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REGULATION OF LONGWALL MINING AND VALLEY FILL PRACTICES IN PENNSYLVANIA - EXECUTIVE SUMMARY

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This study describes the federal and Pennsylvania laws applicable to underground longwall coal mining and the disposal of coal refuse in stream valleys in the Commonwealth. After an introduction to the legal framework, it examines the legal requirements in four areas: (1) the subsidence effects of longwall mining, (2) the water supply effects of longwall mining, (3) permitting and enforcement issues related to subsidence and water supply, and (4) the disposal of coal refuse in valley fills. The study is intended to assist citizens, legislators, policy makers, and others in understanding the coverage of existing laws, regulations, and policies, including areas of uncertainty.

1.0 INTRODUCTION

Longwall mining is regulated by a web of state and federal laws. The Surface Mining Control and Reclamation Act of 1977 (SMCRA) is the primary federal law that addresses the environmental effects of coal mining operations, including the surface effects of underground mining. In 1992, SMCRA was amended by the Energy Policy Act (EPAct), which added a new section requiring underground coal operators to repair, or compensate owners for, material damage to occupied residential dwellings and noncommercial buildings resulting from subsidence; and to replace drinking, domestic, or residential water supplies from any well or spring affected by contamination, diminution, or interruption caused by their operations.

SMCRA provides that any state may assume "exclusive jurisdiction" over the regulation of coal mining operations -- subject to continuing federal oversight and back-up federal enforcement -- if it enacts laws and adopts regulations that are consistent with SMCRA permitting and performance standards, and has enforcement provisions that are no less stringent than the federal requirements. Federal approval of a state program under SMCRA is commonly termed "primacy," referring to the state's primary role in regulation. If federal requirements change, states that wish to maintain primacy must submit amendments to their approved programs in order to keep them consistent with the federal regulatory program. Similarly, if a primacy state adopts laws and regulations on its own initiative, these must be submitted to the federal Office of Surface Mining (OSM) for review and approval to assure that the state program remains consistent with federal requirements.

Pennsylvania, a primacy state since 1982, amended its Bituminous Mine Subsidence and Land Conservation Act (BMSLCA) in 1994. The amendment, commonly known as Act 54, was intended both to implement the 1992 EPAct requirements, and to carry out the result of a (controversial) multi-year mediation effort among Pennsylvania underground coal mine operators and some conservation groups. The law also removed impediments to longwall mining in populated areas of Pennsylvania by eliminating the former requirement in the BMSLCA that operators prevent subsidence to dwellings, noncommercial buildings, and cemeteries in place in 1966. In 1998, Pennsylvania's Environmental Quality Board adopted regulations implementing Act 54. The regulations will be submitted to OSM for review and approval.

Pennsylvania also amended its Coal Refuse Disposal Control Act in 1994. These amendments, commonly known as Act 114, allow disposal of coal refuse in stream valleys and encourage the siting of coal refuse disposal areas in places adversely affected by prior coal mining activities. These amendments were conditionally approved by OSM in 1998.

State-enacted laws and state-adopted regulations are fully operative and enforceable as a matter of state law, even before they have been reviewed and approved by OSM under SMCRA, and operators must comply with them. However, they are not regarded by OSM as part of the state's approved primacy program prior to approval by OSM; and they may be preempted by federal law if they are inconsistent with SMCRA. If state provisions are subsequently disapproved by OSM, the state must adopt new laws and regulations in order to maintain primacy jurisdiction.

When inconsistencies between state and federal regulations arise because of newly adopted federal requirements, the federal government generally must await their incorporation into state law before the new requirements can be applied directly to particular operators. However, OSM determined that the 1992 EPAct provisions protecting structures and water supplies are directly enforceable by OSM in instances where the corresponding state provisions are incomplete. In Pennsylvania, there is, consequently, "joint enforcement" with respect to subsidence damage and water replacement; DEP enforces Act 54, while OSM enforces any federal regulatory provisions that are beyond the scope of DEP's authority pending achievement of consistency between the programs.

2.0 REGULATION OF THE SUBSIDENCE EFFECTS OF LONGWALL MINING

Regulatory standards for subsidence impacts of longwall mining fall into two general categories: (1) requirements for preventive measures, and (2) repair, replacement, and compensation requirements.

