

CHAPTER A .
AN EVALUATION OF APPROXIMATE
ORIGINAL CONTOUR AND POSTMINING
LAND USE IN WEST VIRGINIA

*(See the "Glossary of Mining Terms," above, for definitions
of the terms used in this document.)*

1. INTRODUCTION

The Federal Surface Mining Control and Reclamation Act of 1977 (SMCRA) establishes a program of cooperative federalism that allows states such as West Virginia to enact and administer their own regulatory programs within limits established by Federal minimum standards and with oversight authority by the Department of the Interior. *See* H.R. Rep. 218, 95th Cong., 1st Sess. at 57 (1977), *reprinted in* 1977 U.S. Code Cong. & Admin. News 593, 595; *Hodel v. Virginia Surface Mining and Reclamation Association*, 452 U.S. 264, 289 (1981). In SMCRA's findings section, Congress explained its decision to offer each state "primary jurisdiction" or "primacy" in this area:

because of the diversity in terrain, climate, biologic, chemical and other physical conditions in areas subject to mining operations, the primary governmental responsibility for developing, authorizing, issuing, and enforcing regulations for surface mining and reclamation operations subject to this chapter should rest with the States[.]

30 U.S.C. § 1201(f).

Primacy does not, however, grant a state absolute authority to regulate surface coal mining without any Federal involvement. Section 503 of SMCRA requires that state rules and regulations be "consistent with regulations issued by the Secretary pursuant to [SMCRA]." 30 U.S.C. § 1253(a)(7). Further, Section 505(b) of SMCRA provides that "[a]ny provision of any State law or regulation . . . which provides for more stringent land use and environmental controls and regulations" than does SMCRA or the Federal rules "shall not be construed to be inconsistent" with SMCRA. 30 U.S.C. § 1255(b).

Because West Virginia has a state program approved under Section 503 of SMCRA, *see* 30 C.F.R. Part 948, its actions must be evaluated for consistency with that program. At the same time, however, if it becomes apparent that some aspect of the approved program is inconsistent with SMCRA, it is incumbent upon the Office of Surface Mining (OSM) to address that situation.

If, for example, State program provisions are found to be less effective than the Federal requirements, OSM can require the State to amend its program in accordance with 30 C.F.R. § 732.17. In this report, consequently, OSM has evaluated the way in which the West Virginia Division of Environmental Protection (WVDEP) administers the requirements relating to approximate original contour (AOC) and postmining land uses associated with mountaintop-removal and steep-slope AOC variances for consistency with its approved State program. It has also reviewed the State program requirements to determine if they are consistent with Federal requirements.

In order to evaluate WVDEP's administration of requirements related to AOC and postmining land use and to determine whether West Virginia requirements are consistent with SMCRA, OSM reviewed a representative sample of 19 permits, 12 of which had AOC variances. OSM has focused its evaluation on (1) gathering data that might be useful in understanding how AOC is determined in West Virginia and determining whether or not additional guidance in making AOC determinations may be necessary, and (2) determining the appropriateness of the postmining land use when an AOC variance was granted by the State. The 19 permits reviewed were issued over more than two decades. Some involved disturbances initiated before the permanent program was approved by OSM; others involved disturbances only recently begun. The purpose of evaluating the older permits was to gain insight into the actual land forms created after mining and to see if there have been any trends over the years.

As discussed below, this report identifies some problems with the State's implementation of its mountaintop-removal and steep-slope mining requirements. Some of the problems are due to the program regulations themselves and others are the result of the State's implementation of those requirements. While these problems do raise concern, OSM believes that they can be resolved. Most of the problems identified during this review are procedural or administrative in nature. There was no evidence of any significant environmental problems at any of the sample sites. OSM also acknowledges that WVDEP has been constructive in helping identify these problems and is showing a willingness to take steps to correct them. OSM is confident that, together with the State's cooperation, these issues can be resolved in a timely and effective manner that protects the environment, satisfies legal requirements, and minimizes disruption to the coal industry.

To ensure that all concerns are addressed, OSM is making this report widely available, and solicits public comment on it, particularly its proposed findings and recommendations. Comments should be transmitted to OSM Headquarters by January 15, 1999, via the Internet or mailed or hand delivered to the office. The E-mail address for the office is **PHAIRSTO@OSMRE.GOV**. The U.S. Postal Service mailing address is:

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If you would like to discuss your comments or questions on the draft oversight report, please contact John Craynon, Chief, Technology Development Staff at (202) 208-2866. Following receipt and evaluation of the public comments, OSM expects to issue a final report. This draft report, all comments, and the final report will be included in West Virginia's oversight file for 1998 and will be available for public review in Washington, as well as Charleston. In addition, any comments received will be shared with WVDEP to facilitate discussions on corrective actions.

2. PURPOSE AND SCOPE

OSM's CHFO has prepared this oversight report on portions of the West Virginia surface mining program, which was approved on January 21, 1981, under SMCRA. OSM headquarters and the Office of the Solicitor have participated in the development of the proposed conclusions and recommendations in this report. The WVDEP, which administers the regulatory program in West Virginia, assisted OSM in gathering the data for this report, and also, to some extent, contributed to the analysis. The proposed conclusions and recommendations are, however, OSM's.

This evaluation focuses on the three types of mountaintop coal mining operations that mine all or a significant portion of a coal seam or seams running through the upper portion of a mountain or ridge. These types of mines have often been called "mountaintop-removal mines" by citizens and the media, even though that term applies only to one type of mountaintop operation in the regulatory sense. It was in response to the extensive public interest in mountaintop operations that the CHFO and WVDEP included a topic for mountaintop postmining land use and spoil disposal in the general oversight agreement they signed on November 13, 1997. Also included in the November agreement was a stipulation that OSM and WVDEP would work together on AOC determinations. These two concepts were merged in an amended detailed work plan (see appendix I) in May of 1998, which forms the basis for the evaluation summarized in this report.

This report focuses on two kinds of issues:

- First, does WVDEP currently use appropriate standards in evaluating whether a particular postmining land configuration constitutes a return to AOC? This report describes various characteristics of land after mining in terms of elevation changes, creation of valley fills, creation of level sections, and other general descriptive information. The issue is how any of those characteristics, either by themselves or in combination, may be used in determining if AOC has been achieved.
- Second, in situations where WVDEP has determined that a waiver from AOC requirements is necessary, has it required appropriate postmining land uses in granting the waiver?

To answer these questions, the Federal/State review team looked at both State and Federal program requirements and reviewed a sample of 19 mountaintop operations. In order to review land configuration after reclamation and to evaluate the amount of success in establishing, and the appropriateness of, postmining land uses, the sample included several older permits under which mining was initiated prior to the approved program. The sample included sites approved in different years to see if any trends were evident. The team also examined the database the State uses to catalogue mining operations in order to see if it could be used to accurately identify the number of operations fitting the parameters of this study.

Prior to OSM's 1981 approval of the State program, five of the permits evaluated in this study had been issued, and some coal was being mined within their permit areas. At the time this report was prepared, three of these five permits had obtained final (phase III) bond release. All the sites examined, however, included activities after 1981 that made them subject to the State's permanent program requirements. The review team chose the five pre-1981-approved sites for evaluation primarily in order to help them study actual land reclamation as it relates to AOC and postmining land use.

3. FEDERAL REQUIREMENTS

a. General AOC Requirements

1. Statute

Section 701(2) of SMCRA defines "approximate original contour" to mean,

that surface configuration achieved by backfilling and grading of the mined area so that the reclaimed area, including any terracing or access roads, closely resembles the general surface configuration of the land prior to mining and blends into and complements the drainage pattern of the surrounding terrain, with all highwalls and spoil piles eliminated; water impoundments may be permitted where the regulatory authority determines that they are in compliance with Section 515(b)(8) of this Act.

30 U.S.C. § 1291(2).

Section 515 of SMCRA sets forth environmental protection performance standards applicable to surface coal mining operations. 30 U.S.C. § 1265. Among these is the requirement to return the land to AOC—pursuant to Subsection 515(b)(3), mine operators must "backfill, compact . . . , and grade in order to restore the approximate original contour of the land with all highwalls, spoil piles, and depressions eliminated." 30 U.S.C. § 1265(b)(3).

2. Legislative History

The legislative history of SMCRA shows that Congress intended to provide considerable flexibility with respect to what surface configuration would satisfy the statutory requirement for AOC restoration. The Committee Report on the House version of SMCRA, which contained the definition of AOC that was enacted into law, stated:

H.R. 2 requires that a mine site be regraded to AOC. Moreover, the regrading standard of H.R. 2 was formulated to cover all types of mining operations under all conditions. Thus it is, of necessity, a flexible standard which contemplates different mining circumstances. The bill's critics have alleged, to the contrary, that the term "approximate original contour" imposes an overly rigid and impractical requirement. It should be emphasized, therefore, that a reasonable interpretation of H.R. 2 cannot justify the assertion that the bill requires either the impossible task of restoration of the original contour or the useless act of digging a pit to obtain fill material to achieve full restoration of the original topography.

H.R. Rep. No. 95-218, at 96 (1977).

Since the enactment of SMCRA, OSM has recognized that, in primacy States, the State regulatory authority has the primary responsibility for interpreting what constitutes AOC at a given mine site during the permitting process. See 30 U.S.C. § 1201(f), quoted *supra* in the Introduction.

An important AOC issue, however, is to what extent a postmining change in land elevation, slope, relief, or configuration constitutes a departure from AOC. Our research to date into SMCRA's legislative history has indicated that the primary element of AOC is configuration or shape. The House Committee Report mentioned both configuration and elevation, but gave primary emphasis to configuration:

As defined in the bill, approximate original contour means:

That surface configuration achieved by backfilling and grading of the mine area so that the reclaimed area, including any terracing or access roads, closely resembles the general surface configuration of the land prior to mining and blends into and complements the draining pattern of the surrounding terrain, with all highwalls and spoil piles eliminated * * *.

The term contour is defined by the dictionary as "the outline of a figure or body, with a line or lines representing such an outline." The contour of ground is similarly defined as the outline of the surface of the ground with respect to its undulations. These two definitions primarily refer to the shape or configuration of a surface. In addition, with respect to mapping, contour takes on an additional meaning; the imaginary line connecting the points on the land surface that have the same elevation and the line representing such line on a map or chart. In order to understand this concept it is necessary to distinguish between the two dimensions of elevation and configuration.

Id. at 97.

