FEDERAL REGISTER: 48 FR 23356 (May 24, 1983)

DEPARTMENT OF THE INTERIOR
AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM)

30 CFR Parts 816, 817, and 826
Surface Coal Mining and Reclamation Operations; Permanent Regulatory Program;
Backfilling and Grading

ACTION: Final rule.

SUMMARY: The Office of Surface Mining Reclamation and Enforcement (OSM) is issuing final rules relating to the backfilling and grading requirements for surface and underground mining activities. The rules are reorganized, duplication is eliminated, some specific design criteria are removed, and the backfilling and grading performance standards for steep slope mining are combined with the backfilling and grading performance standards for other types of surface coal mining operations. These changes will allow more flexibility in the backfilling and grading procedures.

EFFECTIVE DATE: June 23, 1983.

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SUPPLEMENTARY INFORMATION:

I. BACKGROUND

OSM proposed revisions on June 21, 1982 *(47 FR 26760)*, to the performance standards that govern the backfilling and grading of areas disturbed by surface coal mining operations. The proposed rules were issued to remove some specific design criteria, to eliminate duplication in the previous rules, and to consolidate backfilling and grading standards for steep slope operations with the standards for other operations. These final rules cover the performance standards for backfilling and grading of disturbed areas in surface mining activities and underground mining activities. In addition, the rules include provisions for backfilling and grading in areas involving thin and thick overburden.

The public hearing on the proposed rules scheduled for August 4, 1982, was not held since no one requested to speak at the hearing. However, two public meetings were conducted on the proposed rules, and the records of these meetings are filed in the Administrative Record.

When the rules were proposed on June 21, 1982, it was announced that the public comment period would remain open until further notice *(47 FR 26760).* A subsequent Federal Register notice *(47 FR 30266,* July 13, 1982) announced that the public comment period would close at 5:00 p.m., August 25, 1982, to coincide with the closing of the public comment period on the draft Supplemental Environmental Impact Statement on the proposed rules and other related proposals. As a result of persons wishing to testify on various aspects of the proposed rules at oversight hearings before the House Committee on Interior and Insular Affairs on September 9-10, 1982, the public comment period was reopened through September 10, 1982, to allow admission of relevant portions of the hearing transcripts into the Administrative Record *(47 FR 39201,* September 7, 1982).

These final rules implement the environmental protection standards for surface coal mining operations as set forth in the Surface Mining Control and Reclamation Act of 1977 (Act), *30 U.S.C. 1201* et seq. The backfilling and grading rules for areas disturbed by surface mining activities are based on Section 515(b)(3) of the Act, and the rules for areas disturbed by underground mining activities are based on Section 516(b) of the Act. The final rules governing surface coal mining operations on steep slopes are based on the performance standards in Section 515(d) of the Act.

Backfilling and grading rules for the permanent regulatory program were promulgated on March 13, 1979 *(44 FR 15411).* Part 816 of those rules included general requirements for backfilling and grading (Sections 816.101 and 816.102), requirements for covering coal and acid- and toxic-forming materials (Section 816.103), and requirements for areas with thin and thick overburden (Sections 816.104 and 816.105). Similar requirements for the surface effects of underground mining activities were included in Part 817, except that there were no rules for areas with thin or thick overburden. In the same March 13, 1979, rulemaking, special backfilling and grading rules for steep slope operations were included in 30 CFR Part 826.

The June 21, 1982, notice proposed that Sections 816.101 and 816.103 be combined with Section 816.102 into a section on general requirements for backfilling and grading and that Sections 816.101 and 816.103 be removed. The requirements for areas with thin and thick overburden (Sections 816.104 and 816.105, respectively) that duplicated the general backfilling and grading requirements were proposed to be deleted. The same changes were proposed for Part 817, except that rules for thin and thick overburden are unnecessary for underground mining activities. In the June 21, 1982, rulemaking it was proposed that the special backfilling and grading rules for steep slope operations (Part 826 of the permanent program rules) be moved to Parts 816 and 817 as new Sections 816.107 and 817.107, respectively.