2.1 PREVENTION REQUIREMENTS

At common law, the land surface and structures thereon are entitled to support, unless the coal owner or its predecessors in interest acquired either the support estate or a waiver or release of liability for subsidence-related damage. Much of the coal in Pennsylvania was conveyed many decades ago in mineral deeds which conveyed or waived the right of support and which released the coal owner from damages for subsidence. However, where the right was not waived nor damages released, the operator must prevent subsidence damage, as a matter of tort law and property law apart from any regulatory requirements.

The BMSLCA provides that the operator "shall adopt measures and shall describe to the department in his permit application measures that he will adopt to prevent subsidence causing material damage to the extent technologically and economically feasible, to maximize mine stability, and to maintain the value and reasonable foreseeable use of such surface land." This provision applies to longwall operations. But neither the federal government nor Pennsylvania has clearly defined the longwall operator's duties of prevention with respect to the land surface itself.

Act 54 requires operators to undertake minimization measures where "irreparable injury" is likely to occur to dwellings and farm buildings. But DEP regards most damage as reparable.

Like SMCRA, Act 54 requires prevention of subsidence damage where a "proposed mining technique or extraction ratio will result in subsidence which creates an imminent hazard to human safety." The law provides that use of the technique or ratio shall not be permitted unless the operator takes measures "approved by the department to eliminate the imminent hazard to human safety." Also, as under federal law, underground mining activities are prohibited beneath or adjacent to: (1) public buildings and facilities, (2) churches, schools, hospitals, and (3) impoundments or bodies of water with a capacity of 20 acre-feet or more, and significant water sources for public water supply systems, "unless the subsidence control plan demonstrates that subsidence will not cause material damage to or reduce the reasonably foreseeable use of such features or facilities."

Operators are required to minimize damage, destruction, or disruption in services provided by utilities. Prior to 1998, the Pennsylvania regulations specified that measures to minimize damage would include not only measures taken in the mine itself, but also measures on the surface of the land to minimize damage, destruction, or disruption. But the 1998 regulations adopted by the Environmental Quality Board allow "notification to the owner of the facility

which specifies when underground mining beneath or adjacent to the utility will occur" to satisfy the minimization requirement. This notice is intended to allow the investor-owned utility to take measures to prevent damage or disruption in service, with the costs being borne by whichever party does not own the support right. In many settings this will be the utility. However, an operator is required to take measures to "minimize" damage to customer-owned gas and water service connections "unless the customer does not consent to such measures." In addition, the Environmental Quality Board interprets the term "public buildings and facilities" noted above to include government-owned utilities "such as a water or sewer authority." Thus, the operator is required to prevent material damage to, or reduction of the reasonably foreseeable use of, a government-owned utility line.

2.2 REPAIR AND COMPENSATION REQUIREMENTS

As under federal law, the operator's duty under the BMSLCA to maintain the value and reasonable use of land includes the duty to *correct* material damage to the land to the extent technologically and economically feasible. While prior Pennsylvania regulations required the operator to correct material damage caused by subsidence to perennial streams, the 1998 regulations only require the operator to "mitigate the effects to the extent technologically and economically feasible."

With respect to structures, Act 54 requires operators to repair or provide compensation for subsidence damage to:

(1) "any building which is accessible to the public, including, but not limited to, commercial, industrial and recreational buildings and all permanently affixed structures appurtenant thereto,"

(2) "any noncommercial buildings customarily used by the public, including, but not limited to, schools, churches and hospitals,"

(3) "dwellings used for human habitation and permanently affixed appurtenant structures or improvements in place on [August 21, 1994] or on the date of first publication" of the mine's permit application or a five-year renewal thereof, and

(4) "the following agricultural structures: all barns and silos, and all permanently affixed structures of 500 or more square feet in area that are used for raising livestock, poultry or agricultural products, for storage of animal waste or processing or retail marketing of agricultural products produced on the farm." However, if an irreparably damaged

agricultural structure is being used for a different purpose than that for which it was constructed, the operator may provide for the reasonable cost to replace the structure with one satisfying the current use.

This is broader than federal law, which requires repair or compensation only for subsidence damage to dwellings and noncommercial buildings. A few structures covered by federal law fall outside the scope of Act 54: (1) dwellings damaged prior to August 21, 1994 (and not protected as pre-1966 structures before that date), (2) dwellings where the operator was denied access for premining or postmining surveys (discussed below), and (3) noncommercial buildings not used by or accessible to the public.