The Committee went on to give a number of examples of what the Committee meant by AOC. *Id.* at 97-103. In each of these, the emphasis was on configuration as the primary element.¹

Our examination of the legislative history of SMCRA has disclosed no statements indicating that a change in elevation, by itself, constitutes a departure from AOC. Instead, on several occasions during the debate on SMCRA and its precursors, the bill's sponsors gave assurances that the AOC requirement did not mandate a return to original elevation. Usually, these statements were made in response to charges that a return to AOC, as required by SMCRA, would be impossible. For example, during the floor debate on H.R. 25, a direct precursor of SMCRA, Representative Clausen of California, one of the principal sponsors of the bill, emphasized that AOC did not mandate a return to original elevation:

In addition, the bill requires that lands be returned to the approximate original contour and requires they be covered by vegetation. The land must come as close to resembling its premining appearance as possible. It is important to point out that this requirement is *not intended to require restoration of mined lands to their original elevation, but to a similar configuration.*

121 Cong. Rec. 6676, 6686 (March 14, 1975)(floor debate on H.R. 25) (emphasis added).

During the same debate, Congressman Ruppe of Michigan, who played a key role in SMCRA's enactment, also emphasized that it did not mandate a return to original elevation:

¹The IBLA has since used one of these examples to rule that a postmining increase in elevation due to the swell of spoil material does not constitute a departure from AOC. *Pacific Coast Coal Co., Inc*, 118 IBLA 83 (1991).

However, we plainly realize that the lands which will be mined vary in terms of their physical characteristics, and as a result we have provided rational flexibility. We do not mandate that the mined land be returned to exactly the same shape as it was prior to mining. What the committee has obliged operators to do is to return the land to its "approximate original contour." *It should be emphasized here once again, as I have attempted to do many times in the past, that "approximate original contour" does not mean that the land must be returned to original elevation.* This would be patently ridiculous in the case of a thick seam of coal covered by a relatively thin stratum of overburden. When this coal is mined, it will create a depression that could not be returned to the original elevation without hauling an enormous amount of materials from some other location, thereby creating a similar depression elsewhere. Therefore, the committee bill requires that the coal operator regrade the mined area inside and around the perimeter of the mined area so that the depression blends into the surrounding terrain, and that within the mined area, the surface of the land "closely resembles" its premining configuration.

Id. at 6888. See also Additional Views of Cong. Ruppe, Clausen, and Lagomarsino, H.R. Rep. No. 94-45, at 152 (94th Congress, 1st Sess. 1975) ("First, approximate original contour as it applies to thick seam area mining in the West is not intended to require that the mined site be returned to its original elevation. Original elevation simply often cannot be obtained. . . . It must be emphasized that the requirement to return to approximate original contour does not necessarily mandate the attainment of original elevation."); 120 Cong. Rec. 23650, 23659 (July 17, 1974) (floor debate on H.R. 11500, another SMCRA precursor); ("Now approximate original contour does not mean original elevation or that every bump on the landscape must be restored.").

While this legislative history is helpful, much of it focuses on thin and thick overburden situations, rather than mountaintop-removal and steep-slope mining operations, and it does not clearly state what a regulatory authority must consider when making AOC determinations. Subsection 515(b)(3) of SMCRA specifically exempts thin and thick overburden situations from the requirement to restore the AOC.

3. OSM's Treatment of AOC in Rules

In its national regulations and in approving individual State programs, OSM adopted the statutory definition of AOC essentially unchanged. In the development of national regulations, the only discussion where elevation change was mentioned in relation to AOC is in the preamble to the rules regarding thick or thin overburden. The permanent program rules promulgated in 1979

defined thin overburden as overburden where the final thickness is less than 0.8 times the initial thickness and thick overburden as overburden where the final thickness is greater than 1.2 times the initial thickness. The preamble stated:

The definition of approximate original contour states that the reclaimed area should closely resemble the general surface configuration of the land prior to mining. OSM interprets this to mean that the approximate original contour, or configuration, of the premining land is intended, and minor changes in elevation are anticipated.

44 Fed. Reg. 15231 (March 13, 1979).

Thus, an elevation change of plus or minus 20 percent was accepted as AOC in those rules.

In 1983, those numerical limits were deleted from the thick and thin overburden rules. *See* 48 Fed. Reg. 23356, 23365 (May 24, 1983). In 1988, the D.C. Circuit upheld the remand of those rule changes because the Secretary had failed to explain his reasons for removing the numerical limits. *National Wildlife Federation v. Hodel*, 839 F.2d 694, 734 (D.C. Cir. 1988). In 1991, OSM again published rules addressing thick and thin overburden. Again OSM declined to set a numerical limit and asserted that the issue was best left to the regulatory authority. The preamble contains cross sections showing elevation changes of greater than plus or minus 20 percent that would still be considered AOC. This rule was never challenged and remains in place today. *See* 56 Fed. Reg. 65629-95633 (December 17, 1991).

In 1987, OSM issued Directive INE-26 (see appendix II) to provide guidance to OSM field personnel in evaluating AOC issues during oversight. The Directive makes three points with respect to AOC. First, because both the permittee and the regulatory authority (as well as other interested parties) need a clear understanding prior to mining of what the final postmining topography will be, the anticipated postmining topography must be determined in the permitting process to enable a determination if AOC will be achieved. Second, inspections should ensure that the approved postmining topography is being reasonably achieved, including general surface configuration, drainage, and elimination of highwalls and spoil piles. Third, in oversight, considerable deference should be given to prior decisions by the State, particularly where the final grade work has been done. In recognition of the emphasis that the 1987 Directive places on the role of the permitting process in applying AOC requirements to specific operations, the current review looked to see what WVDEP was accepting as meeting AOC requirements in the permitting process. (See page A-19 for further discussion of the findings.)

b. Federal Requirements Relating to Mountaintop-Removal Mining Operations

Section 515 of SMCRA contains specific performance standards for mountaintop-removal mining. Subsection 515(c) permits an exception to the AOC restoration requirement for

mountaintop-removal operations which, after reclamation, would be capable of supporting specific postmining land uses. In such operations, instead of restoring the site to approximate original contour, the operator is permitted to remove all of the overburden and create a level plateau or a gently rolling contour with no highwalls remaining. 30 U.S.C. § 1265(c). Subsection 515(c)(3) lists the allowable postmining land uses: "industrial, commercial, agricultural, residential or public facility (including recreational facilities) use[s]." 30 U.S.C. § 1265(c)(3). In demonstrating the feasibility and practicability of the proposed postmining land use, the applicant must include specific plans and show that the use will be:

- (i) compatible with adjacent land uses;
- (ii) obtainable according to data regarding expected need and market;
- (iii) assured of investment in necessary public facilities;
- (iv) supported by commitments from public agencies where appropriate;
- (v) practicable with respect to private financial capability for completion of the proposed use;
- (vi) planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use; and
- (vii) designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site.

30 U.S.C. § 1265(c)(3)(B).

The Federal regulations pertaining to mountaintop-removal operations are found at 30 C.F.R. § 785.14 and Part 824. The regulations generally track the language of SMCRA, but do clarify the applicable requirements in the following respects:

- A requirement for compliance with the alternative postmining land use provisions of 30 C.F.R. § 816.133(a) through (c) [30 C.F.R. § 824.11(a)(4)];
- A specification that final graded slopes on the plateau portion of the operation not exceed 1v:5h (20%) [30 C.F.R. § 824.11(a)(7)];

- A requirement that plateau outcrops attain a minimum static safety factor of 1.5 or that they not exceed 1v:2h (50%) [30 C.F.R. § 824.11(a)(7)];
- A requirement that the resulting level or gently rolling contour be graded to drain inward from the outslope [30 C.F.R. § 824.11(a)(8)]; and
- A clarification that the prohibition on damage to natural watercourses applies only to watercourses below the lowest coal seam to be mined [30 C.F.R. § 824.11(a)(9)].

**c. Federal Requirements Pertaining to
Steep-Slope Mining Operations**

Subsection 515(d) of SMCRA specifies additional requirements for "steep-slope surface coal mining." The term "steep slope" is defined at Subsection 515(d)(4) as "any slope above twenty degrees or such lesser slope as may be defined by the regulatory authority after consideration of soil, climate, and other characteristics of a region or State." 30 U.S.C. § 1265(d) (4). When mining on such slopes, no spoil, abandoned or disabled equipment, debris or waste materials may be placed downslope below the bench or mining cut; the operator may not disturb the land above the top of the highwall unless it is found that such disturbance will facilitate compliance with the Act's environmental protection standards; and complete backfilling with spoil material is required to "cover completely the highwall and return the site to approximate original contour" 30 U.S.C. § 1265(d).

As provided in Subsections 515(e)(1) and (e)(2) of SMCRA, a variance from AOC for a steep-slope mining operation is allowed if the owner of the property requests it in writing as part of the permit application; the watershed control of the area is improved; the potential use of the affected land is deemed to constitute an "equal or better economic or public use;" and the proposed use is designed and certified by a qualified registered professional engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site. 30 U.S.C. § 1265(e)(1) and (e)(2). Subsection 515(e)(2) further specifies that these variances from AOC must be for operations that will render the land suitable, after reclamation, "for an industrial, commercial, residential or public use (including recreation facilities)." 30 U.S.C. § 1265(e)(2).

The Federal regulations relating to steep-slope mining operations are found at 30 C.F.R. §§ 785.15, 785.16, 816.107/817.107, and 816.133(d)/817.133(d). The regulations generally track the language of SMCRA, but do clarify the applicable requirements in the following respects:

- Steep-slope mining operations must comply with the alternative postmining land use provisions of 30 C.F.R. §§ 816.133(c) and (d) and 817.133(c) and (d) [30 C.F.R. § 785.16(a)(2)];

- The watershed of lands within the proposed permit area and adjacent areas will be improved by the steep-slope mining operation if the amount of total suspended solids or other pollutants discharged into surface or ground waters will be reduced or flood hazards within the watershed will be reduced by a reduction in peak flow discharges; the total volume of flow will not vary in a way that adversely affects surface waters or any existing planned use of surface or ground water; and the appropriate State environmental agency approves the plan [30 C.F.R. § 785.16(a)(3)];
- All highwalls must be completely eliminated with spoil material in a manner which results in a static safety factor of at least 1.3 [30 C.F.R. §§ 816.133(d)(7) and 817.133(d)(7)]; and
- Only that amount of spoil necessary to achieve the postmining land use and ensure the stability of the retained spoil may be placed off the mine bench [30 C.F.R. §§ 816.133(d)(8) and 817.133(d)(8)].

4. STATE PROGRAM REQUIREMENTS

a. General AOC Requirements

State law requires, with certain exceptions, that mined lands be returned to their AOC. Subsection 22-3-3(e) of the West Virginia Surface Coal Mining and Reclamation Act (WVSCMRA) essentially repeats the SMCRA definition of AOC. The exceptions, *i.e.*, formal variances from AOC, are limited to mountaintop-removal and steep-slope mining operations as provided for in Subsections 22-3-13(c) and (e) of the WVSCMRA. Table A-1 contains a summary of the State's requirements relating to AOC and the variances that are allowed under the West Virginia approved program.

