

GAO

Briefing Report to Congressional Requesters

July 1988

SURFACE MINING

Information on the Updated Abandoned Mine Land Inventory



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United States  
General Accounting Office  
Washington, D.C. 20548

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Resources, Community, and  
Economic Development Division

B-226046

July 22, 1988

The Honorable Sidney R. Yates  
Chairman, Subcommittee on Interior  
and Related Agencies  
Committee on Appropriations  
House of Representatives

The Honorable Ralph Regula  
Ranking Minority Member  
Subcommittee on Interior  
and Related Agencies  
Committee on Appropriations  
House of Representatives

In response to your January 28, 1988, request and subsequent discussions with your offices, we have reviewed the procedures the Office of Surface Mining Reclamation and Enforcement (OSMRE), Department of the Interior, used in updating the national inventory of abandoned coal mine land problem areas. Specifically, you asked that we provide information on (1) the role and composition of the National Inventory Update Committee, (2) the criteria OSMRE used in determining whether problem areas had sufficiently high priority to be included in the national inventory, and (3) how the problem areas were screened to assure that only those affecting public health, safety, and general welfare were placed in the inventory.

The inventory has an important impact on the amount of reclamation funds granted to each state.<sup>1</sup> Under the Surface Mining Control and Reclamation Act of 1977, 50 percent of the reclamation fees collected from coal mine operators in any

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<sup>1</sup>As used in this report, the term "state" refers to both states and Indian tribes.

state are returned to the state.<sup>2</sup> The remaining 50 percent may be spent at the discretion of the Secretary of the Interior. Interior decided to use these discretionary funds to provide additional grants to the states beginning with fiscal year 1986 funding. Currently, the state share of the Secretary's discretionary funds is determined by a formula based on the state's historic coal production and abandoned mine land reclamation needs as shown in the national inventory. Therefore, states that have a larger inventory and associated reclamation costs receive a larger share of the discretionary funds.

We briefed your offices earlier on the information we had obtained. As agreed, this briefing report summarizes the information presented. In summary, we found the following:

- OSMRE established the National Inventory Update Committee in 1984 to review a sample of state-submitted problem areas to be included in the national inventory. The objectives of this review were to identify (1) any inconsistencies existing between the OSMRE field office reviews and (2) any omissions of required data on individual state submittals that field offices may have inadvertently overlooked. According to the National Inventory Update Committee Procedures, the National Committee--which met for the last time in October 1987--was to be composed of four OSMRE Abandoned Mine Land program staff (one person from headquarters and three persons from the field offices). However, actual participation in the 22 committee meetings held from August 2, 1984, to October 13, 1987, ranged from 3 to 6 OSMRE staff members. In all, 14 different staff members participated on the committee at one time or another.
- OSMRE's AML Inventory Update Manual outlined the criteria that would be used by OSMRE in determining the reclamation priority of a given problem area and hence whether it would be included in the national inventory. Abandoned mine lands involving public health, safety, and the

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<sup>2</sup>To promote the reclamation of mined areas left without adequate reclamation before enactment of the Surface Mining Control and Reclamation Act of 1977, the Congress established an Abandoned Mine Reclamation Fund to be administered by the Secretary of the Interior. Reclamation fees--generally 35 cents per ton of coal produced by surface mining and 15 cents per ton produced by underground mining--provide the primary source of income to the Fund.

general welfare are included in the inventory and are used in allocating the federal portion of the Abandoned Mine Land Fund to the states. Abandoned mine lands that present environmental restoration problems that do not threaten public health, safety, or the general welfare are included in the inventory but are not used to allocate funds. They are not used in fund allocation because they are viewed as having lower priority and the projected deposits into the fund will be inadequate to reclaim all abandoned mine land problems.

- OSMRE developed various quality control review procedures to review state submissions for inclusion in the inventory. First, field office personnel reviewed the problem area data sheets submitted by the states to make sure the information they contained was accurate. Then, each of the areas with associated reclamation costs over \$500,000, along with a 5-percent sample of all remaining areas, were field-verified (that is, visually inspected to assure that the conditions at the site were accurately reflected in the problem area data sheets). If the OSMRE field office found that an area met these criteria, the submission was forwarded to OSMRE headquarters; otherwise it was returned to the state. At OSMRE headquarters, the National Inventory Update Committee reviewed each submission having an estimated reclamation cost of more than \$500,000 and a 10-percent sample of the remaining submissions to help ensure that they were considered for inclusion in the inventory in a consistent manner.