The Act 54 duty to repair or compensate for subsidence damage to the listed structures is termed the "sole and exclusive remedy for such damage" and is not diminished by prior leases, agreements, or deeds relieving operators from such a duty (except for valid waivers of pre-1966 building protections entered into for consideration between 1966 and the 1994 Act).

The owner of any structure covered by Act 54 who believes that a structure has been damaged by subsidence must first notify the mine operator. If the operator accepts responsibility, the operator must repair the damage or provide compensation. If the parties are unable within six months of the date of the notice to agree on the cause of the damage or the reasonable cost of repair or compensation, the owner "may" file a claim with the DEP. (The DEP will not act until after the operator "has had six months to address the complaint.") Failure to file a subsidence damage claim with DEP within two years after damage to a structure does not end the operator's liability, but terminates the structure owner's right to a DEP investigation.

The DEP must investigate the claim within 30 days, and within 60 days following the investigation must determine causation and reasonable costs of repair or replacement. If the DEP finds that the mining caused the damage, it must order the operator to compensate the owner or make repairs within 6 months (or a longer period if further subsidence damage is expected). The occupants of a subsidence-damaged structure are also entitled to payment of reasonable expenses for temporary relocation, and for other incidental costs if approved by the DEP. OSM will need to determine whether the periods provided in Act 54 for investigation and resolution of damage claims are consistent with the federal requirement that the operator must "promptly" repair or compensate for subsidence damage.

If the operator is aggrieved by the DEP's order, it may appeal to the Environmental Hearing Board, but must deposit the compensation amount ordered by the DEP in escrow. If the operator loses the appeal and still fails to comply, the DEP must pay the escrow amount with

accumulated interest to the landowner. Likewise, if the landowner is aggrieved by the DEP's "order," the landowner may appeal to the Environmental Hearing Board. If the operator does not comply with the DEP order, the DEP must take further necessary action, including issuance of cessation orders and commencement of permit revocation.

An operator is not liable for subsidence damage under Act 54 if it was denied access for premining and postmining surveys, thereafter served notice by personal service or certified mail upon the landowner, and the landowner failed to grant access within ten days after receipt of the notice. This provision, which has no counterpart in the federal law, may be particularly problematic for surface owners since Act 54 requires provision of such access within a narrow window of time . The Pennsylvania regulations provide no opportunity to cure the denial even if there was good cause for missing the original ten-day notice period, and even if the operator would not be prejudiced thereby -- for example, if a surface owner (or owner's successor in interest) could grant access for a premining or postmining survey outside that time period.

In determining responsibility for repair, replacement, or compensation for dwellings and noncommercial buildings, federal regulations make the operator presumptively liable for damages occurring within a 30-degree angle of draw (or another angle adopted by a state). Act 54 and its implementing regulations lack such a presumption. This creates an issue of whether Act 54 is consistent with federal requirements. It also means that surface owners and the DEP will carry the burden of proving an operator's liability in all cases.

Bonding for subsidence damage is required in a "reasonable amount as determined by the Department." As a matter of custom and practice, the DEP requires $10,000 as the entire subsidence bond. Act 54 does not provide for the posting of an additional bond after the occurrence of subsidence damage.

Under Act 54, a mine operator and landowner may enter into an agreement at any time to establish the "manner and means" for repair or compensation for subsidence damage. The release of liability must clearly state what rights are established by the law, and the landowner must expressly acknowledge the receipt of payment or other valuable undertaking not less than that necessary to compensate for reasonable costs of repair or replacement. The release is of no effect if no mining occurs for a period of 35 years within the "coal field" of which the coal underlying the surface property is a part. The landowner must include the agreement and release in any deed for the conveyance of property covered by the agreement in order to notify future surface owners that the statutory rights have been modified by agreement.