During the permitting process, applicants must identify the premining and postmining topography and indicate whether they are requesting a variance from AOC. Depending on the mining plan, operators in steep-slope areas (greater than 20 degrees) can obtain either a mountaintop-removal AOC variance or a steep-slope AOC variance.

b. State Requirements Relating to Mountaintop-Removal Mining Operations

Subsection 22-3-13(c)(2) of the WVSCMRA provides that an AOC variance may be granted for the surface mining of coal, "where the mining operation will remove the entire coal seam or seams running through the upper fraction of a mountain, ridge, or hill . . . by removing all of the overburden and creating a level plateau or a gently rolling contour with no highwalls remaining and capable of supporting [*certain*] postmining uses . . ." (emphasis added).

TABLE A-1

WEST VIRGINIA PROVISIONS	Approximate Original Contour (AOC) Restoration	Mountaintop Removal AOC Variance	Steep Slope AOC Variance
Premining topographical eligibility requirements	None. Standard applies universally in absence of variance.	Mountain, ridge, or hill	Average slopes in excess of 20 degrees [OSM disapproved broader variance.]
Postmining topographical requirements	Must closely resemble general premining surface configuration	Level or gently rolling inward-draining plateau	No specific requirements (dependent upon land use and terrain)
Surface owner consent to proposed postmining topography	Not required, but owner must be consulted on postmining land use	Not required, but owner must be consulted on postmining land use	Required
Acceptable postmining land uses	Premining or higher or better uses (uses with higher economic value or nonmonetary benefit to landowner or community)	Industrial, <i>woodland</i> , commercial, agricultural, residential, or public use (including recreational facilities) which also constitutes an equal or better use	Equal or better uses [WV has not satisfied 1996 requirement to amend its program to be consistent with section 515(e).]
Implementation requirements for approved postmining land use	None (must be capable of supporting approved use)	Must be integrated with mining and reclamation	None (must be capable of supporting approved use)
Special hydrologic requirements	None	Must not damage natural watercourses	Must demonstrate that watershed will be improved
Required static safety factor	1.3	1.5	1.3
Amount of overburden that may be placed outside mined-out area	Limited to excess spoil and spoil required for blending with surrounding terrain	No restrictions apart from requirement to retain enough on bench to achieve postmining land use	Limited to amount necessary to achieve postmining land use and ensure stability
WVSCMRA cites	22-3-13(b)(3)	22-3-13(c)	22-3-13(e)
WV CSR Title 38-2 citations	14.8, 14.15, 14.16, 15.2	14.10	14.12

As illustrated in table A-2, the allowable postmining land uses for mountaintop-removal operations approved under the West Virginia program include:

- industrial,
- woodland,
- commercial,
- agricultural,
- residential, or
- public use.

TABLE A-2

<i>Approvable Postmining Land Uses in West Virginia</i>								
Mining Type	A	B	C	D	E	F	G	H
Mines w/o AOC Variance	X	X						
Steep-Slope Mines w/AOC Variance		X*						
Mountaintop-Removal Mines w/AOC Variance**			X	X	X	X	X	X
A. Pre-Mining Use B. Equal or Better Economic or Public Use C. Industrial D. Woodland					E. Commercial F. Agricultural G. Residential H. Public Use			
*As defined by WVSCMRA **Must also constitute an equal or better use								

Pursuant to Subsection 22-3-13(c) of the WVSCMRA, the State may grant a permit with a mountaintop-removal AOC variance only after finding that:

- the proposed postmining land use constitutes an “equal or better use;”

- the proposed use will be compatible with adjacent land uses and existing land use plans;
- county commissions and other State and Federal agencies have been provided an opportunity to comment on the proposed land use; and
- the application contains specific plans and assurances that the proposed use will be (1) compatible with adjacent land uses; (2) practicable with respect to financing and completing the proposed use; (3) supported by commitments from public agencies where appropriate; (4) planned pursuant to a schedule that will integrate the mining operation and reclamation with the postmining land use; and (5) designed by an approved person to assure the stability, drainage, and configuration necessary for the intended use of the site.

**c. State Requirements Pertaining to
Steep-Slope Mining Operations**

Subsection 22-3-13(e) of the WVSCMRA and West Virginia Code of State Regulations (CSR) 38-2-14.8 and 14.12 contain requirements governing steep-slope mining. State law provides that WVDEP may issue a permit with a variance from AOC for surface mining on slopes greater than 20 degrees when the watershed of the area is improved and all backfilling and grading is completed with all highwalls eliminated.

According to CSR 38-2-14.12, the State may grant a variance from the requirements for restoring mined lands in steep-slope areas to AOC only if:

- the permit area is located on slopes that exceed an average of 20 degrees;
- all highwalls are completely backfilled in a manner which results in a static safety factor of 1.3;
- only spoil not necessary to achieve the postmining land use is removed from the mine bench;
- the watershed of the permit and adjacent areas will be improved by reducing pollutants to ground and surface waters and reducing flood hazards;
- appropriate Federal, State, and local governmental agencies have been provided an opportunity to comment on the proposed postmining land use and have deemed it to be "equal or better economic or public use;"
- the proposed use is designed and certified by a registered professional engineer to assure stability, drainage, and configuration necessary for the intended use of the site; and

- the landowner has requested in writing that a variance be granted to achieve the proposed alternative postmining land use.

5. REVIEW METHODOLOGY

Beginning in 1997, the public and media began to focus increasing attention on "mountaintop operations" in West Virginia. Commonly understood, this term refers to any operation that removes all or part of the top of a mountain or ridge and places the overburden or excess spoil resulting from the removal into valley fills. As used in this report, the broad term "mountaintop operations" should be distinguished from the narrower term "*mountaintop-removal* (AOC variance) *operations*" (see category #1 below).

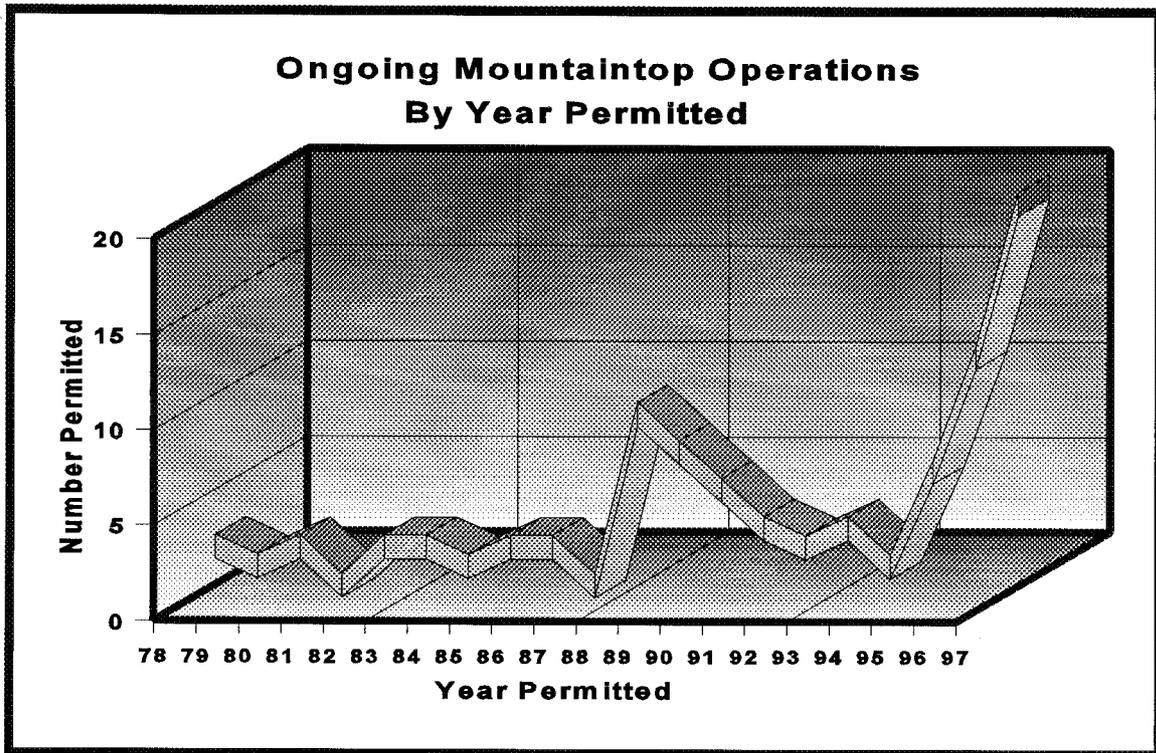
Three types of mining practices are included in the term "mountaintop operations" for this evaluation. These types are:

1. "Mountaintop-removal (AOC variance) operations" - Mines which remove all of the coal seam or seams in the upper fraction of a mountain or ridge and request a mountaintop-removal variance from AOC. Only this kind of operation constitutes a mountaintop-removal mine in the regulatory sense.
2. Mines which remove all of the coal seam or seams in the upper fraction of a mountain or ridge and return the land to AOC.
3. Mines in steep-slope areas (slopes exceeding 20 degrees) which have received steep-slope AOC variances according to State records. These sites were included in the evaluation for comparison with mines in category #1.

Notwithstanding regulatory definitions, OSM recognizes that the public's concern is not confined to any one of these mining scenarios, but encompasses all three. Accordingly, this report addresses all three types of mines.