Most state and OSMRE officials we interviewed told us that, because of inconsistencies in the updated abandoned mine land inventory, it should not be used as a basis for allocating grant funds among the states. These officials' comments to us were consistent with a vote taken at a March 1988 meeting of the Association of Abandoned Mine Land Programs, where only 2 of the 19 states present supported the continued use of the inventory as part of the fund allocation process. The officials told us that the inventory does not present an accurate picture of the relative reclamation needs of one state versus another. These officials cited several factors as contributing to this situation.

One factor was that some states were more conservative in their approach than others. For example, some states limited the number of problem areas submitted and/or the cost of the reclamation proposed to what they considered reasonable given the limited funding that would be available, whereas

others attempted to document as many problem areas as they could and/or proposed more costly reclamation methods, notwithstanding future funding limitations. Thus, when the level of federal funding provided to a state is based on the relative dollar value of the state's reclamation needs as reflected in the inventory, the less conservative states will fare much better than those that limited the number of areas submitted and/or the reclamation costs.

Another factor cited by state officials, and confirmed by OSMRE officials, was that OSMRE tightened the requirements for justifying that a problem existed during the inventory update period and then did not go back and reevaluate submissions that had been approved by the Committee prior to the change. Thus, some submissions were accepted into the inventory under less restrictive requirements.

Finally, a number of state officials, who were permitted by OSMRE to examine other states' submissions as part of their independent fact-finding efforts, told us that they found inconsistencies in the way some problem areas were evaluated by the OSMRE field offices. They told us that submissions similar to those rejected by their respective field offices were sent forward by other OSMRE field offices. The Chairman of the National Inventory Update Committee agreed with this observation and said that, because the National Committee only reviewed a sample of those submissions forwarded by the OSMRE field offices, it was not in a position to correct the inconsistencies.

On the other hand, officials we spoke to in West Virginia and Kansas supported the updated inventory and believed it should continue to be used in allocating funds. They expressed the view that the inventory development process was fair in that each state was given the same opportunity to identify problem areas. They also believed the updated inventory was as good as any was likely to be.

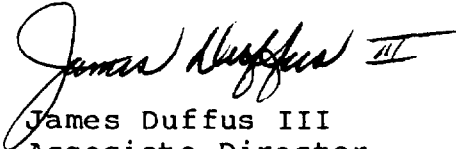
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In performing our review of the inventory update procedures, we reviewed OSMRE's AML Inventory Update Manual; the National Inventory Update Committee Procedures; and National Committee, OSMRE, and state correspondence related to the review of submissions. We also interviewed the Chairman and four members of the National Committee; OSMRE headquarters and abandoned mine land officials in five field offices (Lexington, Kentucky; Charleston, West Virginia; Harrisburg,

Pennsylvania; Columbus, Ohio; and Kansas City, Missouri); and Ohio, Pennsylvania, Kansas, Kentucky, Illinois, and West Virginia state abandoned mine land officials. Because of severe time constraints on our work, we concentrated our efforts on obtaining testimonial evidence from these state and OSMRE officials. We examined a number of individual state submissions to confirm inconsistencies in the review process but did not perform the detailed analysis of approved and rejected state submissions that would be necessary to fully validate the opinions expressed by these officials. Our work was conducted in accordance with generally accepted government auditing standards.

As agreed with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this briefing report until 30 days from the date of this letter. At that time, we will send copies to interested parties and make copies available to others upon request. If you have any additional questions or if we can be of any further assistance, please contact me at (202) 275-7756.

Major contributors to this briefing report are listed in appendix I.

  
James Duffus III  
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## C O N T E N T S

SECTION		<u>Page</u>
1	THE NATIONAL INVENTORY UPDATE COMMITTEE--ROLE AND COMPOSITION	7
2	CRITERIA FOR PLACING PROBLEM AREAS IN THE UPDATED NATIONAL INVENTORY	9
3	AML INVENTORY SCREENING PROCESS	12
	OSMRE Field Office Review	12
	OSMRE National Inventory Update Committee Review	14
4	THE UPDATED NATIONAL INVENTORY--STATE AND FEDERAL OFFICIALS SUGGEST INCONSISTENCIES OCCURRED	15
	Differing Approaches to the Inventory	15
	Changing OSMRE Requirements	18
	Inconsistent Implementation of OSMRE's Guidelines	19
APPENDIX		
I	MAJOR CONTRIBUTORS TO THIS BRIEFING REPORT	23