The BMSLCA is remedial legislation "and each and every provision hereof is intended to receive a liberal construction such as will best effectuate that purpose, and no provision is intended to receive a strict or limited construction." Other provisions make it clear that the DEP has ample authority "to adopt such rules, regulations, standards, and procedures as shall be necessary to protect the air, water, and land resources of the Commonwealth and the public health and safety from subsidence, prevent public nuisances, and to enable it to carry out the purposes and provisions of this act, including additional requirements for providing maps, plans, and public hearings." This language could enable the DEP to go much farther than mere repair of damaged structures and replacement of water "supplies." These legislative directions run counter to the effort in Executive Order 1996-1 and DEP's Reg Basics Initiative to drop Pennsylvania's protection to the minimum levels required by federal laws except where "justified by a compelling and articulable Pennsylvania interest *or required by state law.*" The compelling and articulable Pennsylvania interest may also be provided by the Commonwealth's constitution: "The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

The legislative findings under the BMSLCA echo these concerns: "(2) Damage from mine subsidence has seriously impeded land development of the Commonwealth. (3) Damage from mine subsidence has caused a very clear and present danger to the health, safety and welfare of the people of Pennsylvania. (4) Damage by subsidence erodes the tax base of the affected municipalities...." These factors suggest a basis for adopting more preventive measures to supplement the repair and compensation measures embodied in Act 54.

3.0 REGULATION OF HYDROLOGIC EFFECTS OF LONGWALL MINING

3.1 PREVENTION OF DAMAGE TO WATER SUPPLIES

Except for sources of water for public water systems, the BMSLCA does not specifically require prevention of damage to developed water supplies, focusing instead upon replacement or provision of alternative water supplies if damage should occur. However, as under the federal regulations, operators must "minimize changes to the prevailing hydrologic balance in both the permit and adjacent areas." In addition to complying with effluent limits, operators must "avoid" drainage into groundwater and surface water from pollution-forming underground development waste and spoil. Regulations provide that underground mining must be conducted in a manner that maintains the value and reasonably foreseeable uses of perennial streams, such as aquatic

life, recreation, and water supply, as they existed prior to mining beneath the stream. The Clean Streams Law also requires that discharges from underground mines not pollute the waters of the Commonwealth.

3.2 REPLACEMENT OF DAMAGED WATER SUPPLY

Act 54 provides that any operator who, after August 21, 1994, "as a result of underground mining operations, affects a public or private water supply by contamination, diminution or interruption" must "restore or replace" the supply with an alternate source which "adequately services in quantity and quality the premining uses of the supply or any reasonable uses of the supply." While federal law is limited to replacement of "drinking, domestic, or residential" water supplies from a "well or spring," Act 54 requires replacement of a water supply "used for domestic, commercial, industrial or recreational purposes, or for agricultural uses, or which serves any public building or any noncommercial structure customarily used by the public, including, but not limited to, churches, schools and hospitals."

Under Act 54, a landowner or water user must notify the mine operator of a claim of contamination, diminution or interruption, and the operator must investigate "with reasonable diligence." The operator must notify the DEP of any claim and its disposition. Within 24 hours of notice from the landowner or water user, the operator must provide a "temporary water supply" if the affected water supply is within a 35 degree angle of draw from the outside of any coal removal area and the user is "without a readily available alternate source." If a temporary supply is not provided within 24 hours, the department must order the operator to provide one within 24 hours.

If the water supply is not replaced or if the operator ceases to provide an alternate source, the landowner or water user may request a DEP investigation. The DEP must investigate any claim of water loss within ten days of such request and determine within 45 days whether the mining activity caused the damage to the water supply, notifying all parties of its finding. If it finds causation, the DEP must order the operator to comply with its obligations, including temporary water supplies and permanent replacement. The DEP may order the operator to provide "a permanent alternate source where the contamination, diminution or interruption does not abate within three years of the date on which the supply was adversely affected." Any landowner, water user, or operator aggrieved by an "order or determination" by DEP has the right to appeal to the Environmental Hearing Board.

The operator is presumptively responsible for water replacement if the affected supply is within a 35-degree angle of draw from the outside of any coal removal area. The operator may

rebut this presumption if it proves that it was denied access to conduct premining and postmining surveys of the quality and quantity of the water supply, had thereafter served notice upon the landowner by certified mail and the landowner failed to provide access within ten days after receipt of the notice. This denial of access *does not bar recovery by the landowner,* but shifts the burden of proof from the operator to the claimant or the DEP.

A mine operator can entirely avoid liability for water replacement by affirmatively proving that the contamination, diminution or interruption:

(1) existed prior to the mining activity as determined by a premining survey,
(2) occurred more than three years after the mining activity,
(3) was caused by something other than the mining activity, or
(4) was not claimed until more than two years after the water supply was adversely affected.