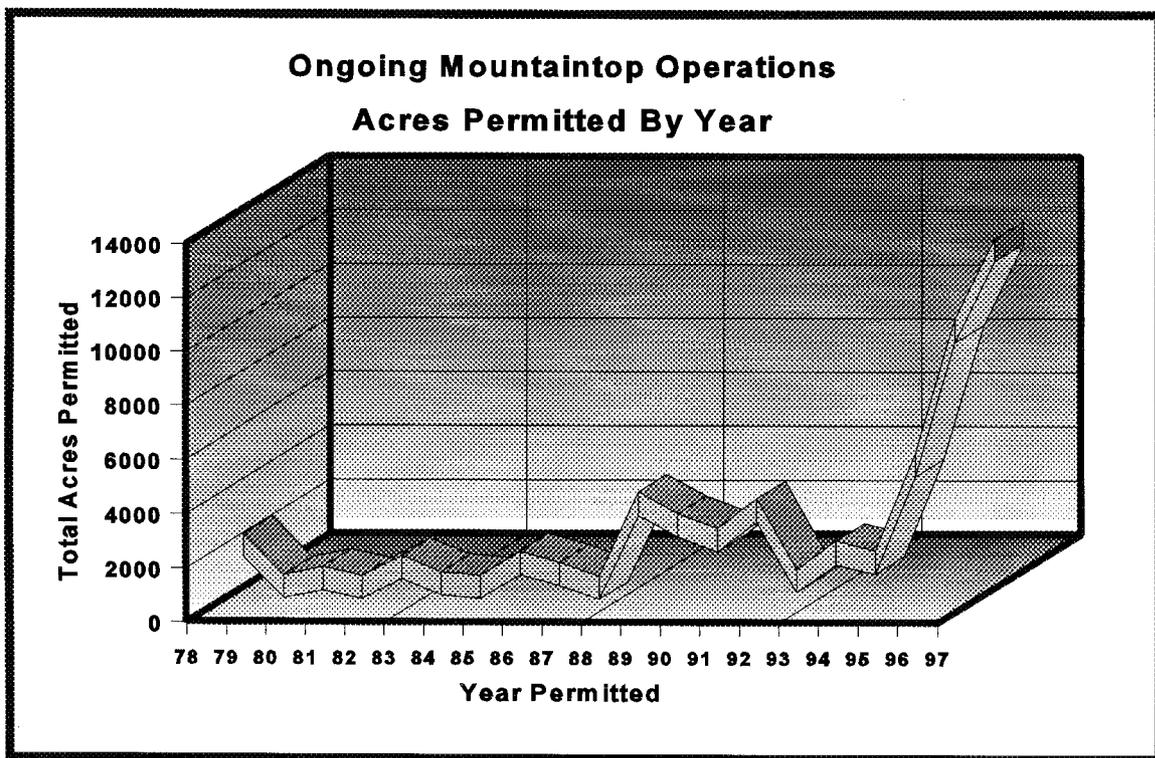
Chart A-1 shows the number of ongoing mines included in all categories of "mountaintop operations." It shows that the number of such operations has increased in recent years. Appendix III contains a listing of ongoing mountaintop permits issued in the State as of June 1, 1998. Table A-3 also shows the number of ongoing mountaintop operations in the State in relation to other mining operations. As chart A-2 shows, the acreage disturbed by mountaintop operations has also risen. This dramatic increase in the number and scale of these operations may help explain the upsurge in the public's interest in mountaintop operations. It is important to emphasize that the charts cover more than "mountaintop-removal" operations in the regulatory sense. The information was obtained from the State's permit tracking system, which does not differentiate between sites with an AOC variance and those without an AOC variance. After the State has completed its current effort to refine the database from which this information was gathered, the data in these charts may change somewhat. However, OSM believes the trends reflected are correct.

CHART A-1



Source: WVDEP's Environmental Resources Information Network

CHART A-2



Source: WVDEP's Environmental Resources Information Network

TABLE A-3

<i>Permanent Program Inspectable Units* in West Virginia As of June 1, 1998</i>		
Type Mine	Number of Inspectable Units	Bonded Acres
Surface		
Mountaintop	84	44,431
Area	260	63,680
Contour	440	94,069
Underground	1,055	29,712
Other Facilities	738	65,466
Totals	2,577	297,358
*Does not include abandoned units which remain unreclaimed.		

a. Site Selection

OSM, in cooperation with WVDEP, established a team to conduct this evaluation. This joint State/Federal review team selected the sites evaluated in this report from a list of sites provided by WVDEP. Appendix IV contains a copy of the State listings from which the selections were made. Because the State's Environmental Resources Information Network (ERIN) could not identify mining operations with mountaintop-removal or steep-slope AOC variances, the team had to select the sites from a broad list of mining types. The joint review team selected sites from the following categories in order to evaluate the three types of mining practices mentioned above:

- four permits listed as "mountaintop" operations;
- nine large permits listed as "area mines" in steep-slope terrain. At the time of selection, OSM was not able to determine if these mines were significantly different than mines listed as "mountaintop" in the State system. OSM added them to the sample for that very reason.
- three completed "mountaintop" mines that had received a final bond release; and
- three mines that had been the subject of recent news articles.

Appendices V and VI contain listings of sites selected for review by permit number and mining categories, respectively.

b. Work Plan

The OSM members of this joint State/Federal review team were responsible for conducting the actual permit reviews, as well as for developing this report. The State team members accompanied OSM on each field investigation, helping to gather data.

In evaluating operations which had been granted AOC variances, OSM reviewed permit documents to determine whether or not they had satisfied all State program requirements relating to AOC-variance approvals and postmining land-use changes. In evaluating operations where the site was to be returned to AOC, OSM reviewed permit files to determine how the approved mining maps and plans documented compliance with State AOC provisions and, if applicable, with alternative postmining land-use requirements.

OSM and WVDEP conducted field investigations on all the sites selected for this study. For each permit that had requested and received an AOC variance, the onsite evaluation determined whether the final surface configuration of the permit area was consistent with the approved permit and whether or not its alternative postmining land use was in development or had been achieved according to the plans and schedule required by the approved State program. For those sites that are to be returned to AOC (that is, for permits that did not request or receive an AOC variance), field investigations evaluated what site conditions WVDEP generally views as amounting to "AOC." Review team members photographed each site to show current conditions. OSM obtained a representative cross section of premining and postmining land configurations either from company data, where available, or site surveys. Chapter B of this report shows both the cross sections and the photographs the review team compiled for each of the 19 sites.

In general, the review team gathered descriptive information to assess how the State has been implementing the AOC restoration requirement. This information included:

- descriptions of elevation changes;
- a measurement of the total relief; *i.e.*, the difference in elevation between the highest mountaintop, ridge, or hill and the lowest valley in the permit area for the highest mountain affected by mining in the permit area;
- excess spoil calculations;
- photographs of the site and the surrounding area;
- typical cross sections showing premining and postmining topography;

- field observations of postmining drainage patterns compared to premining drainage patterns; and
- a general description of the mining operation based on permit and inspection documents.

This information was used (1) to document what the West Virginia regulatory authority regards as postmining AOC and (2) to evaluate differences, if any, between the final configuration of sites with AOC variances and those without AOC variances.

6. FINDINGS AND ANALYSES

a. Approximate Original Contour (AOC)

In order to facilitate a more comprehensive understanding of State policies and practices on AOC, the evaluation in this report gathered information beyond what might normally be reviewed by OSM on a State AOC decision. For example, rather than only checking to see if the State followed a reasonable public process in making its determination and checking to see if the on-the-ground reclamation conformed to the permit, OSM developed its own descriptions of the site including cross sections, photographs, fill measurements, *etc.* to facilitate an overall understanding of what was being allowed as AOC within the State. Tables A-4 and A-5, as well as chapter B of this report, provide descriptive information about all the sites evaluated. As indicated above, this information, to some extent, goes beyond what is required by current regulations.

Table A-5 shows that not all of the permit applications that were reviewed by OSM contained information regarding swell factors and the amount of predicted excess spoil to be placed in fills. There is no specific requirement in the regulations relating to swell factor, but the permit application should contain information regarding spoil calculations and the amount of excess spoil to be placed in fills. The older permits lacked this information, but most newer permits contained it.

To help evaluate how WVDEP is making AOC determinations, OSM compared sites that were to return the land to AOC to sites that were granted variances from AOC. As a result of this comparison, OSM made the following observations:

- Both sites with and sites without AOC variances may sustain comparable reductions in elevation.
- Both sites with and sites without AOC variances require excess spoil disposal fills. On the larger sites, these may be several thousand feet in length (see table A-5). Valley fills hold the excess spoil not needed to achieve AOC or, for those sites with an AOC variance, the spoil not needed to achieve the approved postmining land use. Valley fills are outside the mined area to which AOC applies. Therefore, valley fills themselves are not subject to a requirement to achieve AOC.

KEY TO COLUMNS IN TABLE A - 4

Selected Sites-- Permit numbers for sites in the evaluation listed in date order of the original application with the last two digits representing the year received.

Entire Coal Seam Removed Y/N--This column is to indicate if the mine removed at least one entire coal seam in the upper fraction of a mountain, ridge, or hill. A multiple seam operation would not have to remove all seams being mined to receive a **Yes (Y)** in this column.

Stated Mining Type--These are as listed in the permit application. Note from the next column that mountaintop (mntop) does not always include a waiver indicating an AOC variance was requested making it a mountaintop removal in the regulatory sense.

Requested AOC Variance Type--

SS--The permit was approved with a steep-slope AOC variance.

MTN--The permit was approved with a mountaintop-removal AOC variance.

NA--No variance was approved. The site is to be returned to AOC.

Premining Land Use--Existing land use as described in the permit.

Postmining Land Use--Land use to be attained after mining according to the permit.

Total Relief--Difference in elevation between the highest mountain ridge or hilltop and the lowest valley floor in the mining area.

Largest Elevation Reduction--This is the largest reduction in elevation at one spot that OSM was able to determine from the typical cross sections OSM developed or from permit information. See chapter B for cross sections and photographs.

Run-Off Direction--This column indicates there was or was not visible redirection of run-off from or drainage to another watershed caused by a change in contours from premining to postmining.

TABLE A-4

<i>Characteristics of Sites Selected for Review</i>									
Selected Sites	Entire coal seam removed Y/N	Stated Mining Type	Requested AOC Variance (Type)		Premining Land Uses	Postmining Land Uses	Total Relief (Feet)	Largest Elevation Reduction	Run-off Pattern Changed (Y/N)
			Y/N	SS / MTN					
S-201-76	Y	Mtntop/ Auger	Y	MTN	Woodland/ Wildlife	Pastureland/ Woodland/ Wildlife	720	80	N
S-198-77	Y	Mtntop	Y	MTN	Forestland	Airport	450	200	N
S-128-78	Y	Mtntop/ Contour	Y	MTN	Forestland	Rangeland	760	170	N
S-142-78	N	Mtntop	Y	MTN	Forestland	Forest/Commercial Forestland	800	190	N
S-175-78	Y	Mtntop	Y	MTN	Forestland	Pastureland/ Hayland	360	50	N
S-47-84	N	Mtntop/ Area	Y	SS	Fish & Wildlife	Fish & Wildlife	580	60	N
S-5062-86	Y	Area	Y	SS	Forestland	Rangeland	800	260	N
S-5082-86	Y	Mtntop	Y	MTN	Fish & Wildlife	Fish & Wildlife	750	100	N
S-5046-88	Y	Mtntop	N	NA	Wildlife/ Forestland	Wildlife/ Forestland	400	40	N
S-6020-89	Y	Mtntop/ Area/Auger	Y	MTN/ SS	Forestland	Agriculture/ Fish & Wildlife	1060	245	N
S-3006-91	Y	Auger/Area/ Mtntop/ Contour	Y	SS	Forestland	Wildlife/ Forestland	840	200	N
S-3013-91	Y	Area/Mtntop/ Contour/ Auger	Y	SS	Forestland/ Fish & Wildlife	Commercial Woodland/ Fish & Wildlife	750	150	N
S-5006-91	Y	Mtntop/Area	Y	SS	Forestland	Fish & Wildlife	1000	90	N
S-5055-92	N	Contour/ Area/Auger	N	NA	Forestland/ Wildlife	Fish & Wildlife Recreation	450	50	N
S-3021-93	Y	Mtntop/Area/ Contour	N	NA	Forestland	Rangeland	760	80	N
S-3035-93	Y	Area/ Contour/ Mtntop	N	NA	Forestland/ Fish & Wildlife Recreation	Fish & Wildlife Recreation/ Forestland	800	90	N
S-4010-96	Y	Area/Mtntop/ Contour	N	NA	Forestland	Forestland	750	100	N
S-5003-96	Y	Area/Auger/ Contour/ Mtntop	N	NA	Forestland	Fish & Wildlife Recreation	500	210	N
S-5023-96	Y	Area/Auger/ Contour/ Mtntop	N	NA	Forestland	Fish & Wildlife Recreation/ Forestland	900	300	N

KEY TO COLUMNS IN TABLE A-5

Selected Sites-- Permit numbers for sites in the evaluation listed in date order of the original application with the last two digits representing the year received.