### ABBREVIATIONS

AML	abandoned mine land
GAO	General Accounting Office
OSMRE	Office of Surface Mining Reclamation and Enforcement (Department of the Interior)
PADS	problem area data sheets



## SECTION 1

### THE NATIONAL INVENTORY UPDATE COMMITTEE-- ROLE AND COMPOSITION

- OSMRE formed a National Inventory Update Committee in 1984 to review and approve state abandoned mine problem area submissions for inclusion in the national inventory.
- The Committee was composed of OSMRE headquarters and field office officials who met between August 1984 and October 1987.
- Fourteen different officials participated in 1 or more meetings, and during the Committee's last 15 months committee participants were the same at 2 consecutive meetings only once.

In 1984, the Office of Surface Mining Reclamation and Enforcement (OSMRE) established an OSMRE headquarters committee--the National Inventory Update Committee--to review state abandoned mine land problem area submissions prior to inclusion in the national Abandoned Mine Land (AML) inventory. This committee, which met for the last time on October 13, 1987, was composed of headquarters and field office AML officials detailed to the committee. If problem areas from a committee member's field office were being discussed, that individual could serve only as an information source. The Committee met for the first time on August 2, 1984.

The purpose of the National Committee, according to the August 1984 AML Inventory Update Manual, was to review a sample of state-submitted abandoned mine land problem areas that had been initially reviewed by the OSMRE field offices to

" . . . identify any inconsistencies existing between Field Offices, any omissions on submittals which Field Offices may have inadvertently overlooked, and any particularly outstanding submittals which may serve as 'models' of the quality of data that should be reflected in all submittals."

If approved by the National Committee, the AML problem area was entered into the national inventory. Each OSMRE field office director was informed of the results of this review, including an explanation as to why a submission was rejected. If rejected, the states could provide additional justification for inclusion in the inventory and resubmit the area for consideration.

According to the National Inventory Update Committee Procedures, the Committee was to be composed of three persons from

the field offices and one person from headquarters.<sup>3</sup> The field office representatives were to be rotated with individual tenures of about 1 year. However, field rotation was not implemented until the end of fiscal year 1986, and thereafter participation in committee meetings varied greatly.

Between August 2, 1984, and October 13, 1987, 14 different OSMRE headquarters and field office officials participated in 1 or more of the 22 committee meetings. The number of participants attending any one meeting ranged from three to six, with field representation ranging from one to four, and headquarters participation ranging from one to three. The Committee chairman, one of the OSMRE headquarters representatives, attended all 22 meetings. Between August 2, 1984, and July 15, 1986, attendance by committee members remained relatively the same. However, after this date committee participants were the same at two consecutive meetings only once.

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<sup>3</sup>According to OSMRE officials, the procedures that were followed by the Committee in updating the inventory were not issued until June 1987.

## SECTION 2

### CRITERIA FOR PLACING PROBLEM AREAS IN THE UPDATED NATIONAL INVENTORY

- To be included in the national inventory, abandoned mine sites had either to threaten public health, safety, or the general welfare, or to present environmental restoration problems.
- Only the reclamation costs associated with sites threatening public health, safety, or the general welfare are used in OSMRE's formula for computing funding allocations to the states.
- In updating the inventory, OSMRE required the states to provide specific evidence on so-called problem area data sheets that supported their determination of threats at each site.

OSMRE limited the national inventory of AML sites to those abandoned mines that threatened the public health, safety, or general welfare, or involved environmental restoration. In an attempt to assure uniformity in the state problem area submissions, OSMRE in August 1984 set forth specific information requirements for identifying the type of problem involved and its reclamation priority. However, according to OSMRE officials, the agency gave the states the discretion to select the reclamation method for abating the problem. Therefore, while OSMRE provided unit-cost guidelines for estimating the cost of various reclamation alternatives, by virtue of their authority to select which alternative would be used, the states had ultimate control over the reclamation cost estimate for each problem area.

OSMRE has determined that only abandoned mine land areas that meet the top three priorities established in Section 403 of the Surface Mining Control and Reclamation Act of 1977 could be included in the inventory. These priorities are:

- "(1) the protection of public health, safety, general welfare, and property from extreme danger of adverse effects of coal mining practices;
- (2) the protection of public health, safety, and general welfare from adverse effects of coal mining practices;
- (3) the restoration of land and water resources and the environment previously degraded by adverse effects of coal mining practices including measures for the conservation and development of soil, water (excluding channelization), woodland, fish and wildlife, recreation resources, and agricultural productivity."

