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**WEST VIRGINIA OVERSIGHT
EVALUATION REPORT**

*Approximate Original Contour
and Postmining Land Use*

Evaluation Year 1998



PREPARED BY

**U.S. Department of the Interior
Office of Surface Mining
Charleston Field Office**

**AN EVALUATION OF APPROXIMATE
ORIGINAL CONTOUR AND POSTMINING
LAND USE IN WEST VIRGINIA**

November 1998

**A draft report
prepared by the U. S. Department of the Interior,
Office of Surface Mining,
Charleston Field Office**

EXECUTIVE SUMMARY

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

1. PURPOSE OF THIS REPORT

The Office of Surface Mining's (OSM) Charleston Field Office (CHFO) has prepared this oversight report on portions of the West Virginia surface mining program, which was approved on January 21, 1981, under the Federal Surface Mining Control and Reclamation Act of 1977 (SMCRA). OSM headquarters and the Office of the Solicitor have participated in the development of the proposed conclusions and recommendations in this report. The West Virginia Division of Environmental Protection (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 document addresses *mountaintop operations*, that is, those mines that remove all or a large portion of a coal seam or seams running through the upper fraction of a mountain or ridge. The number of mountaintop operations has risen dramatically in recent years, both in number and scale, which may help explain the upsurge in the public's interest in such mines. It was in response to the extensive public interest in mountaintop operations that the CHFO and WVDEP included this topic in the general oversight agreement they signed on November 13, 1997.

Although the media have frequently categorized all mountaintop operations as "mountaintop-removal," that is only one of three types of mountaintop operations addressed in this report (see glossary for definitions). The three types are: (1) mountaintop-removal with a variance from approximate original contour (AOC), (2) mines which remove all of the coal seam or seams in the upper fraction of a mountain but which return the land to AOC, and (3) steep-slope mines with an AOC variance. Under SMCRA, as well as both Federal and State regulations, all mines are required to return the mined land to AOC, unless a variance is granted by the regulatory authority, which, in West Virginia, is the WVDEP.

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?

Mountaintop operations raise a number of other complex issues that are partially or wholly outside the confines of SMCRA. These are currently under study not only by OSM but also by other Federal agencies. One of the matters that both OSM and other Federal agencies are continuing to examine is the way mountaintop operations affect local streams through construction of valley fills. The matter of valley fills involves the overlapping jurisdiction of several Federal agencies including OSM, the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency, and the U.S. Army Corps of Engineers. A task force is currently considering how Federal agencies will coordinate to address various issues associated with valley fill mining practices. Moreover, litigation has recently been filed that raises questions about compliance with the Clean Water Act in connection with these operations. *Bragg v. Robertson*, No. 98-636 (S.D. W. Va.) (complaint filed July 16, 1998). Other state and federal land use and environmental laws, regulations, and policies might affect mountaintop operations. Some people may oppose such operations on philosophical grounds, even if they are fully in compliance with all laws and regulations. In order to provide an accurate picture of the mountaintop operations in West Virginia, this report includes some data about the size of the valley fills created in connection with the operations that served as a basis for this report. See table A-5 and the individual description reports of the sampled sites in chapter B. The report does not address the broader issues relating to valley fills, but instead, it focuses solely on the requirements of SMCRA and its implementation in West Virginia.

An important question to ask is why, rather suddenly, has the controversy emerged about mountaintop operations and whether SMCRA and other laws are adequate to deal with them. There are several reasons. One has to do with the terms of SMCRA itself. While SMCRA is a wide-ranging law, it does not clearly answer all the questions that are raised. There are some uncertainties about how to apply the AOC requirements, and how broadly or narrowly the postmining land use limitations should be construed. There is the related question about how much leeway SMCRA gives the states to address these issues. Evolution in the coal industry has also contributed to the relatively recent emergence of the issue. With the application of new Clean Air Act restrictions, West Virginia's high quality coal has become more desirable in the marketplace. Technological advances that permit larger operations operating in mountainous Appalachia are also a contributing factor. Finally, until very recently, the regulatory issues have not generally been raised in the permitting processes by other governmental agencies, by environmental groups, or by other citizens. The explanation for why it has taken so long for the issue to come to the fore, is therefore, complex.

OSM is making this report widely available, and solicits public comment on it, particularly its proposed findings and recommendations. OSM seeks public input on fair resolution of any issues, particularly as they relate to permits issued in the past several years. Details on how and where to submit comments may be found in the Introduction to this report.

2. PROPOSED CONCLUSIONS AND RECOMMENDATIONS

OSM has concerns with the administration of various aspects of the West Virginia 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.

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.

After analyzing the information gathered during the oversight process, the following conclusions and recommendations were developed:

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. Because mountaintop 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 operations throughout the region. Finally, OSM also invites comments on whether further guidance, if deemed appropriate, should be developed through a formal rulemaking that would amend OSM's regulations, or through other measures, such as a policy statement or an amendment to the West Virginia program.