If a water supply is "not restored or reestablished or a permanent alternate source" is not provided within three years, the landowner may either agree to accept compensation from the mine operator, or "at the option of the landowner" may require the mine operator to purchase the property for its fair market value as of the time immediately prior to the damage to the water supply, or may require the mine operator to make a one-time payment reflecting the diminution in fair market value brought about by the damage to the water supply. A mine operator and landowner may also enter into a voluntary agreement at any time to establish the "manner and means" for water replacement or for compensation. In order to be valid, the release of liability must clearly state what rights are established by the law, the landowner must acknowledge the release for value received, and the term of the release must not exceed 35 years. The landowner must incorporate the agreement and release in any deed for the conveyance of the property covered by the agreement. In contrast, the federal law and regulations require water replacement in all instances.

Act 54 provides that the rights to water replacement or compensation set forth in the Act are non-exclusive, and landowners and water users not proceeding under Act 54 may pursue any other remedies available at law or equity, subject to any defenses that may be available in mineral deeds, leases, or otherwise.

4.0 SUBSIDENCE AND WATER LOSS ISSUES IN THE PERMITTING AND ENFORCEMENT PROCESS

4.1 PERMITTING ISSUES

Before an underground coal mining operation may begin surface-disturbing activities it must obtain a permit under the BMSLCA. The operator is required to file a copy of the permit application with the recorder of deeds of each county where the operation is located, and to give notice of the application within 5 days to each affected political subdivision. Notice of the permit application must be published in local newspapers once a week for four consecutive weeks. The DEP publishes notice of the application in the Pennsylvania Bulletin. The public has an opportunity to comment on the application for a period extending 30 days after the appearance of the last newspaper notice. In addition, any person may request an informal conference with the DEP concerning the application.

Pennsylvania's permit application regulations require preparation and submittal of detailed geologic data, watershed data, hydrologic data, substantial technical information, and a mining map. Operators must submit a subsidence control plan with the permit application, addressing, at a minimum, the area within a 30-degree angle of draw. The plan must describe whether subsidence "could cause material damage to or diminish the value or reasonably foreseeable use of any structures or could contaminate, diminish, or interrupt water supplies." The plan must also describe measures to maintain the value and reasonably foreseeable use of the surface land and perennial streams.

Pennsylvania operators must also conduct pre-subsidence surveys of structures prior to "the time that a structure falls within a 30 degree angle of draw of underground mining, or such larger area as required by the Department." The operator is excused from surveying a structure if the landowner denies access after receiving notice that denial of access will result in the loss of the right to repair or compensation, and need not survey any structure constructed less than 15 days before the structure comes within the angle of draw. The results of the survey must be provided to the owner within 30 days of completion, and to the DEP upon request.

Federal regulations require both the subsidence control plan and the pre-subsidence survey to be submitted with the permit application. The timing of the pre-subsidence structure survey under the 1998 Pennsylvania regulations may be inconsistent with federal requirements. Although it is desirable to know the pre-mining condition of structures close to the time of mining, it may also be quite difficult at that time to redesign the overall mining approach or

include appropriate preventive measures in the subsidence control plan if the structures are not assessed until after the permit has been issued.

Similarly, Pennsylvania's regulations require the operator to conduct a premining survey of the quantity and quality of all water supplies within the permit and adjacent areas. However, the premining survey need not be conducted prior to the permit application, but only "prior to mining within 1000 feet of a water supply unless otherwise authorized or required by the Department based on site specific conditions." The results of the analysis must be provided to the landowner and the DEP within 30 days of their receipt by the operator. The operator is excused from surveying a water supply if the landowner denies access after receiving notice that denial of access will result in the loss of the presumption for water replacement within the 35-degree angle of draw.

Operators must give notice by registered or certified mail to political subdivisions and to surface landowners at least six months prior to mining under the property. The notice must advise landowners of the availability of mining maps, which must be filed both with the county recorder of deeds and with the offices of whatever political subdivisions request them. Mining maps must be updated every six months.

4.2 ENFORCEMENT ISSUES

Commonwealth Court and the courts of common pleas each have jurisdiction to issue injunctions to prevent violations of the BMSLCA and otherwise to enforce the law upon suit by the DEP, the county commissioners, any political subdivision, or any affected property owner. Officials of political subdivisions, including counties, within which underground mining is conducted, and their agents, are legally entitled to access to inspect the mining operations to determine whether the provisions of the law are being complied with.