However, in allocating the federal portion of the AML Fund to the states, only the reclamation costs associated with problem areas having public health, safety, and general welfare implications (priorities 1 and 2) are used by OSMRE because the projected deposits into the AML Fund will be inadequate to reclaim all abandoned mines.

The inventory of priority 1 and 2 sites has an important impact on the amount of reclamation funds granted to each state. OSMRE published an initial inventory of abandoned mine land sites in August 1983. Because the initial inventory created much controversy about the inventory's validity and its use in apportioning the AML fund, OSMRE decided to update the inventory in 1984.

To update a state's inventory of abandoned mines, OSMRE required the state to submit standard information on each problem area associated with past coal mining activities. Each problem area identified by the state had to be justified on an AML Update Form, commonly referred to as problem area data sheets (PADS). The AML Inventory Update Manual provided instructions to the states for completing each line of the PADS and supplemented these instructions with definitions and other descriptive material. Required information for each problem area included but was not limited to

- general data on the problem area and its location;
- a description of the health, safety, and general welfare (priority 1 and 2) problems associated with the problem area and an explanation of the evidence used to conclude that the problem exists;
- a description of environmental restoration (priority 3) problems and an explanation of the evidence used to conclude that the problem exists; and
- an estimate of the cost to reclaim the problem area using the manual's cost guidelines.

As stated above, OSMRE required the states to explain the evidence used to conclude that a problem existed. For priority 1 and 2 problems, which are used in allocating AML funds to the states, this evidence had to meet the following criteria:

Priority 1 Criteria:

- "a. Documentation of the circumstances of any occurrence (from records or interviews) of injury or death to a person, or persons, or damage to property.

- b. Documentation that the problem is easily accessible and is being visited."

Priority 2 Criteria:

- "a. Documentation of the adverse effects of past coal mining that might harm people or cause damage to property and an expression of public concern about problems at the Problem Area.
- b. Documentation that the area is accessible or visited."

## SECTION 3

### AML INVENTORY SCREENING PROCESS

- OSMRE established a two-level review process in an attempt to ensure that state problem area data sheet submissions were considered for inclusion in the inventory in a consistent manner.
- Once state submissions were received, OSMRE field offices reviewed them to ensure that they were complete and accurate. Beginning in 1986, in response to an internal control review finding, the field offices supplemented this desk review by field-verifying a sample of the submissions.
- The National Committee acted as a second level review by examining an additional sample of the submissions forwarded by the field offices.
- The National Committee review focused on administratively assessing the adequacy of the evidence of problems presented in the state submissions and did not question the reclamation method and hence the reclamation cost estimate proposed by the state.

OSMRE developed various quality control review procedures aimed at ensuring that each state's submissions were subject to the same depth of review and were considered for inclusion in the revised inventory in a consistent manner. OSMRE's August 1984 update manual described the procedures OSMRE would use to review state PADS submissions before placing them into the national AML inventory. The two-step review process consisted of an initial field office review followed by an OSMRE headquarters review performed by the National Inventory Update Committee.

#### OSMRE FIELD OFFICE REVIEW

At the field office level, the August 1984 update manual required PADS submissions to be reviewed in two ways. First, the field offices were to determine whether the form was complete and the information correct and accurate. Second, the field offices were to determine whether sufficient evidence was submitted to justify that a problem existed and that the proposed reclamation technique and cost were reasonable.

The field office officials we interviewed said that they followed the update manual in performing their reviews. However, the Chairman of the National Committee told us that it was obvious that, at least early in the evaluation process, certain field offices were not adequately reviewing the PADS because some required information was not being submitted. He said, however, that these submissions were returned to the states and the quality

of the field office review improved as the reviewing officials gained experience.

Beginning in March 1986, the field office review was expanded as a result of an internal control review performed by OSMRE staff in accordance with Interior's Guideline for Conducting Internal Control Reviews. This review, completed in August 1985, identified several internal control weaknesses, including the following:

"Abandoned mine land data has not been field verified by OSM; therefore, an opportunity exists for fraud through inclusion of nonexistent problems or overinflated cost estimates."