A major source of confusion over what qualifies as "mountaintop-removal" mining operations, which require a variance from AOC, arises from 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. 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.

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 the 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. OSM has not determined the extent to which the above differences have contributed to inadequate

documentation justifying an AOC variance and non-approved 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.

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 that, in addition to those permits OSM examined in preparing this report, it review other permits currently in effect 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 is intended to 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.

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. OSM has requested WVDEP to initiate an immediate review of its permit application and permitting process to assure that the program requirements are being fully implemented. OSM is not proposing any corrective action for previously issued permits.

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. OSM requests that WVDEP implement proper classification procedures for operations seeking AOC variances and review the appropriateness of AOC variances issued to steep-slope operations, taking corrective actions on existing permits, where practicable.

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. OSM has requested that WVDEP submit an amendment to correct this deficiency, and WVDEP has filed a proposed rule with the West Virginia Legislative Rulemaking Review Committee to address the required amendment. OSM requests that WVDEP consider whether it is appropriate to issue any steep-slope AOC variances until an amendment is approved.

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G L O S S A R Y O F M I N I N G T E R M S

OSM has defined the mining terms listed below in an effort to improve the general understanding of mining practices within the State of West Virginia. These terms are used throughout this report. OSM has taken some of the definitions from the West Virginia Surface Coal Mining and Reclamation Act (WVSCMRA); others are culled from the Federal Surface Mining Control and Reclamation Act of 1977 (SMCRA) or from State and/or Federal regulations. OSM has developed still others solely for the purpose of the report. When not otherwise clear, the source of each definition is identified in the brackets that follow it.

State program:

Approved State program.-The West Virginia surface coal-mining program approved under SMCRA consists of the West Virginia surface mining law, regulations, policies, and procedures that OSM approved initially on January 21, 1981 [46 *Federal Register*, pages 5915 through 5956]. Subsequent amendments and actions concerning the approved State program are set forth at 30 C.F.R. §§ 948.10, 948.12, 948.13, 948.15 and 948.16.

Oversight.-The term used to describe OSM's role of monitoring a State's implementation of its approved program. Upon approving a State program, OSM's role of sharing responsibilities for regulating surface coal mining activities within a State is reduced to overseeing the State's administration of its approved program [general term described in 30 C.F.R. Part 732].

Primacy.-The term used to describe the delegation of primary authority by OSM to a State in administering its surface mining program. West Virginia obtained primacy on January 21, 1981, with OSM's conditional approval of its permanent regulatory program [general term described in 30 C.F.R. Part 732].

Approximate original contour (AOC):

AOC.-The 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. All mined areas are to be returned to AOC, unless they receive a variance from it [term defined in Subsection 22-3-3(e) of WVSCMRA and Subsection 701(2) of SMCRA].

AOC variance.-A regulatory authority may grant a variance or waiver from the requirement to restore a site to AOC if certain specified conditions are satisfied.

State and Federal law provide for the following types of AOC variances: mountaintop-removal, steep-slope, thick overburden, thin overburden, and remined areas. This report concentrates only on mountaintop-removal and steep-slope AOC variances.

A mountaintop-removal AOC variance can be granted by the regulatory authority only if the entire coal seam or seams running through the upper fraction of the hill, ridge, or mountain is removed, and a level plateau or a gently rolling contour is created with no highwalls remaining. The site granted such a variance must be capable of supporting certain postmining land uses.

A steep-slope AOC variance may be granted by the regulatory authority if (1) the proposed mining is going to occur in a steep-slope area, (2) the watershed control of the area will be improved by granting such a variance, and (3) the landowner requests in writing that the variance be granted in order that the land after reclamation will be suitable for certain postmining land uses [Subsections 22-3-13(c) and (e) of the WVSCMRA and Subsections 515(c) and (e) of SMCRA].

Types of mining applicable to this report:

Area mining. -A mining operation where, unless the operation is located in a steep-slope area and a steep-slope AOC variance has been granted, all disturbed areas are restored to (1) AOC and (2) the site is capable of supporting the uses that existed prior to mining or an equal or better use.

An area-mining operation may remove multiple seams of coal in the upper reaches of a mountain just like a mountaintop-removal operation; however, this type of operation cannot be classified as a mountaintop-removal operation for two reasons. First, the site may be restored to AOC; second, the entire coal seam or seams may not be removed [Code of State Regulations (CSR) 38-2-14.15.b.4 and OSM/WVDEP oversight work plan (appendix I); definition modified for use in this report].

Contour mining. -Surface-mining technique that makes a cut into a hillside, creating a level bench with a highwall. A contour-mined area must be restored to AOC, including elimination of the highwall, unless the mining is conducted on a steep slope and a variance from AOC has been approved. In either situation, the highwall must be eliminated. The AOC variance would have to meet the requirements of a steep-slope variance [OSM/WVDEP oversight work plan (see appendix I)].