The final rules generally adopt the provisions of the proposed rules. The final rules include general requirements for backfilling and grading in Section 816.102, requirements for areas with thin and thick overburden in Sections 816.104 and 816.105, respectively, and additional provisions for backfilling and grading operations on steep slope areas in Section 816.107. In order to simplify the preamble, the following discussion of the rules in Sections 816.102 and 816.107 also applies to Sections 817.102 and 817.107, unless otherwise noted. The sections for thin and thick overburden, Sections 816.104 and 816.105, respectively, apply only to surface mining activities. As discussed below, Part 826, governing mining on steep slopes, is being removed at this time. For additional discussion of the proposed rules, see the preamble to the proposed rules published June 21, 1982 *(47 FR 26760).*

II. DISCUSSION OF COMMENTS AND RULES ADOPTED

A. GENERAL COMMENTS

During the comment period, OSM received comments from industry and associations, individuals, environmental groups, and Federal and State agencies. More than 100 comments on the proposed backfilling and grading rules were received and evaluated in preparing the final rules. All of the relevant comments received concerning this final rule are addressed below.

Several general comments that did not address specific aspects of the rules will be addressed before discussing the changes to the proposed rules.

OSM received support for the change to the performance standards in the proposed backfilling and grading rules, but was also criticized for providing too much flexibility to the State regulatory authorities. Several commenters indicated that the move to performance standards and allowing flexibility to the States was needed.

OSM concludes that Congress intended the States to have flexibility in implementing the performance standards. Section 201(c)(9) of the Act requires OSM to assist the States in developing State programs which meet the standards of the Act "and at the same time, reflect local requirements and local environmental and agricultural conditions * * *." The standards of Section 515(b) of the Act are minimum requirements which the States may add to at their discretion. The emphasis of the rules is on performance standards; the regulatory authority may develop design criteria or other standards that are appropriate to the local program.

One commenter criticized the time and effort required to perform unnecessary and unrealistic studies with no benefit other than to satisfy the rules. However, the commenter did not identify any studies that were characterized as a waste of effort and money. OSM believes that the information required by these backfilling and grading rules is reasonable and necessary for the regulatory authority to determine that the operation is, and will be, in compliance with the Act.

One commenter requested that a technical handbook being developed by OSM to provide state-of-the-art knowledge for backfilling and grading be clearly designated for reference purposes only. This request was made to ensure that the handbook mentioned in the preamble of the proposed rules *(47 FR 26762)* would not be misconstrued to have the force

of rules over a period of time. The commenter continued by stating that updating the handbook would be a major undertaking and that there would be times when the handbook would lack the latest information developed by industry.

The technical handbook being developed by OSM will present only guidelines for the design and construction of the backfilling and grading portion of the reclamation operation and will not have the force of law. OSM is aware that keeping the handbook current will be a major undertaking and that new developments in the industry must be conscientiously followed and incorporated into the handbook.

B. SPECIFIC COMMENTS AND DISCUSSION OF RULES ADOPTED

PART 816 -- PERMANENT PROGRAM PERFORMANCE STANDARDS -- SURFACE MINING ACTIVITIES

PREVIOUS SECTION 816.101 - BACKFILLING AND GRADING: GENERAL REQUIREMENTS

The proposed rules combined some provisions of previous Section 816.101 with Section 816.102, deleted others because of duplication with proposed Section 816.102, and removed some specific design criteria as discussed in the preamble of June 21, 1982 *(47 FR 26762)*.

The proposed backfilling and grading rules removed the timing and distance requirements in previous Section 816.101(a) for rough backfilling and grading of contour, open pit, and area strip mining operations. The change was proposed since a detailed timetable for each step in the reclamation plan already is required by 30 CFR 780.18(b)(1), and the specific design criteria would more properly be described in the technical handbook or be set by the regulatory authority on the basis of local conditions.