Permit Size--The size in acres of the area covered by the listed permit.

AOC Variance Y/N--This column is to indicate if the permit as issued included a variance from the requirement to reclaim to AOC. A (Y) in this column means the permit was approved with either a mountaintop-removal or steep-slope AOC variance.

Premining Overburden--This is the volume, in million cubic yards, of materials overlying the coal seam(s) prior to mining. This volume includes the volume of materials between coal seams for multiple-seam operations. Unless noted, the volume is "in-place" volume, not for broken or loose material.

Predicted Swell--This column lists the predicted increase in the volume of material which results from the breakage or loosening of the overburden, in percentage and volume terms. The "swell" of material is a function of the type of rock and the method of breaking or loosening. The volume of material indicated in this column plus the premining overburden volume is roughly equivalent to the volume of "spoil" that must be placed back on the mined area or in excess spoil disposal sites, usually valley or durable rock fills in West Virginia.

Total Spoil Generated by Mining--The total loose volume of material generated in the mining process of breaking up and the material (overburden) above the coal seam for removal.

Proposed Fill--This column lists the portion of the total spoil material which was not going to be placed on the mined area and that was proposed to be placed in fills, in both percentage and volume terms.

Number of Fills--This is the number of fills into which the proposed fill volume was to be deposited.

Total Length of All Fills--This is the combined length in thousands of feet of all the fills.

NA--No data available.

TABLE A-5

<i>Fill Data for Sites Selected for Review</i>								
Selected Site	Permit Size (acres)	AOC Variance Y/N	Premining Overburden ¹	Predicted Swell ²	Total Spoil Generated by Mining ¹	Proposed Fill ³	Number of Fills	Total Length of all Fills
S-201-76	100	Y	NA*	NA / NA	NA	NA / NA	2	1.05
S-198-77	185	Y	NA	NA / NA	NA	NA / 4.3	1	0.79
S-128-78	1,040	Y	NA	NA / NA	NA	NA / NA	2	13.73
S-142-78	483	Y	33.4	25% / 8.4	41.8	42% / 17.6	5	5.83
S-175-78	127	Y	NA	NA / NA	NA	NA / NA	3	1.05
S-47-84	107	Y	NA	NA / NA	10	62% / 6.2	2	3.10
S-5062-86	535	Y	NA	NA / NA	NA	NA / NA	2	2.35
S-5082-86	242	Y	19.8	21% / 4.1	23.9	58% / 13.8	2	2.55
S-5046-88	96	N	NA	NA / NA	NA	NA / NA	3	2.95
S-6020-89	657	Y	NA	NA / NA	NA	NA / NA	3	10.60
S-3006-91	803	Y	134.4	25% / 33.6	168	8% / 12.8	5	9.07
S-3013-91	511	Y	87.4	30% / 26.2	113.6	40% / 45.9	3	7.48
S-5006-91	852	Y	81.8	20% / 16.3	98.1	61% / 59.5	2	11.05
S-5055-92	613	N	NA	NA / NA	NA	NA / NA	4	4.53
S-3021-93	1,339	N	NA	NA / NA	103.6	45% / 46.7	14	26.43
S-3035-93	1,036	N	98.4	25% / 24.6	123	34% / 42	4	20.30
S-4010-96	545	N	37.6	40% / 15.1	52.7	33% / 17.6	3	8.85
S-5003-96	2,088	N	312.3	23% / 71.8	384.1	44% / 168	7	61.60
S-5023-96	1,676	N	NA	NA / NA	472.4	44% / 207.4	5	40.23

* NA = No data available
¹ This column is measured in million cubic yards (mcu).
² This column shows percent of premining overburden and volume measured in million cubic yards (mcu).
³ This column shows percent of total spoil and volume measured in million cubic yards (mcu).

Nevertheless, valley fills can affect the achievement of AOC in the mine area. That is, if the raising of the valley floor is such that, when compared to the reduction in elevation of the mountain, it significantly alters the premining topography, the change of configuration of the mined area in relation to the surrounding terrain is a useful indicator of whether AOC has been achieved.

- Where data was available, sites with AOC variances had a somewhat wider percentage range of excess spoil being placed in fills than did sites without AOC variances. As table A-5 shows, the percentage of spoil being placed in fills ranged from 8 to 62 percent for sites with AOC variances and between 33 and 45 percent for sites without AOC variances. Both sites with and without AOC variances placed more material in the fill than could be accounted for by just the swell factor, which ranged from 20 to 40 percent, according to the permits. (Excavated material swells because of the creation of voids during mining. The swell factor is one of the elements considered in estimating the number of fills needed to conduct an operation.) Current regulations do not place a numerical limit on the amount or percentage of material which may be placed in a fill. This information may be a good indicator of the degree to which an operation proposes to use available material to reach AOC.
- There were no significant changes in general drainage patterns for any site. (See table A-4). In other words, even if a fill may have covered the valley floor, there was no visible significant redirection of runoff from one drainage area or watershed to another.
- Final grading plans for some sites that were to be returned to AOC differed little from those for sites that had AOC variances. As illustrated by the data for each permit in chapter B, both sites with AOC variances and sites that were to be returned to AOC have created similar looking level areas on some parts of the permit as well as similar changes in elevation.

Other observations OSM made concerning sites that were to return the land to AOC were:

- During the permitting process, no other agencies or members of the public objected to the State's determination that the sampled sites, if mined and reclaimed in accordance with their permits, would meet the AOC requirement.
- Disturbances at the sites have generally been in the upper reaches of the mountain and total relief has not been eliminated. Typically, the "relief"—*i.e.*, the distance between the valley floor in the immediate area to the highest peak prior to mining—was reduced, but it was not eliminated. In West Virginia, since the mountains in the surrounding area are not evenly spaced or of an even elevation, changes at the top of the mountain can still blend into the surrounding terrain if properly shaped.

- Some operations do a better job of creating relief than others. Some operations blend well into the surrounding terrain. The visual differences in many areas are related more to differences in ground cover between the mined sites and adjacent areas than to actual differences in land form.
- The slopes of the regraded areas in steep-slope areas will not be as steep as before mining. To the extent this change is in the upper reaches of a mountain, the regraded areas may still blend in with the surrounding terrain.

b. Mine Classification and Inventory

The Environmental Resources Information Network (ERIN) is an electronic database developed by WVDEP to track permitting and inspection and enforcement actions. ERIN was not created, nor was it intended, to meet regulatory requirements, but was developed as a means by which State administrators can monitor agency actions and assess program performance.

Both ERIN and State permitting documents use the term "mountaintop" not only to describe operations that will, according to their permits, be returned to AOC, but also to describe operations that will *not* be returned to AOC. The use of this broad term has led to the erroneous conclusion that all mines termed "mountaintop" by the State will create flat land. But, as this report notes, in accordance with both State and Federal regulations and notwithstanding State usage, mountaintop operations that are returned to AOC may not meet one of the key criteria for *mountaintop-removal* operations, *i.e.*, they do not create a flat or gently rolling plateau. As a consequence, these operations are not required to meet the regulatory requirements related to mountaintop-removal mining.

State officials have acknowledged that ERIN was never designed to distinguish between the three types of mountaintop operations and have agreed that they will begin reviewing permits to determine what kind of variance, if any, has been approved. According to WVDEP officials, ERIN has recently been modified to capture data regarding various types of AOC variances. As a consequence, from this point forward, these data can be entered or updated as operators submit future permit applications, modifications, renewals, or revisions.

WVDEP has agreed to accelerate its efforts in updating ERIN to accurately identify all mining operations in the State with mountaintop-removal and steep-slope AOC variances. In cooperation with OSM, WVDEP has created a permit review form (see appendix VII) which is being used by its field staff in characterizing the type of mining on each operation for which the staff has responsibility. The data will then be entered into ERIN. WVDEP anticipates completing this task in the near future.

This updated information will differentiate among the three categories of mines described earlier in this report, *i.e.*, (1) mines which remove all of the coal seam or seams in the upper fraction of a mountain or ridge and request a mountaintop-removal variance from AOC; (2) mines which

remove all of the coal seam or seams in the upper fraction of a mountain or ridge and return the land to AOC; and (3) mountaintop mines in steep-slope areas (slopes exceeding 20 degrees) which have received steep-slope AOC variances according to State records.

c. Mountaintop-Removal Mining Operations With AOC Variances

1. Approved Program Language Differences

The language in the approved State program differs somewhat from the Federal language and certain aspects of the State program requirements may require further attention, as follows:

- For mountaintop-removal operations that have been granted variances from AOC, the approved State program authorizes postmining land uses that may be inconsistent with SMCRA. Unlike SMCRA, WVSCMRA specifically provides for "woodlands" as an acceptable postmining land use for mountaintop-removal operations. "Woodlands" is defined in CSR 38-2-2.134 to mean commercial woodlands where the postmining land use would result in the development of a commercial product for which flat or gently rolling land is essential to facilitate the operation of mechanical harvesting equipment.
- OSM approved the woodlands postmining land use for mountaintop-removal AOC variances as part of its initial approval of the entire West Virginia program. *See* 46 Fed. Reg. 5919 (Jan. 21, 1981). SMCRA recognizes "agriculture" as an acceptable postmining land use for a mountaintop-removal AOC variance. The Secretary had determined shortly after SMCRA's enactment, however, that "silviculture" or general forestry does not constitute "agriculture" within the meaning of Section 515(c)(3). *See* 44 Fed. Reg. 15288-15289 (March 13, 1979). Nevertheless, the Secretary approved the "woodlands" postmining land use, reasoning that

by strictly limiting the definition of woodlands to require the operator to demonstrate that flat land is *essential* to the proposed *commercial* land use, West Virginia would permit such use only where the intent of the Federal rule is met. Thus, although there may be no across-the-board need for flat areas for silviculture, there might in a specific case be special circumstances which would make flat land essential.

