agency communication.



<p>6. PITFALLS TO AVOID</p>	<p>a. As suggested in the response to item #5, DOR's problems arise from ineffective interagency communication. Federal statutory language is too vague and general to apply to the state's program. Neither federal oversight agency (i.e., OSMRE or USEPA) has taken an active role in resolving inconsistencies or programmatic problems on this issue. Mining-related activities, including waste disposal, are not high on Ohio EPA's priority list, consequently making it difficult to come to agreement on even the most basic of matters (i.e., definition of what constitutes coal waste, fly ash, nonoil waste, etc.). While Ohio EPA acknowledges staffing and time constraints make it difficult to process/enforce waste disposal permits, they have been unwilling to relinquish much control to date. DOR has taken a very pro-active position on waste disposal with Ohio EPA and after two years of negotiations we are beginning to see positive changes in the overall process and development of trust between the agencies.</p> <p>b. Technical pitfalls are generally difficult to enumerate because of the highly specific nature of each individual disposal plan. DOR has also attempted to educate the industry, when necessary, as to the importance of providing site-specific plans, avoiding "boiler plate" responses, and the need to recognize disposal plans require a longer and more detailed review.</p>
<p>7. RECOMMENDED APPROACHES</p>	<p>a. We have utilized these materials under our AML program for resoiling (fly ash) and as lime substitutes (scrubber waste). We have not used bottom ash except in minor amounts mixed with fly ash. Our resoiling experience has been with alkaline material applied to acidic spoil in lieu of topsoil. At 200-400 tons per acre, this met with good success. Alkaline ash has also been layered into coal refuse piles during reclamation in an attempt to achieve buffering of the refuse. The Division just recently completed a site where scrubber waste was used as a liming agent for the reclamation of a coal refuse pile.</p> <p>b. Our uses consider set-back distances from waterways, protection from off-site transport and contamination of ground water. Ohio EPA approves all beneficial re-uses prior to incorporation into the AML project.</p>
<p>8. ADDITIONAL COMMENTS</p>	<p>None.</p>

PENNSYLVANIA

<p>1. SURFACE MINING</p>	<p>Yes, via an interdepartmental agreement between the mining program and waste management program and our residual</p>
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PROGRAM'S AUTHORITY	waste management regulations.
2. DOES OSM GRANT FUND ASH DISPOSAL?	Yes, since this relates to reclamation plan reviews.
3. HAVE YOU PROMULGATED SPECIAL REGULATIONS?	See attached excerpts from our residual waste management regulations.
4. HAVE ANY ENFORCEMENT PROBLEMS ARISEN?	No.
5. HAVE THERE BEEN ANY PUBLIC PERCEPTION PROBLEMS?	The public is inquisitive about proposals to use ash for mine site reclamation. The public seems to be more concerned, however, about proposals for use of sewage sludge as a soil additive for land reclamation than for ash disposal.
6. PITFALLS TO AVOID	Be careful not to create full-blown ash disposal sites under the guise of mining (see 7. below).
7. RECOMMENDED APPROACHES	Pennsylvania has new restrictions (effective 7/4/92) relative to ash placement at coal mining activities. See attached material.
8. ADDITIONAL COMMENTS	None.

TENNESSEE

1. SURFACE MINING PROGRAM'S AUTHORITY	No.
2. DOES OSM GRANT FUND ASH DISPOSAL?	Not applicable.
3. HAVE YOU PROMULGATED SPECIAL REGULATIONS?	The Division of Solid Waste has a permit-by-rule for coal ash fill areas.
4. HAVE ANY ENFORCEMENT PROBLEMS ARISEN?	None known.
5. HAVE THERE BEEN ANY PUBLIC PERCEPTION	The public is inquisitive about proposals to use ash for mine site reclamation. The public seems to be more concerned, however, about proposals for use of sewage sludge as a soil additive for



PROBLEMS?	land reclamation than for ash disposal.
6. PITFALLS TO AVOID	Contact with acidic water (pH 2-3) can release metals in the ash.
7. RECOMMENDED APPROACHES	No.
8. ADDITIONAL COMMENTS	None.