Most State regulatory authorities supported the deletion of the timing and distance requirements for backfilling and grading since it grants additional flexibility to them. However, some States requested authorization to specify these requirements in their State programs. They believed some criteria are necessary to eliminate constant disputes between the regulatory authority and the operator on what constitutes contemporaneous reclamation. Another State wanted flexibility to set requirements for the timing of backfilling and grading to meet specific conditions within the State, which are needed to maintain contemporaneous and quality reclamation. One State believed that national guidance is appropriate with respect to time periods and suggested setting the times based on mine method and technology. The suggested time periods for backfilling and grading various types of mining operations would fall within the scope of contemporaneous reclamation. It also indicated that any standard should have an "escape" clause. The escape clause would allow the regulatory authority to approve different time periods if the mine conditions or other site-specific conditions made it impossible to meet the established standards.

One commenter believed that the rationale given in the preamble to the proposed rules for deleting the time and distance requirements was insufficient. The commenter felt that the timetable in the previous rule was well explained and should not be changed because one of the chief purposes of the Act is to establish minimum national standards that all operators have to meet. The commenter also stated that specific requirements are necessary as enforcement measures, because under the proposed rules the inspector would be unable to detect violations without review of the permit and that parameters must be established within which compliance can be measured.

OSM agrees that the regulatory authorities should be able to establish schedules that specify contemporaneous reclamation. In a related rulemaking *(47 FR 16604*, April 16, 1982) concerning concurrent surface and underground mining activities, OSM proposed to amend Section 816.100, the provision that governs contemporaneous reclamation. As part of the final rule in that rulemaking, OSM will add language to Section 816.100 that will allow the regulatory authority to set time and distance requirements for mining operations that take into account conditions that are unique to their locale. Such standards established by the regulatory authority will be at least as effective as those in the previous rule which allowed the regulatory authority to grant additional time for backfilling and grading when a need was demonstrated by the operator. Under revised Section 816.100, the regulatory authority will be able to establish a timetable more in keeping with State needs. OSM does not believe it imposes an undue burden on inspectors to review permits to determine the approved timing for contemporaneous reclamation. However, under the final rule a State will still have the flexibility to establish time periods for backfilling and grading as part of the State program rather than on a permit-by-permit basis.

OSM believes that different State time frames for backfilling will not affect interstate competition, as stated by one commenter. In either area- or contour-mining, an operation will generally have the economic incentive to transport spoil the shortest distance possible and to move the material only one time. In most cases spoil will be moved directly to the final location and backfilling will occur at the same time as mining. Where material must be rehandled, the costs of rehandling and backfilling would be the same regardless of the time frame specified. Thus, the primary consideration, in terms of costs for backfilling, is not the time frame involved, but rather the distance and number of times material must be handled. Under final Section 816.100, the time frame chosen by each State will have to be the shortest practicable period between mining and backfilling given the particular conditions in that State. A difference among States before backfilling is completed would not confer any advantage on operators in one State over those in another. Operators in all States are still required to accomplish reclamation contemporaneously with mining. This rule merely acknowledges that "contemporaneous reclamation" is a relative term which must be interpreted by each State on the basis of the mining conditions in its territory. In fact, costs may be greater for some types of mining if there is a longer distance between the mining area and the backfilling operation because of additional cost in moving the overburden a greater distance.

OSM received no other comments on the requirements that were proposed of deletion from Section 816.101. Therefore, Section 816.101 will be removed from the final rules for the reasons stated in the preamble to the proposed rules *(47 FR 26762* June 21, 1982).

SECTION 816.102 - BACKFILLING AND GRADING: GENERAL REQUIREMENTS

Section 816.102 sets the general provisions for backfilling and grading areas disturbed by surface mining activities. The section requires return to the approximate original contour (AOC) except under certain situations; sets standards for handling and placing spoil and coal processing waste; and establishes general performance standards for exposed coal seams, acid- and toxic-forming materials, cut-and-fill terraces, small depressions, impoundments, and final-graded surfaces. Various changes were made to the proposed rule, consisting of primarily rearranging some of the provisions, adding cross references to some of the provisions, and providing additional clarifying language. Further discussion of these changes is included with the response to comments set forth below.