In response to this finding, on March 7, 1986, OSMRE's Deputy Director for Operations and Technical Services outlined the procedures OSMRE field offices were to follow in field-verifying the information reported by the states in inventory updates. Field verification was to be performed on all priority 1 and 2 problem sites reported on update submissions that exceeded \$500,000 in estimated reclamation costs and an additional 5-percent random sample of the remaining submissions. OSMRE field office officials we interviewed said that their field office verification consisted of visiting the problem areas to determine whether the information reported in the PADS was consistent with their observations at the sites. The procedures followed by each of the field offices we contacted are summarized below.

Kansas City--Because of the small number of abandoned mine land problems, the OSMRE field office verified all PADS.

Charleston--Field-verified all PADS over \$500,000 and a 5-percent sample of those under \$500,000. The field office did not establish criteria whereby the entire PADS submission would be returned if an unacceptable number of sampled PADS were rejected by the field office. Instead, unacceptable sampled PADS were returned to the state for correction, and PADS not sampled were forwarded to OSMRE headquarters.

Columbus and Harrisburg--Field-verified all PADS over \$500,000 and a 5-percent sample of those under \$500,000. If less than 80 percent of a state's PADS were acceptable, the entire state submission would be returned. If less than 20 percent were unacceptable, all PADS except those found unacceptable were forwarded to OSMRE headquarters. However, according to Columbus and Harrisburg field office officials, the field office never had to return an entire PADS submission.

Lexington--Field-verified all PADS over \$500,000 and probably a 10-percent sample of those under \$500,000. A Lexington field office official told us that the field office found no problems with the Kentucky PADS.

OSMRE NATIONAL INVENTORY  
UPDATE COMMITTEE REVIEW

In addition to the field office review, selected state PADS were reviewed by the National Inventory Update Committee. Under the procedures outlined in the August 1984 update manual, the Committee was to review all disputed PADS (that is, those in which the state and the responsible OSMRE field office are in disagreement); all PADS involving threats to health, safety, and general welfare with estimated reclamation costs greater than \$500,000; and a sample of not less than 10 percent of all remaining PADS.

The Committee chairman and members we interviewed said that the Committee's decision to accept or reject a PADS was based solely on a review of the information contained in the PADS. As such, they assumed that the field offices had verified the accuracy of the information. Although the Committee questioned the adequacy of the evidence provided, it decided in December 1984 not to question whether the specific reclamation techniques proposed by the state in the PADS were the most appropriate. It could ask for more information on the proposed method but not whether it was the correct method. The Committee chairman told us that the Committee generally accepted whatever reclamation technique was proposed by the state and, unless information in the PADS raised questions as to the amount of reclamation needed, the Committee was forced to accept the state's cost estimate.



## SECTION 4

### THE UPDATED NATIONAL INVENTORY--STATE AND FEDERAL OFFICIALS SUGGEST INCONSISTENCIES OCCURRED

- Most state and OSMRE officials we spoke with do not believe the revised inventory presents an accurate picture of the relative reclamation needs of one state versus another.
- These officials pointed out that (1) the states varied considerably in their approach to submitting problems for the inventory, (2) OSMRE developed tighter guidelines for accepting submissions in the midst of the update process and did not apply the tighter requirements to submissions approved earlier, and (3) OSMRE field offices implemented OSMRE review criteria differently.
- As a result, most officials believe the existing updated inventory should not be used as a basis for allocating grant funds among the states.

Most state and OSMRE officials we interviewed told us that, because of inconsistencies in the updated inventory, it should not be used as a basis for allocating grant funds among the states. In their view, the inventory does not present an accurate picture of the relative reclamation needs of one state versus another. Several factors contribute to this view, including (1) different state approaches to performing the inventory, (2) changing OSMRE requirements during the update period, and (3) inconsistent implementation of OSMRE's inventory update guidelines. The views expressed to us were consistent with a vote taken at the March 1988 meeting of the Association of Abandoned Mine Land Programs. At this meeting only 2 of the 19 member states present voted in favor of using the updated inventory as part of OSMRE's formula for allocating grant funds. The states at the meeting expressed even less desire for reopening the inventory for further updating, with only one state voting in favor. We agree that while another inventory update could be conducted there is no certainty that once completed it would have more credibility than the previous two inventories. In this connection, those officials that told us they supported using the updated inventory in allocating funds expressed the view that it was prepared as fairly as any inventory was likely to be.