Citizen suits for compliance may be brought after 60 days' notice to the DEP and any alleged violator, or immediately upon notice to the DEP where the violation or order complained of presents an imminent threat to the health or safety of the plaintiff or would immediately affect a legal interest of the plaintiff. County commissioners have independent authority to prevent underground coal mining in violation of the law, and to prevent the miners from entering the mine until such time as the law is complied with.

Civil penalties may be assessed by DEP for up to $5,000 per day for each violation; and not less than $750 per day for failure to correct a violation within the period prescribed by order or notice of violation. Criminal penalties are also prescribed. The existence of unresolved

subsidence claims may not be used by DEP to withhold permits or delay the processing of permits, however, unless the operator has violated a DEP order to make repairs or pay compensation. SMCRA provides for back-up enforcement by OSM if a state is not adequately enforcing its approved primacy program. If OSM becomes aware of a violation, it must give the DEP ten days' notice before taking enforcement action itself, unless the violation is causing an imminent danger to the public health and safety or significant imminent environmental harm, in which case OSM may act immediately. Where the violation involves a water replacement or subsidence damage provision of EPAct that is not covered by Pennsylvania law, OSM will take enforcement action itself under the federal law after notice to DEP.

5.0 REGULATION OF VALLEY FILLS

5.1 COAL REFUSE DISPOSAL CONTROL ACT

Prior to 1994, Pennsylvania law did not allow coal refuse disposal within one hundred feet of a stream bank. In 1994, Pennsylvania amended its Coal Refuse Disposal Control Act (CRDCA) in order to give the DEP authority to grant variances to this provision. The amendments (referred to as Act 114) allow operators to apply for a variance to "dispose of coal refuse and to relocate or divert streams in the stream buffer zone if the operator demonstrates to the satisfaction of the department that there will be no significant adverse hydrologic or water quality impacts as a result of the variance." Act 114 also established new requirements for the siting of coal refuse disposal areas and new design and performance standards. In addition, it provided a special authorization process and modified effluent limits for coal refuse disposal areas on lands with a pre-existing pollution discharge. The Act 114 provisions apply to new coal refuse disposal sites permitted on or after January 6, 1995, including lateral expansions of existing sites.

5.2 PERMITTING PROCESS

The DEP has made compliance with Act 114 a two-step process. First, a suitable disposal site must be selected; second, the company must obtain a permit from the DEP. A number of state and federal agencies play a role, or can become involved, in the site selection and permitting processes including the DEP, the Pennsylvania Fish and Boat Commission, the Pennsylvania Game Commission, the U.S. Army Corps of Engineers, the federal Office of Surface Mining, U.S. EPA Region III, and the US Fish and Wildlife Service.

5.2.1 *Site Selection*

Subject to valid existing rights (usually defined as possessing a valid permit prior to 1977) certain lands are designated by both federal and state law as off-limits for coal refuse disposal. Act 114 also provides that, except for preferred sites (see below), coal refuse disposal operations shall not be sited in prime farmlands, in sites known to contain threatened or endangered species, in watersheds designated as "exceptional value" under the regulations implementing Pennsylvania's Clean Streams Law, in areas hydrologically connected to certain exceptional value wetlands, and in watersheds of less than 4 square miles located upstream of public water supplies or public recreational impoundments.

The site selection process begins with an applicant identifying a search area for potential coal refuse disposal sites. Act 114 states that:

> For new refuse disposal areas to support an *existing* coal mining activity, the applicant shall identify the alternative sites considered within a one mile radius and the basis for their consideration....For other new coal refuse disposal activities, the applicant shall identify the alternative sites considered within a twenty-five square mile area and the basis for their consideration.

Identifying a "preferred site" within the designated search area is the next step for the applicant. A "preferred site" is defined by Act 114 as:

> (1) A watershed polluted by acid mine drainage.
> (2) A watershed containing an unreclaimed surface mine but which has no mining discharge.
> (3) A watershed containing an unreclaimed surface mine with discharges that could be improved by the proposed coal refuse disposal operation.
> (4) Unreclaimed coal refuse disposal piles that could be improved by the proposed coal refused disposal operation [or]
> (5) Other unreclaimed areas previously affected by mining activities.