See 46 Fed. Reg. at 5919 (January 21, 1981). (Emphasis in original.)

None of the initial sampled sites with a mountaintop-removal variance specifically listed "woodlands" as a postmining land use. One permit issued in 1978 listed commercial forestland, but it lacked the required explanation for "woodlands,"

i.e., a demonstration that flat land is essential for the operation of mechanical harvesting equipment. The reclamation on the sampled site had not advanced to the stage where OSM could review how the commercial forestland land use would be actually implemented. However, because the State regulatory definition of the term woodlands is unusual, with stringent criteria, OSM believes that it should continue to monitor the granting of AOC variances for mountaintop-removal mines proposing "woodlands" as a postmining land use.

- Language in State law governing mountaintop-removal operations differs from the requirements of Subsection 515(c)(3)(B) of SMCRA in that it does not require applications for such AOC variances to provide exactly the same assurances as listed in the Federal law. Specifically missing is language requiring assurances that the proposed postmining land use be (1) obtainable regarding expected need and market data and (2) assured of investment in necessary public facilities. The State statute, as approved by OSM on January 21, 1981, did not contain the requirement regarding expected need and market data. An individual commented to this effect prior to program approval, but OSM did not address the matter in its January 21, 1981, *Federal Register* notice (Administrative Record Nos. WV 147 and WV 392). In 1981, attorneys for the State maintained, and OSM apparently agreed, that another criterion of State law encompasses the Federal requirement that the proposed postmining land use can and will be serviced by necessary public facilities: specifically, a State provision which requires that it be shown that the postmining land use is "practicable with respect to achieving the proposed use." (See Section 22-3-13(c)(3)(ii) of WVSCMRA). The review of the sample mountaintop-removal permits with AOC variances revealed that WVDEP is not requiring permit applicants to supply information that would meet the intent of either of these requirements. From the sampled permits, OSM cannot judge conclusively the degree to which operations have been successful in achieving the postmining land uses they proposed. The number of approved program permits ready for bond release is limited and, as explained elsewhere in this section, includes land uses not in the approved program.
- Section 515(c)(3) of SMCRA provides that a mountaintop-removal AOC variance may be granted only if, after mining, the site will result in an "industrial, commercial, agricultural, residential or public *facility* (including recreational facilities) use." (Emphasis added.) The State program, by contrast, authorizes mountaintop-removal operations for *any* "public use," not just public facilities. *Black's Law Dictionary* defines *facility*, in relevant part, as "something that is built or installed to perform some particular function." It also defines *public*, in relevant part, as "open to common use; . . . not limited or restricted to a particular class of the community." The State "public use" provision was approved by the Secretary as part of the original program on January 21, 1981. The approval document does not address the differences between "public use" and "public facility (including

recreational facilities) use." It would seem that Congress included the word "facility" in the mountaintop-removal provisions to ensure that after mining the site would be capable of supporting a development such as an amphitheatre, ball field, airport, community center, or public shooting range that would be constructed for public use. Although none of the permits in the sample specifically authorized "public use" as the postmining land use, State officials have discussed the possibility that the "fish and wildlife habitat and recreation lands" would be approvable as a "public use." OSM will be considering this issue further in review of a pending program amendment discussed in the next paragraph.

- West Virginia currently has a program amendment pending before OSM that would permit "fish and wildlife habitat and recreation lands" to be an allowable postmining land use for mountaintop-removal operations. Because Section 515(c)(2) of SMCRA does not specifically mention "fish and wildlife habitat" or "hunting and fishing" as acceptable postmining land uses, the question is whether "fish and wildlife habitat" would constitute a "public facility (including recreational facilities) use" within the meaning of Section 515(c)(3) of SMCRA. West Virginia has asserted that, under the proposed amendment, "fish and wildlife habitat" would be authorized only if the operator provides for public access after mining. OSM earlier published this proposal for public comment and the comment period has expired. *See* 63 Fed. Reg. 39790 (July 24, 1998). With the release of this report, OSM plans to reopen the comment period on this issue by notice published in the *Federal Register*.

2. Observed Postmining Land Uses

In its review of those permit applications with mountaintop-removal AOC variances, OSM generally found the required documentation to be absent (see table A-6). All of the permits with mountaintop-removal AOC variances lacked at least some of the documentation required by the State program for approving the designated postmining land use.

OSM observed the following land uses at the seven sample sites:

- *Pastureland*. - Two sites had been approved for "pastureland" which OSM has determined fits within the "agriculture" category of Section 515(c)(3) of SMCRA. 30 C.F.R. § 701.5 44 Fed. Reg. 14933-14934 (March 13, 1979). These were older operations approved in 1976 and 1978 that have been released from bond. One site appears unmanaged; the other site is being grazed by a dozen head of bison/cattle. Both permits, which are approximately 100 acres each, received final (Phase III) bond release from the State in 1985. Both permit applications for these sites lacked the documentation required by the approved program. However, both were initially approved prior to 1981, when West Virginia became a primacy State.

TABLE A-6

*Mountaintop-Removal AOC Variance
Criteria for Sites Selected for Review*

Required Findings	S-201-76	S-198-77	S-128-78	S-142-78	S-175-78	S-5082-86	S-6020-89*
The proposed postmining land use constitutes an equal or better use.	Not found (1)						
The proposed use will be compatible with adjacent land uses and existing land use plans.	Y	Not found (1)					
County commissions and other State and Federal agencies were provided an opportunity to comment on the proposed land use.	Y	Not found (1)	Not found (1)	Y	Not found (1)	Not found (1)	Not found (1)
The application contains a specific plan and assurances that:							
(1) The proposed postmining land use will be compatible with adjacent land uses.	Y	Not found (1)	Not found (1)	Not found (1)	Not found (1)	Y	Not found (1)
(2) The proposed use will be practicable with respect to financing and completing the proposed use.	Not found (1)	Y	Not found (1)				
(3) The proposed use will be supported by commitments from public agencies where appropriate.	NA (2)	Y	NA (2)				
(4) The proposed use will be planned pursuant to a schedule that will integrate the mining operation and reclamation with the postmining land use.	Y	Y	Y	Not found (1)	Not found (1)	Y	Y
(5) The proposed use will be designed by an approved person to assure the stability, drainage, and configuration necessary for the intended use of the site.	Y	Y	Not found (1)	Not found (1)	Not found (1)	Y	Not found (1)
(6) The proposed use is obtainable regarding expected need and market data. (3)	Not found (1)						
(1) Based on review of WVDEP files in Nitro, WV. (2) NA = Not applicable. (3) Exact language from SMCRA is not found in the approved State Program. * Permit S-6020-89 received both a mountaintop-removal AOC variance and a steep-slope AOC variance and is included on both Table A-6 and Table A-7.							

- *Airport.*-One older site had been approved in 1977 as an "airport," which is a "public facility ... use" within the meaning of Section 515 (c)(3) of SMCRA. The airport was constructed and is in place. The State released the site from bond on December 16, 1996.
- *Agriculture, and fish and wildlife.*-One site had been permitted in 1989 as a mountaintop and area mine with a combination mountaintop-removal and steep-slope AOC variance. The permit documentation does not make clear which land use applies to which portion of the permit area. "Agriculture" is an approvable land use for mountaintop-removal AOC variances, but the application does not contain the required documentation supporting this use. Most of the documentation in the application indicates that the primary postmining land use will be "fish and wildlife habitat." "Fish and wildlife" is not listed in SMCRA or the approved program as an acceptable postmining land use for mining operations with a mountaintop-removal AOC variance. Under SMCRA, "agriculture" is not an acceptable postmining land use for a steep-slope mining operation with an AOC variance, but the State program currently allows this use on the grounds that it constitutes an equal or better use. As discussed elsewhere in this chapter, OSM has notified the State that this portion of its program is inconsistent with Section 515(e)(2) of SMCRA. Final reclamation was not completed at the time of the field review on this site.
- *Fish and wildlife.*-One permit had been issued in 1986 with a postmining land use of "fish and wildlife habitat." This land use is not part of the approved State program for a mountaintop-removal AOC variance. Final reclamation was not completed at the time of the field review on this site.
- *Commercial forestland.*-One site was permitted in 1978 and then re-permitted under the permanent program, with a postmining land use of "commercial forestry." As discussed earlier, under the State program, "woodlands" is an acceptable postmining land use for mountaintop-removal operations, but "commercial forestry" as described in the permit application does not appear to satisfy that use. The permit application provides no information about whether flat land is essential to allow mechanical harvesting of a commercial product. In addition to lacking required documentation, more reclamation will have to be done to satisfy the proposed postmining land use. All mined areas have been revegetated, but final reclamation has only been completed on the lower faces of the fills with dense stands of black locust. Although classified as a mountaintop-removal operation with an AOC variance, the entire coal seam was not completely mined and the postmining land use does not satisfy the existing mountaintop-removal AOC variance requirements.

- *Rangeland.*-One permit had been approved in 1978 with a proposed postmining land use of "forestland/hayland." This was changed to "rangeland" in 1998. WVDEP has discussed the possibility that "rangeland" would constitute "agriculture" within the meaning of Section 515(c)(3) of SMCRA. While "rangeland" may be considered to be an agricultural land use, an application for "rangeland" as a postmining land use in relation to a mountaintop-removal AOC variance must be specifically justified. However, the permit documentation for the operation in question does not demonstrate how "rangeland" satisfies the postmining land use requirements for a mountaintop-removal operation with an AOC variance. Final reclamation was not completed on this operation at the time of the inspection. Therefore, OSM was unable to completely evaluate the success of reclamation.

OSM had originally planned, by including some older sites in the sample, to evaluate the actual on-the-ground success of mountaintop-removal operations in meeting the postmining land uses as designated by SMCRA. Because some of the postmining land uses are not authorized by the program and because reclamation is still going on at most sites, OSM cannot reach conclusions on this issue. It is apparent that the proposed uses are more likely to be a low intensity agricultural use, such as "pastureland," rather than the other uses listed in SMCRA, *i.e.*, "residential, commercial, industrial or public facility (including recreational facility) use."

3. Additional Permits Examined In Order To Test Findings

The twelve sampled permits with AOC variances (of the 19 permits in the original sample) were all issued before 1992. For this reason, OSM was concerned that the observations in the evaluation might not reflect current practices. To gain insight into more recent practices, OSM reviewed seven additional permit files that had AOC variances and had been issued within the last three years (see appendix VIII-1). With respect to these seven, OSM reviewed only the documentation related to the postmining land uses; that is, it did not complete a full analysis similar to the other 19 sites in the original sample.