### DIFFERING APPROACHES TO THE INVENTORY

The states varied in their approach to performing the inventory and submitting PADS for inclusion in the AML inventory. Some state officials told us they limited the number of PADS submitted and the associated reclamation costs to what they considered reasonable, given the resources that would be made available for reclamation, whereas others attempted to document as

many problem areas as they could and proposed more costly reclamation methods, notwithstanding future funding limitations. Therefore, since the level of funding provided to a state is based in part on the relative dollar value of the state's reclamation needs as reflected in the AML inventory, those states taking the conservative approach will not fare as well as less conservative states.

Further, according to one state official and OSMRE correspondence to the Kansas City Field Office, the reclamation method selected for inventory purposes need not be the same method proposed for grant purposes. If this is the case, therefore, there is nothing to preclude a state from using the highest cost reclamation method in the inventory update (thereby inflating its inventory reclamation cost and boosting its share of the fund) and subsequently seek grant funds to reclaim the site using a much cheaper method. For example, Missouri submitted a highwall (the vertical wall remaining when the coal is removed) PADS and proposed using a guardrail to eliminate the problem. In commenting on this submission, the National Committee wrote:

"Guardrails are a much more economical means of reducing or abating the hazard, but they do not eliminate the problem. Guardrails are an acceptable and economical means of 'reclaiming' the problem and will probably be used in this PA [problem area]. However, Missouri might consider reclaiming this DH [dangerous highwall] by backfilling through a resubmittal to obtain maximum credit for this problem."

The state followed the Committee's suggestion and proposed the higher-cost reclamation method.

State officials in Ohio and Kentucky told us that they were conservative either in submitting PADS for inclusion in the inventory or in developing solutions to the problem. For example, according to an Ohio official and OSMRE Columbus field office officials, the state did not survey all of its highwalls for inclusion in the inventory. Instead, it submitted only those highwalls on which the state had received complaints. On the other hand, according to a West Virginia official, that state made an extensive effort in 1987 to identify its highwalls. A West Virginia official told us that, initially, the state did not think that highwalls could be included in the inventory. However, in 1986, on the basis of its review of Pennsylvania highwall PADS included in the previous inventory, West Virginia found that highwalls could be placed in the inventory.

The Ohio official also noted that OSMRE provided no policy guidance to the states on acceptable reclamation methods; therefore, the states could propose widely differing approaches to solve similar problems. He said that Ohio took into consideration

the limited amount of AML funding available and tried to develop realistic solutions to identified problems. For example, in some cases Ohio proposed placing a fence around a highwall to keep hunters out, whereas other states proposed the most costly approach of backgrading, contouring, and revegetating the highwall. A West Virginia official told us that the state initially discussed using other less costly alternatives such as fences as a reclamation alternative for highwalls but decided that this alternative did not permanently relieve the problem. Therefore, West Virginia chose to base its reclamation cost estimates on backfilling its highwalls.

A Kentucky official said that, although he is certain Kentucky has more highwalls than any other state, the state was conservative and submitted very few highwalls for reclamation. He said that he probably was "caught at the switch" because the inventory became a game as to who could come up with the biggest estimates and therefore receive the largest share of the federal funds.

Pennsylvania and Kentucky officials said that the states also approached problems associated with acid mine drainage differently. A Pennsylvania AML official told us that OSMRE's AML guidelines consistently require site-specific data be developed in order to submit a problem area for inclusion in the inventory. He said that, based on this and the fact that Pennsylvania's acid mine drainage problems were rejected in the prior inventory's standardization process, the state assumed that site-specific data would also be required to substantiate acid mine drainage problems affecting water for human consumption or agricultural use.

West Virginia, on the other hand, did not provide site-specific data to support its acid mine drainage problem, according to Pennsylvania and Kentucky officials. Instead, West Virginia PADS provided very general information demonstrating that the water in an entire watershed was polluted and was being used. Then, to arrive at an estimate of the reclamation cost for the abandoned mines within the watershed, the state applied a unit cost of \$1,500 per pound of acid to the average net acid load of the waterway. For example, the Blackwater River watershed, the state's biggest watershed problem, incorporates about 90,150 acres of farms, woodlands, wetlands, and recreational areas. As a result of past coal mining activity, the watershed has been severely scarred with unreclaimed surface and underground mines. Past studies of the watershed indicated that chronic acid mine drainage from these mines caused damage to such things as municipal water supplies, barges, waterfront property, and aquatic life. Based on the average net acid load per day from the Blackwater River, the cost to reclaim the mine sites in the watershed was estimated at \$48,648,000 (after review by the National Inventory Update Committee this estimate was reduced to \$44,362,500). A West Virginia official disagreed with the Pennsylvania and Kentucky observation and said that the state's watershed PADS not only

contain some necessary general information but also trace the acid mine drainage problems back to the source providing site-specific data.