By designating these areas as preferred disposal sites, the law creates an incentive for operators to redisturb areas previously affected by coal mining activities rather than to disturb new areas. A site otherwise meeting one of the five criteria is not "preferred" under the statute if the "adverse impacts" of its use for coal refuse disposal "clearly outweigh the public benefits." If a preferred site is considered for coal refuse disposal, the applicant must identify any adverse

environmental impacts and any public benefits that might occur as a result of coal refuse disposal, including any environmental impacts that might result from a variance to the stream buffer requirement. If the DEP finds that adverse environmental impacts outweigh public benefit, site approval is denied. If the DEP finds that adverse environmental impacts do not outweigh public benefit, site approval is granted.

If there are no preferred sites within the search area, or if an applicant identifies a preferred site within the search area but does not intend to use it based on the greater suitability of another site, the applicant must conduct an alternatives analysis comparing all potential sites. The analysis must demonstrate the basis for exclusion of other sites, and must demonstrate that the proposed site is "the most suitable on the basis of environmental, economic, technical, transportation, and social factors." The DEP uses this analysis along with a study of adverse environmental impacts conducted by the Pennsylvania Fish and Boat Commission to determine whether the adverse environmental impacts outweigh public benefit for coal refuse disposal in a non-preferred site. If the DEP finds that adverse environmental impacts outweigh public benefit, site approval is denied. If DEP finds that adverse environmental impacts do not outweigh public benefit, site approval is accepted.

There is currently no role for the public in the site selection process for coal refuse disposal areas. The sites are selected, designed, and approved by all of the relevant agencies before the permit application is submitted

5.2.2 *Permitting*

The permit is the public process wherein the operation is evaluated. The DEP's practice is to begin this public process only *after* the operator and state agencies have agreed on the selected site. The applicant is required to publish notice of the filing of the application in local newspapers once a week for four consecutive weeks, and public notice and comment procedures are governed by the same regulations that govern the permitting of underground coal mines described previously in this report. Written comments or objections may be submitted to the DEP within 30 days after the last publication of the newspaper notice; and any person may request an informal conference on the application during the same period. The conference must be held publicly within 60 days of the close of the public comment period.

The permit application must contain detailed geological, hydrological, engineering, and other information prescribed by the CRDCA and regulations. Permit application information is available for public review and inspection. The DEP conducts a technical review of the entire application. The plan must "include a system to prevent adverse impacts to surface and ground

water and to prevent precipitation from contacting the coal refuse." In addition, the system must, when final reclamation of the disposal area is achieved, minimize infiltration to the extent practicable and be graded to promote surface runoff in a manner that does not promote erosion. The reclaimed area, including the infiltration control system, must allow for revegetation.

The decision on the permit must be made within 60 days after the informal hearing. If the permit is approved, the operator must post the required bond. Although the amount of the bond required "shall be in an amount determined by the secretary based upon the total estimated cost to the Commonwealth of completing the approved reclamation plan," under DEP's bonding guidelines, an applicant normally posts a bond equal to $1,000 per each disturbed acre of land. Under the statute no bond may be less than $10,000. Liability under the bond extends for the duration of the operation plus five years after completion of reclamation. Bonds may be released on a phased basis, but no part of the bond is to be released so long as "the lands to which the release would be applicable are contributing suspended solids to streamflow or runoff outside the permit area in excess of the requirement of law." Bond releases are subject to public notice and comment procedures.

For valley fill disposal, an applicant must submit an additional request for a variance to dispose of coal refuse within one hundred feet of a stream bank or to relocate and divert streams. The operator must demonstrate that there will be "no significant adverse hydrologic or water quality impacts as a result of the variance." OSM granted only conditional approval to the Act 114 variance language. The federal regulations allow a variance only where the authorized activity will not "cause or contribute to the violation of applicable State or Federal water quality standards and will not adversely affect the water quantity and quality or other environmental resources of the stream." Act 114 qualifies its protection of hydrology and water quality impacts with the word "significant," a word not present in the federal standard. It is also not clear whether the Act 114 variance protects "other environmental resources of the stream."