The review of the seven additional permit files confirmed that problems continue to exist with the documentation and the legitimacy of postmining land uses for mountaintop-removal mining operations (see appendix VIII-2 and VIII-3). Four of the seven permits had both a mountaintop-removal and a steep-slope AOC variance. All of the seven permits evaluated by OSM had premining land uses of "forestland." Two of the permits authorized a postmining land use of "pastureland," two authorized a postmining land use of "commercial woodlands," one authorized a postmining land use of "fish and wildlife habitat and recreation lands," and the remaining two authorized various combinations of usage for each permit, including "forestland/commercial woodlands" and "fish and wildlife habitat and recreation lands/pastureland/hayland." All seven permits generally lacked documentation on how they corresponded with the postmining land uses authorized by the program in connection with AOC variances.

As mentioned, three of the additional permits had "commercial woodlands" as either the primary or as part of a combined postmining land use. In order to approve "commercial woodlands" as a postmining land use for mountaintop-removal operations with AOC variances, the operator must demonstrate and WVDEP must find that the flat land is essential for the operation of mechanical harvesting equipment. None of the permit applications contained this demonstration.

The current State permit application form may be contributing to the confusion about the appropriate postmining land uses. The application form does not specifically list or reference all the requirements for an AOC variance. Even though the permitting requirements for mountaintop-removal and steep-slope mining operations are different, WVDEP and permit applicants appear to be applying the postmining land use requirements for steep-slope variances to both types of operations.

d. Steep-Slope Mining Operations With AOC Variances

Six of the 19 permits in the original sample were for large mines with steep-slope AOC variances. These were included in the sample because the operations appeared to have similar characteristics to mountaintop-removal operations and are to be granted only for specific postmining land uses. One of those six had received both a mountaintop-removal and a steep-slope AOC variance. In connection with these six permits, OSM identified issues with both the State program and its implementation.

1. Appropriateness of Variance Type

As table A-4 shows, five of the six steep-slope AOC variances had been granted for areas where the entire coal seam or seams in the upper fraction of a mountain were to be removed. One of the five also had a mountaintop-removal AOC variance, but the application was not clear as to which provisions applied to which areas of the permit. All circumstances where the entire coal seam or seams were removed should have given rise to a mountaintop-removal AOC variance, rather than a steep-slope AOC variance for an area mine. The type of variance is important because different standards apply, particularly in relation to the allowable postmining land uses.

2. Program Language Differences

- The approved program does not limit steep-slope mining operations with AOC variances to the specific postmining land uses specified in Section 515(e)(2) of SMCRA. Federal law requires that, in order to approve a permit application with a steep-slope AOC variance, the land, after reclamation, must result in an

"industrial, commercial, residential or public use (including recreational facilities)." The approved West Virginia program, however, only requires that the proposed use be an "equal or better economic or public use" (see table A-2).²

In 1993, the State submitted a proposal to OSM to amend its steep-slope mining requirements at Section 22-3-13(e) of WVSCMRA to allow WVDEP to promulgate rules permitting variances from AOC. In response, on April 1, 1994, OSM advised the State that a variance from AOC in a steep-slope area may be granted only if the mined land, after reclamation, would be suitable for an "industrial, commercial, residential, or public use, including recreational facilities." The State resubmitted its amendment without making the required change. On February 21, 1996, OSM approved the State's proposal to amend Section 22-3-13(e). OSM approved the revision only to the extent that it applied to steep-slope areas as defined in Section 22-3-13(d) of WVSCMRA. In addition, OSM required the State to amend its program to limit such variances to "industrial, commercial, residential, or public use" in accordance with Section 515(e)(2) of SMCRA. The State was required to submit either a proposed amendment or a schedule with a description of an amendment to OSM by August 1, 1996. The State missed this deadline; but on June 17, 1998, WVDEP filed a proposed rule regarding steep-slope AOC variances with the West Virginia Legislative Rulemaking Review Committee. This rule has not been submitted to OSM for approval.

3. Observed Postmining Land Uses

OSM determined that in some instances a mountaintop-removal AOC variance would have been more appropriate than a steep-slope AOC variance because the entire coal seam or seams had been removed. Even in these cases, however, where a steep-slope AOC variance was inappropriately granted in lieu of a mountaintop-removal AOC variance, OSM evaluated State approved actions against the State program's steep-slope criteria.

Table A-7 illustrates that none of the permit applications contained all of the documentation for steep-slope AOC variances required by CSR 38-2-14.12. Most applications contained letters from the landowners requesting that the variance be granted, but the required plans and approvals for a steep-slope variance were often lacking or incomplete.

²The West Virginia Administrative Record indicates that the State's initial AOC-variance requirements at the now superseded West Virginia Code Section 20-6-13(3) are similar to the current statutory requirements at Section 22-3-13(e) of WVSCMRA. However, neither of these statutes contains the specific postmining land-use provisions for steep-slope mining operations required by Section 515(e)(2) of SMCRA. Nevertheless, without explanatory comment, OSM approved the State's initial AOC-variance requirements as part of the West Virginia State program. 46 Fed. Reg. 5915-5956 (January 21, 1981).

TABLE A-7

<i>Steep-Slope AOC Variance Criteria for Sites Selected for Review</i>						
Required Findings	S-47-84	S-5062-86	S-6020-89*	S-3006-91	S-3013-91	S-5006-91
The permit area is located on slopes that exceed an average of 20 degrees.	Y	Y	Y	Y	Y	Y
All highwalls are completely backfilled.	Y	Y	Y	Y (1)	Y	Y(1)
Only spoil not necessary to achieve the postmining land use may be removed from the mine bench.	Not found (2)					
The permitted and adjacent areas will be improved by reducing pollutants to ground and surface waters and flood hazards.	Not found (2)	Y	Y	Y	Not found (2)	Not found (2)
Appropriate Federal, State, and local governmental agencies were provided an opportunity to comment on the proposed postmining land use and deemed it to be an equal or better economic or public use.	Y	Y	Not found (2)	Not found (2)	Not found (2)	Not found (2)
The plan is designed and certified by a registered professional engineer to assure stability, drainage, and configuration necessary for the intended use of the site.	Y	Y	Not found (2)	Not found (2)	Not found (2)	Not found (2)
The landowner requested in writing that a variance be granted to achieve the approved alternative postmining land use.	Not found (2)	Y	Y	Not found (2)	Y	Y
(1) Proposed permit still active. (2) Based on review of WVDEP files in Nitro, WV.						
*Permit S-6020-89 received both a mountaintop-removal AOC variance and a steep-slope AOC variance and is included on both Table A-6 and Table A-7.						

The evaluation of actual steep-slope variances granted by WVDEP indicates that postmining land uses presently are not limited to "industrial, commercial, residential or public use." Instead, of the six permits that requested steep-slope AOC variances, one permit applied for in 1986 had a postmining land use of "rangeland," two permits applied for in 1984 and 1991 had postmining land uses of "fish and wildlife," one permit applied for in 1991 had a postmining land use of "wildlife/forestland" and one permit applied for in 1991 had a postmining land use of "commercial woodlands and wildlife" (see table A-4). The one permit applied for in 1989 with a combination mountaintop-removal and steep-slope AOC variance had postmining land uses of "agriculture" and "fish and wildlife." All of these proposed postmining land uses currently satisfy the State's current "equal or better" postmining land use provision. However, when West Virginia, as required, amends its program to limit steep-slope AOC variances, these permits may not satisfy the new program requirements.

4. Additional Permits Examined in Order to Test Findings

As noted in section 6.c.3, OSM went beyond the original sample of 19 permits to review the postmining land use decisions on seven additional permits with AOC variances issued in the last three years. Four of those permits had both a mountaintop-removal and a steep-slope AOC variance (see appendix VIII-2). None had a steep-slope AOC variance independent of a mountaintop-removal variance. One of the permits provided for "woodlands" as the postmining land use. This postmining land use is only allowable for mountaintop-removal operations with AOC variances, and should not have been approved for steep-slope mining operations with AOC variances.

The review of these additional permits showed that, in the past few years, documentation has improved with respect to the steep-slope variance requirements (see appendix VIII-4). It is, however, still difficult to determine where the application intends the mountaintop-removal variance requirements to apply, and where only the steep-slope variance requirements would apply. The State may allow the use of both kinds of variances in a permit; but, as required by the permit application form, the operator should be able to distinguish between the types of variances and identify the specific areas for which each variance applies.

e. Site Reclamation and Utility

Although this evaluation concentrated on postmining land use and AOC, the oversight team generally observed that the sites were well revegetated after mining and the reclaimed areas appeared stable.

7. PROPOSED CONCLUSIONS AND RECOMMENDATIONS

OSM has concerns with the administration of various aspects of the State program. Some of the issues have existed since the early days of the program, while other concerns relate to the recent increase in the number and size of mountaintop permits. Decisions under the State program, such

as permitting actions, have been made with full public involvement without any questions or concerns being raised by any party. OSM appreciates the interest expressed by WVDEP in reviewing this topic and its willingness to assist in the data gathering and ultimate resolution of issues. OSM seeks public input on fair resolution of any issues, including whether and how to take corrective action with respect to permits obtained in good faith many years ago.

In general, OSM proposes that any reforms that result from this report should be applied prospectively, and that existing mining operations, some of which were initially permitted many years ago, be altered only to the extent practicable. OSM requests that, in addition to those permits which were examined for this report, WVDEP review all existing permits with AOC variances and apply these reforms prospectively. For example, OSM proposes that WVDEP require revisions of any permits or portion thereof that have not been reclaimed in order to ensure that final reclamation leads to an approvable postmining land use. OSM does not propose that any areas that have been regraded or that have established vegetation be disturbed in order to address the concerns raised herein.

The proposed conclusions and recommendations for mines returned to AOC and for mines with AOC variances are:

a. Approximate Original Contour (AOC)

OSM's oversight evaluation indicates an industry trend of proposing to return mine sites to AOC rather than obtaining an AOC variance. Also, the evaluation revealed that policies or procedures used for determining when a mining operation's reclamation plan satisfies requirements established for AOC are either applied inconsistently or are overly broad, resulting in varied interpretations of what constitutes AOC. Specifically, OSM believes that large, postmining changes in elevation in relation to the premining relief, the amount and location of material placed off the mined area, and land configuration (land shape or form) should be given more attention in AOC determinations.

The permit files for the sampled sites contained no objections from landowners or other interested parties contesting WVDEP's determination that the operations were designed to restore the approximate original contour. OSM, however, believes this recent industry trend of proposing to return mine sites to AOC highlights the need for careful AOC determinations. Additionally, even though mines removing an entire coal seam in the upper fraction of a mountain can return the land to AOC within the meaning of SMCRA, OSM believes more careful attention is needed with regard to the issue of what constitutes AOC.