An OSMRE Harrisburg field office official told us that, if Pennsylvania had used West Virginia's approach to acid mine drainage problems, several thousand miles of Pennsylvania's polluted rivers could be placed in the inventory. A Pennsylvania AML official estimated that using this approach could have conceivably added about \$3 billion to Pennsylvania's inventory, given the acid mine drainage problems identified in the state's Abandoned Mine Reclamation Plan.

#### CHANGING OSMRE REQUIREMENTS

During the inventory update, the National Inventory Update Committee developed tighter guidelines for accepting or rejecting PADS. According to OSMRE headquarters officials and the Chairman of the National Committee, these changes were not communicated to all states but instead were incorporated in letters to those states whose PADS were being rejected. The Committee chairman told us that these changes were not retroactively applied and therefore some PADS were accepted into the inventory under less restrictive requirements.

The most significant changes involved subsidence problems, according to the Chairman of the National Inventory Update Committee. The August 1984 Update Manual stated that the subsidence had to be "active" in order to be included in the inventory, but it did not indicate how recently the subsidence events must have occurred. However, according to the Committee chairman, the Committee decided in 1986 that only subsidence that had occurred within the last 5 years would be considered "active." According to state officials, this change reduced the Kansas, Ohio, and Illinois subsidence acreage that could be included in the inventory.

In responding to state concerns about apparent inconsistencies in how subsidence problems were evaluated in the past compared with how they are currently being reviewed, the Committee stated in an October 20, 1987, memorandum:

"The Committee admits that informational requirements for claimed subsidence problems have been made more strict since 1986. Prior to the summer of 1986 only about a dozen subsidence updates had been reviewed. However, about mid-1986 the Committee began to receive a number of large, complex subsidence Updates covering municipal areas. Because of the variety of the information presented on the ages, causes, severity, and location of claimed subsidence events it was necessary for the

Committee to put into use more detailed informational requirements.

"The basic policies of the Committee have not changed with these newer data requirements. Subsidence must be active (not simply subsidence prone), and the areas accepted for subsidence reclamation continue to be based on the number and pattern of documented events.

"The Committee acknowledges that earlier submitted Updates were reviewed with fewer requirements for detailed documentation of individual subsidence events and their location. However, these early Updates continue to be valid. The Committee does not feel that it is appropriate to suspend the acceptance of previously approved Updates by making procedural clarifications retroactive."

Both the Kansas and Kentucky state AML officials told us that their subsidence PADS were continually being rejected, each time because some requirement had changed. The Kansas official said that "it was like trying to hit a moving target." In both cases, these officials said that other projects in their states or in other states were accepted by the National Committee before these new requirements were imposed.

#### INCONSISTENT IMPLEMENTATION OF OSMRE'S GUIDELINES

On November 23, 1987, the Director, Pennsylvania Bureau of Abandoned Mine Reclamation, informed the Director, OSMRE:

"It is our belief that Update Manual guidelines were not uniformly applied throughout the nation and, indeed, serious discrepancies and differences in field office direction to, and requirements imposed upon, the states resulted due to this lack of uniformity."

Our discussions with OSMRE field office officials as well as our review of OSMRE records indicates that AML problems associated with highwalls and mine fires were not handled uniformly and that the same informational requirements were not imposed on all of the states.

OSMRE officials in two field offices told us that the Update Manual guidelines were so general that almost anything could be justified for inclusion in the inventory, leaving much of the interpretation of what should be included up to the states and field offices. Harrisburg and Charleston field office officials told us, however, that OSMRE never tried to assure consistent implementation among the field offices. The following sections illustrate how different problem areas were treated in different

OSMRE field offices. The information we received does not demonstrate that the PADS that were eventually placed in the inventory did not meet the criteria established by OSMRE. However, it does show that some PADS, similar to some that were forwarded by some field offices and eventually placed in the inventory, were not forwarded by other OSMRE field offices for inclusion in the inventory.