SECTION 816.102(a) [Proposed Section 816.102(b)]

Final Section 816.102(a) establishes the requirements for reclaiming areas disturbed by the mining operation. These provisions were proposed as Sections 816.102 (a) and (b). OSM has reorganized Section 816.102 in the final rules to specifically identify the requirements for backfilling and grading the spoil in the disturbed areas in Section 816.102(a) as the first paragraph, for the convenience of the user, and has placed the exceptions to the AOC-restoration requirement, included in proposed Section 816.102(a)(1)-(a)(3), as the last paragraph in Section 816.102. Also, the language in final Section 816.102(a) is slightly different from the proposal, due to the reorganization; however, the rephrasing does not change the meaning of the paragraph. Comments were received on each paragraph of proposed Section 816.102(b) and these along with the changes to the final rules, are discussed below in sequence.

Final Section 816.102(a) introduces the specific requirements by stating that the disturbed areas shall be backfilled and graded. This provision is a combination of the introductory phrase of proposed Section 816.102(b) and proposed Section 816.102(b)(2) which stated that spoil shall be backfilled and graded. In the final rule, OSM has replaced the word "spoil" with the more inclusive term "disturbed areas" to indicate that there are other areas that may require backfilling and grading in addition to the mined-out area and that materials other than spoil may be used as backfill. A disturbed area is defined in Section 701.5 to mean "an area where vegetation, topsoil, or overburden is removed or upon which topsoil, spoil, coal processing waste, underground development waste, or noncoal waste is placed by surface coal mining operations. . . ." With this change, the rules are more in line with the intent of Section 515(b)(3) of the Act.

Final Section 816.102(a)(1) states that the disturbed areas must be backfilled and graded to achieve AOC, except as provided in Section 816.102(k). Paragraph (k) indicates the circumstances under which the postmining slopes may vary from AOC for certain mining conditions. The requirement to return to AOC was in proposed Section 816.102(a), which introduced the exceptions to AOC for certain mining conditions. Because no comments were required on the general requirement to return to AOC, no change has been made in this rule.

Final Section 816.102(a)(2) requires that the disturbed areas be backfilled and graded to eliminate all highwalls, spoil piles, and depressions except as provided in Paragraph (h) for small depressions and in Paragraph (k)(3)(iii) for previously mined highwalls. This provision is the same as proposed Section 816.102(b)(2)(i) except that a reference for highwall exceptions has been added and the small-depression reference has been reworded in accordance with the reorganization of the section.

One commenter wanted the term "spoil piles" clarified so that it does not mean excess spoil sites. The commenter noted that excess spoil is used for purposes other than backfilling and grading and is disposed of according to the revised excess spoil rules in proposed Section 816.71. Another commenter wanted this paragraph changed to reflect the proposed new definition of excess spoil, which excludes spoil that is used to blend spoil from the mined-out area with the surrounding terrain *(47 FR 24954*, June 8, 1982).

In area mining, the spoil piles referred to in final Section 816.102(a)(2) are those formed during the mining operation from shovel or dragline operations. These are the spoil piles that must be backfilled, compacted, and graded according to Section 515(b)(3) of the Act. In other mining methods, spoil piles are comprised of overburden that is disposed of in the pit area after the coal is removed. Such overburden is not considered excess spoil and must be placed according to the provisions of Sections 816.102-816.105.

Excess spoil includes material that is disposed of in a location other than the mined-out area, except for material used to blend spoil with the surrounding terrain in achieving AOC in nonsteep slope areas. Generally, excess spoil includes only that spoil that is not needed to restore AOC. The spoil piles referred to in Section 816.102(a)(2) are not considered excess spoil which would be disposed of according to the provisions of Section 816.71 because they are necessary to restore AOC. The spoil piles referred to in Section 816.102(a)(2) remain in, or are returned to, the area from which the overburden was removed.