Mountaintop-removal operation. -Type of surface-mining operation that (1) has been granted a variance from AOC and (2) extracts an entire coal seam or seams running through the upper fraction of a mountain, ridge, or hill. Coal extraction

must be accomplished by removing all of the overburden and creating a level plateau or a gently rolling contour that both has no highwalls remaining and is capable of supporting certain postmining land uses. Under the State program, the allowable postmining land uses for mountaintop-removal operations are industrial, commercial, woodland, agricultural, residential, or public use [Subsection 22-3-13(c) of WVSCMRA].

Steep-slope mining.-Type of surface-mining operation where the natural slope of the land within the proposed permit area exceeds an average of 20 degrees. In West Virginia, those portions of a permit area classified as "steep slope" may obtain a variance from AOC if the permit application demonstrates that (1) the postmining use of the mined land will be equal to or better than its premining use, (2) the watershed affected by mining will be improved, and (3) mining will comply with all applicable provisions of the approved State program. Such operations could qualify as area, contour, or mountaintop mines, as further defined in this glossary [CSR 38-2-14.12 and 30 C.F.R. § 785.16].

Mining-related terms:

Durable rock.-Naturally formed aggregates that will not slake in water or degrade to soil material. State and Federal law provide that durable-rock fills must consist of at least 80 percent durable rock [CSR 38-2-14.14.g and 30 C.F.R. §§ 816.73 and 817.73].

Excess spoil.-Overburden material that is disposed of in a location other than the mine pit and that is not needed to achieve AOC [30 C.F.R. § 701.5 and CSR 38-2-2.47].

Excess-spoil fills.-Fill structures that are created by the placement of excess spoil in valleys, on hill sides, or on preexisting benches. The State program contains regulations for constructing valley or head-of-hollow, preexisting bench, sidehill, and durable-rock fills. Although most excess-spoil fills are commonly referred to as valley fills, most mountaintop-removal and steep-slope mining operations today involve the construction of durable-rock fills [CSR 38-2-14.14 and 30 C.F.R. §§ 816.71 and 817.71].

Overburden.-Consolidated or unconsolidated material of any type, excluding topsoil, which overlies a mineral deposit [CSR 38-2-2.83].

Premining/postmining land use.-The primary uses of the land before and after mining. After mining, land is generally required to be returned to its premining use. As provided by CSR 38-2-7.3, a site may be returned to an alternative postmining

land use if certain requirements are satisfied. Permits involving mountaintop-removal or steep-slope mining operations with variances from AOC may be issued by the regulatory authority only if they meet certain specified postmining land uses as described in the approved State program.

Some examples of postmining land uses mentioned in this report include, but are not limited to:

Combined uses-Any appropriate combination of land uses where one land use is designated as the primary land use and one or more other land uses are designated as secondary land uses.

Commercial woodland-Land where forest cover is managed for commercial production of timber products.

Fish and wildlife habitat and recreation lands-Wetlands, fish-and-wildlife habitat, and/or areas managed primarily for fish and wildlife and recreation.

Forestland-Land with at least 25 percent tree canopy or that has been stocked with at least 10 percent forest trees of any size, including land that formerly had such tree cover and that will be naturally or artificially reforested.

Hayland or pasture-Land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or cut and cured for livestock feed.

Rangeland-Rangelands and forestlands that support a cover of herbaceous or scrubby vegetation suitable for grazing or browsing use.

Residential.-Single and multiple-family housing properties together with their necessary support facilities.

[These land-use definitions are taken from CSR 38-2-7.2.]

Relief.-Difference in elevation between the highest mountaintop, ridge, or hill and the lowest valley within a permit area [derived, for purposes of this report, from Bureau of Mines, *Dictionary of Mining, Mineral, and Related Terms*: U.S. Government Printing Office, 1968.]

Required findings.-Specific findings that a regulatory authority must make prior to granting a mountaintop-removal or steep-slope AOC variance [Subsections 22-3-13(c) and (e) of WVSCMRA, CSR 38-2-14.12, and Subsections 515(c) and (e) of SMCRA].

Steep slope.-Any slope of more than 20 degrees or such lesser slope as may be designated by the regulatory authority after consideration of soil, climate, and other characteristics of a region or State [CSR 38-2-14.8 and 30 C.F.R. § 701.5].

Swell.-The tendency of soils, on being removed from their natural, compacted beds, to increase or swell owing to the creation of voids or spaces between soil particles. The volumetric increase, normally expressed as a percentage, that occurs as the consequence of changing undisturbed overburden (bank) into loose (excavated) material [derived, for purposes of this report, from Bureau of Mines, *Dictionary of Mining, Mineral, and Related Terms*: U.S. Government Printing Office, 1968].