### Highwalls

As stated earlier, West Virginia made an extensive effort to document its highwalls. Some of these were justified on the basis of hunting near the highwall. In the PADS we reviewed, access and visitation were supported by the existence of a road and the presence of spent shotgun shells. Potential harm was indicated by reference to a statement made by a local citizen that he/she was concerned that someone might fall off and get hurt. A West Virginia official told us that each highwall identified by the state poses a problem and that, although only one person may have been cited to demonstrate local public concern, the state could have found many others to substantiate this concern. Charleston field office officials said that they disagreed with including in the inventory highwalls justified on the basis of hunting, but the state pointed out that they met OSMRE's Inventory Update Manual criteria. Consequently, they had no alternative but to forward these highwall PADS to Washington for inclusion in the inventory.

A Harrisburg field office official told us that the field office was very skeptical about including highwalls based on hunting or justified by the statement of one person and therefore did not accept all highwall PADS. In such cases, the field office would ask the state to submit additional information to substantiate the harm associated with the highwall. He said that hunters know the highwall is there and must be cautious. Further, he said that Pennsylvania has more hunting than any other state and if this was used as a rationale for fixing highwalls, then all the highwalls in the state might as well be placed in the inventory. Similarly, a Kansas City field office official said that the field office did not accept hunting as a justification for a priority 1 or 2 problem area.

Another inconsistency among the field offices with respect to highwalls was the length of the highwall that could be considered for priority 1 or 2 funding. Harrisburg and Charleston field office officials told us that their field offices allowed only those portions of the highwall associated with priority 1 and 2 problems to be included in the inventory. Also, the field offices required documentation that the highwall was accessible and there was evidence of visitation along the entire length of the claimed highwall. Only those priority 1 and 2 sections of the highwall meeting these criteria could be entered in the inventory. On the other hand, according to a Lexington field office official,

Kentucky highwalls were assigned a single priority according to the highest priority of any segment along the highwall. A Kansas City field office official said that if highwalls had access anywhere along the highwall, the full length of the highwall would be considered a priority 1 or 2.

### Mine Fires

Pennsylvania and West Virginia PADS involving underground mine fires were not treated equally by their respective field offices. In Pennsylvania, nine underground mine fires ranging in size from 7 acres to 143 acres were accepted into the AML inventory. In all but one case--Centralia--the approved reclamation technique involved the total excavation of the mine fire. For example, the largest mine fire, with an estimated reclamation cost of \$182 million, covered 143 acres to a depth of 300 feet. One of the two fires at the site has been burning since 1940 and the other since 1956. The state proposed total excavation of the site, pointing out that trenching, a less costly alternative, has not always been successful in controlling the spread of the fire and does not remove the hazards to people who enter the fire area.

An OSMRE Harrisburg field office official told us that the field office disagreed with these Pennsylvania PADS that called for the total excavation of the mine fire. He said that this type of project would never be undertaken by the state because of its high cost and should be treated similarly to subsidence problems where the costs are capped for inventory purposes. In a February 2, 1987, memorandum to the Assistant Director, Eastern Field Operations Office, the field office expressed its concern as follows:

"We believe guidance is needed regarding how the inventory will recognize the treatment of large mine fires. Specific guidance is provided to help define subsidence areas that can be included in the inventory. That is, frequency, number and distribution of actual subsidences, defines the subsidence area. Large underground mine fires should also have limits placed on them from an inventory standpoint. Mine fires over a certain acreage and depth (i.e., 5 acres with the fire greater than 50' deep) should be included for trenching costs rather than complete excavation."

According to the Harrisburg official, this issue was never resolved. In essence, he said that the field office was told to accept whatever proposal the state submitted.

According to a Charleston field office official, that field office, on the other hand, fought with, and is still fighting, West Virginia on mine fire PADS. A Charleston official told us that the field office turned down underground mine fire PADS that included

outrageous reclamation costs (in the hundreds of millions of dollars) to totally excavate the mine fire. He said that the field office did not believe that the state actually intended to do these projects as proposed. Further, he said that the field office is now feeling the heat because Pennsylvania was allowed to include underground mine fires that proposed total excavation as the reclamation technique. A West Virginia official told us that the state was not upset about the Pennsylvania mine fire PADS but said that total excavation may not be the most feasible reclamation method. Further, he commented that he did not think Pennsylvania would actually propose total excavation if it was requesting a grant.



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