During the evaluation, OSM observed that, in some cases, there is not much difference in the characteristics of mines which have been granted AOC variances and those which are to return the land to AOC. That is, there is little differentiation between the final grading plans that WVDEP has, for some mines, accepted as AOC, when compared to the final grading plans at other mines that WVDEP has considered as requiring a variance from AOC. Additionally, it was found that

many sites identified as returning the mined areas to AOC generated nearly as much excess spoil as the sites with an AOC variance. The result is that some mines are held to more restrictive postmining land use criteria that other seemingly comparable mines need not meet.

One particularly important issue here is whether a postmining change in elevation, by itself, constitutes a departure from AOC. As discussed in more detail in the body of the report, our initial research into the legislative history of SMCRA indicates a congressional understanding that mere change in elevation does not, by itself, trigger a requirement for an AOC variance. The primary element of approximate original contour is configuration or shape: a mined site must be restored to its original configuration in a manner that fits into the surrounding topography. Therefore, our proposed conclusion is that, although elevation is a factor in considering whether AOC has been achieved, it should not be regarded as controlling. OSM invites public comment on this issue.

Because mountaintop-removal operations also exist in surrounding states in the region, OSM invites comments on whether it should issue further guidance on AOC as it relates to mountaintop-removal operations throughout the region. Finally, OSM also invites comments on whether, if further guidance is deemed appropriate, it should be developed through a formal rulemaking amending OSM's regulations, or through other measures, such as a policy statement or an amendment to the West Virginia program.

b. Mine Classification and Inventory

A major source of confusion over what qualifies as "mountaintop-removal" mining operations, which require a variance from AOC, can be attributed to WVDEP's method of classifying, in its permitting database, various mining methods as mountaintop operations regardless of whether an AOC variance has been obtained or not. Over the years, common usage of various minetype classification terms has migrated into the classification system used by WVDEP for identifying the types of operations being conducted. If WVDEP has properly concluded that AOC will be achieved within the meaning of SMCRA in granting these permits, these operations are not technically "mountaintop-removal" operations in the legal sense that they do not need variances from AOC. OSM has found, however, that the State permit tracking system labels operations which return the land to AOC as "mountaintop" operations while also applying the same designation to operations which obtain a variance from AOC.

WVDEP's lumping together of operations that are distinct under the regulations has led to much confusion within the industry, the public, and the media. This practice has also contributed to an incorrect perception by the public that all permits listed by the State as "mountaintop" are creating flat land subject to the special postmining land use provisions of Section 515(c) of SMCRA. Additionally, due to this classification method, WVDEP's electronic database of mine permits is currently unable to identify exactly how many mines of each category may exist within the State.

Although the tracking of mountaintop-removal operations and associated waivers is not required by State or Federal law, WVDEP has made changes to its database and is in the process of reviewing all current surface mining permits to clearly identify which sites should be classified as "mountaintop-removal" operations.

c. Mountaintop-Removal Mining Operations With AOC Variances

Of the 19 permits reviewed by OSM, seven included mountaintop-removal variances from AOC. Most of the land uses associated with these variances related to either (1) low intensity agriculture use such as pastureland, (2) fish and wildlife habitat, or (3) forestry. One of the seven permits was identified in the permit as having both a mountaintop-removal and steep-slope AOC variance. The concept of having more than one AOC variance for an individual permit (both a steep-slope and mountaintop-removal) is permissible as long as the type of variance applies to the approved mining method for an identifiable area on the permit.

OSM has identified, based on its review of these permits, some questions about the WVDEP variance process. The oversight evaluation identified several permits with approved AOC variances that either lacked proper variance documentation or were based on two postmining land uses—"forestland" and "fish and wildlife habitat"—not authorized in the approved State program. West Virginia has indicated that it is not issuing any more permits with "fish and wildlife habitat" as the approved postmining land use. The following summary identifies possible factors that may have contributed to these problems and provides initial recommendations for rectifying them.

1. Approved Program Language Differences

OSM identified three significant areas in which the language of the approved State program differs from that of SMCRA and the Federal regulations. These language differences, which may have contributed to some of the other problems addressed in this report, relate to the following areas: (1) documentation of the need and market for the designated postmining land use, (2) use of "woodlands" as an approved postmining land use, and (3) allowing "public use" instead of "public facility (including recreational facilities) use" as a postmining land use.

- The State program lacks a specific reference to the expected need and market data which is referred to in Section 515(c)(3)(B)(ii) of SMCRA. Under SMCRA, this information must be supplied before a chosen postmining land use can qualify for an AOC variance. The administrative record does not contain an explanation for not requiring this specific language. The review of sampled permits revealed that WVDEP is not requiring information in the application process that could be used to meet this requirement.

- The State program authorizes "woodlands" as a postmining land use for mountaintop-removal AOC variances (W. Va. Code § 22-3-2.134). OSM's approval of "woodlands" must be understood in light of OSM's previous conclusion that "silviculture" or "forestry" was not authorized by SMCRA for a mountaintop-removal AOC variance. As approved in the West Virginia program, "woodlands" means commercial woodlands where the postmining land use would result in the development of a commercial product for which flat land is *essential* to facilitate the operation of *mechanical harvesting equipment*. OSM found that the State was allowing forestry as a postmining land use without any finding or explanation that this narrow definition had been met.
- The State program allows variances for an "industrial, commercial, woodland, agricultural, residential, or *public use*." (W. Va. Code § 22-3-13(c)(3), emphasis added.) OSM approved the "public use" variance in 1981, without comment, as part of its review and approval of West Virginia's entire comprehensive initial program. *See* 46 Fed. Reg. 5915 (January 21, 1981). OSM did not find "public use" as a postmining land use in the samples it examined, but believes, based on discussions with State officials, that the State intends its "fish and wildlife habitat and recreation lands" postmining land use to be a form of "public use" as allowed by its State program. In light of how the State is interpreting "public use," OSM proposes to reconsider whether "public use" as a category of acceptable postmining land uses is consistent with "*public facility* (including recreational facilities) *use*" as contained in SMCRA. Further, WVDEP currently has a program amendment before OSM for "fish and wildlife habitat and recreation lands." *See* 62 Fed. Reg. 31543-31544 (June 10, 1997). OSM proposes to consider this proposed program amendment in connection with the "public use" issue.

OSM has not determined the extent to which the above differences have contributed to the inadequate documentation justifying AOC variances and to unauthorized postmining land uses. Future discussions with WVDEP will identify the source of the problems and, if they are related to the approved program language, OSM will provide the State a 30 C.F.R. Part 732 notification requesting that the language be changed to correct the deficiencies. If, however, the problems are merely the result of inadequate implementation of the current State program requirement, OSM will work with WVDEP to put in place procedural revisions to prevent further occurrences.

2. Postmining Land Uses not Authorized by the State Program

The oversight evaluation found that mountaintop-removal permits have been issued with postmining land uses—"forestry" and "fish and wildlife habitat"—not authorized in the approved State program, although a program amendment to authorize "fish and wildlife habitat and recreation lands" is pending before OSM. OSM has requested that WVDEP immediately discontinue approving permits for unauthorized land uses and review permits currently in effect beyond the 19 permits reviewed for similar problems. For all current

mountaintop-removal permits already issued that have not properly applied the postmining land use provisions of the approved State program, OSM is requesting that WVDEP work with operators to ensure, where practicable, final reclamation achieves a postmining land use authorized by the program. OSM recognizes that the pending program amendment may resolve some of these concerns and, with the release of this report, OSM plans to reopen the comment period on the State's proposed amendment concerning "fish and wildlife habitat and recreation lands." A notice will be published in the *Federal Register*, and comments will be solicited from the public.

3. Inadequate Permit Documentation

OSM found that all of the mountaintop-removal permits with AOC variances lacked at least some of the documentation required for approving the designated postmining land use. In addition to the lack of information supporting the expected need and market data as mentioned earlier, the sample permits were missing certain information which varied from file to file. Other specific criteria (such as the requirement that the proposed land use be compatible with the adjacent land uses; be practicable with respect to financing and completing the proposed use; be supported by commitments from public agencies where appropriate; planned pursuant to a schedule that will integrate the mining operation and reclamation with the postmining land use; and designed by an approved person to assure the stability, drainage, and configuration necessary for the intended use) were addressed in some but not all of the permit documents.

OSM has requested that WVDEP immediately review its permit application and permitting process to assure that the program requirements are being fully implemented. Where the postmining land use is allowed by the program and the problems noted are strictly related to documentation, OSM does not propose that existing permits be revised. That is, in cases where permits are deficient only in documentation, OSM would propose that no further action be taken on previously approved permits. OSM recognizes that, in some cases, additional documentation might result in a change of the postmining land use. However, OSM does not believe that the effort to obtain additional documentation for permits, some of which were issued many years ago, would justify the expenditure of scarce regulatory resources. This proposed approach does not relieve WVDEP of its responsibility to revise its permitting procedures to ensure that these problems will not recur.

d. Steep-Slope Mining Operations With AOC Variances

OSM reviewed six large mines with steep-slope AOC variances to compare their characteristics with mines that had mountaintop-removal AOC variances. One of the six was listed in the permit as having both a mountaintop-removal and a steep-slope AOC variance. The concept of having more than one AOC variance for an individual permit (both a steep-slope and mountaintop-removal) is permissible as long as the type of variance applies to the approved mining method for an identifiable area on the permit. OSM identified the following concerns with these variances:

1. Appropriateness of Variance Type

In the review, OSM found four situations where steep-slope AOC variances had been granted, but where mountaintop-removal AOC variances would have been more appropriate because the entire coal seam or seams had been removed. This distinction is important because the postmining land uses authorized for a steep-slope AOC variance are different than those authorized for a mountaintop-removal AOC variance.

Documentation obtained by WVDEP, as required for steep-slope AOC variances, has improved in recent years, but there is still confusion as to whether a steep-slope or mountaintop-removal AOC variance should be authorized. As noted previously, the current State program allows for an "equal to or better than" land use standard to be applied to steep-slope AOC variances, while mountaintop-removal AOC variances are limited to specific land uses. OSM requests that WVDEP implement proper classification procedures for operations seeking AOC variances and review the appropriateness of AOC variances issued to all steep-slope operations with current permits.

2. Program Language Differences

The approved West Virginia program does not limit approval of an AOC variance for a steep-slope mine to the specific postmining land uses that are specified in SMCRA. This standard conflicts with SMCRA's requirement that, in order to approve a steep-slope AOC variance, an "industrial, commercial, residential, or public use, including recreational facilities" must be proposed. In February 1996, OSM requested that WVDEP submit either a proposed amendment or a schedule with a description of an amendment. The WVDEP has filed a proposed rule with the West Virginia Legislative Rulemaking Review Committee to address the required amendment. The revision is to be considered during the upcoming legislative session and, if approved, submitted to OSM for consideration. OSM requests that WVDEP consider whether it is appropriate for it to issue any steep-slope AOC variances until after an amendment is approved.