The variance process is handled concurrently with the permit process. The application must include a list of all adverse hydrologic and water quality impacts resulting from coal refuse disposal activities within 100 feet of the stream bank, a mitigation plan to prevent or reduce adverse environmental impacts, proof of public notification in two newspapers of general circulation, and a complete scientific characterization of streams to be impacted by the coal refuse disposal. The Pennsylvania DEP provides copies of the application to the Army Corps of Engineers, US EPA, US Fish and Wildlife Service, Pennsylvania Fish and Boat Commission, and the Pennsylvania Game Commission. These agencies have 30 days in which to respond to the application. The US EPA has stated that it intends to review individually all applications for instream coal refuse disposal projects in the Commonwealth.

Pennsylvania law requires an applicant to "give public notice of his application for the variance in two newspapers of general circulation in the area once a week for two successive weeks. Should any person file an exception to the proposed variance within twenty days of the last publication of the notice, the department shall conduct a public hearing with respect to the application within thirty days of receipt of the exception." It is at this time that any person may comment upon the application for variance, and a hearing may be held to address public concerns. The Department must also "consider any information or comments submitted by the Pennsylvania Fish and Boat Commission prior to taking action" upon the request.

If an operator proposes to engage in coal refuse disposal activities in an area with pre-existing pollution discharges resulting from mining operations, DEP must also issue a special authorization to proceed with coal refuse disposal activities. Such a special authorization may be necessary where the operator has selected (or been required to select) a "preferred site," since some such sites, by definition, have discharges that do not meet state water quality standards. The operator must provide a characterization of all preexisting discharges with its application. In order to obtain special authorization, the operator must demonstrate that "the proposed pollution abatement plan will result in a significant reduction of the baseline pollution load and represents best technology." The operator must also demonstrate that the area can be reclaimed and that the coal refuse disposal activities will not cause any additional surface water pollution or groundwater degradation.

5.3 OTHER PERMITS

In addition to the coal refuse disposal permit, an applicant for a coal refuse valley fill must obtain two permits under the federal Clean Water Act. The U.S. Army Corps of Engineers must issue a Section 404 permit, which regulates the placement of materials into waterways. And the DEP must issue a discharge permit under the Commonwealth's Clean Streams Law satisfying Section 402 of the federal Clean Water Act's requirement for permitting of pollution discharges.

The Section 404 permit process requires that the applicant demonstrate that there are no "practicable alternatives" to the discharge of the material in the selected location that would have less adverse effects on the aquatic ecosystem. The Corps also applies a sequence of steps to determine that the applicant has minimized adverse effects on the aquatic ecosystem. An applicant must first avoid filling where possible; if impacts cannot be avoided, they must be minimized to the extent practicable by the project's design; any remaining impacts must be compensated for by providing other resources (such as rehabilitation of other stream or wetlands

resources). Individual Corps permits may be vetoed by the U.S. Environmental Protection Agency if the project will have "unacceptable adverse effects."

The Clean Streams permit sets the pollution discharge limits from the coal refuse disposal area. The US EPA also has the power to review the Clean Streams permit, and has stated that it will exercise this authority for each such permit issued by the DEP for disposal within the stream buffer. Environmental organizations argue that disposal of coal refuse and other materials in valley fills is unlawful under the federal Clean Water Act because such fills can result in the burial of long sections of stream. Although no final decisions have been rendered on this issue in federal court, EPA Region III has begun to examine valley fill permitting throughout the region to determine whether there are ways in which the process can be made more protective of riparian habitat and wetlands.

5.4 ENFORCEMENT

It is unlawful to establish, operate, or maintain a coal refuse disposal area in violation of the Coal Refuse Disposal Control Act, or to "cause air or water pollution in connection with coal refuse disposal operations and not otherwise proscribed by" the Act. DEP may issue orders, obtain injunctive relief, assess civil penalties, or pursue criminal penalties. Any person who provides information concerning a CRDCA violation may accompany DEP on the follow-up inspection. Citizen suits are allowed only after 60 days written notice to the DEP and any alleged violator, unless the violation constitutes an imminent threat to the health or safety of the plaintiff or a threat to the legal interests of the plaintiff. The § 404 permit is enforceable by the Corps of Engineers or the U.S. Environmental Protection Agency; enforcement actions under the Clean Streams Law may be brought by the DEP. Citizen suit enforcement is also available, subject to the 60-day notice requirement under the federal Clean Water Act.