One commenter suggested replacing the section reference for small depressions in proposed Section 816.102(b)(2)(i) with the language from Section 816.102(h) that pertains to small depressions. The commenter offered no explanation for this suggested change.

The depressions which Section 515(b)(3) of the Act requires to be removed are those formed during the mining operation before any backfilling and grading of the spoil has been accomplished. They may be of any size and are not planned as part of the postmining land-use plan. The small depressions allowed to remain by the Act and Section 816.102(h) are small depressions used for specific purposes and formed during the reclamation operation. OSM has retained the organization of these two paragraphs as set out in the proposed rule because to combine them would create a long and confusing paragraph.

Under final Section 816.102(a)(3), the disturbed areas must be backfilled and graded to achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and to prevent slides. These provisions were taken from proposed Section 816.102(b)(2)(ii), which was similar to the final rule except it contained a requirement that the spoil be backfilled and graded to achieve the "most moderate slope possible" after being replaced. Also, it did not include the provision to prevent slides.

A commenter believed that the word "moderate" should be deleted from the sentence "[a]chieve the most moderate slope possible that * * *" because the interpretation of "moderate" is a matter of relative judgment that does not relate to actual land use. OSM accepts the commenter's assertion that "moderate" is a matter of relative judgment and should not be adopted. After evaluating the comment, OSM has decided that it is not necessary to describe the postmining slope further since the required slope is defined by the AOC of the land. The definition of AOC states that the postmining surface configuration should closely resemble the general surface configuration of the land prior to mining. OSM believes this description of the final slope is sufficient under the Act and that this rule need only set limits based on safety considerations.

One commenter indicated that the 1.3 minimum long-term static safety factor was satisfactory as an indication of spoil stability. However, the commenter believed OSM should recognize the fact that it is not necessary to determine the factor of safety in all designs. It was pointed out that many highway fills are designed on 2h :1v slope without calculating a factor of safety during design. The commenter concluded by saying that it is not reasonable to require the operator to determine the factor of safety for embankments well above the design requirements.

The rigorousness of the analysis used to determine the safety factor for an individual structure is based to a large degree on the conditions surrounding the structure. For example, the embankment of a high dam is analyzed more rigorously than the fill for a highway embankment. The rule specifies the long-term factor of safety which must be achieved for each backfilled area. It does not specify the level of detail of analysis to be completed for every situation within the permit area. When determining the proper method of analysis for the stability of a postmining slope, the operator and the regulatory authority should consider all the conditions surrounding the structure, with particular attention given to foundation conditions and the presence of ground water.

Another commenter stated that there are local conditions where the undisturbed slope may not have had a 1.3 static safety factor prior to mining. For these situations, the commenter continued, the operator should not be required to have slopes more stable than naturally occurring surrounding slopes and that the operator should be able to document them and then have the regulatory authority approve a lesser factor of safety.

The commenter has described a situation that may be fairly common in steep slope coal mining country. However, OSM believes that the 1.3 safety factor is appropriate to meet the stability requirements of the Act in Sections 515 (b)(3) and (b)(4) and 515(d)(2). The basis for establishing the 1.3 safety factor is discussed in the preamble to the previous rules at *44 FR 15228* (March 13, 1979). OSM believes those reasons are still valid and, therefore, this rule will retain the 1.3 safety factor for the backfilled and graded area.

Final Section 816.102(a)(4) states that the disturbed area must be backfilled and graded to minimize erosion and water pollution both on and off the site. This provision is derived from proposed Section 816.102(b)(2)(iii), which stated that the spoil must be backfilled and graded to minimize disturbance of the hydrologic balance both on and off the site. The change was made to make the standard more applicable to reclamation operations.

Two commenters stated that the provision to minimize disturbance of the hydrologic balance in proposed Paragraph (b)(2)(iii) was redundant and that it was adequately covered elsewhere in the proposed rules. One commenter suggested using the phrase "prevent slides, erosion and water pollution" in place of the phrase "minimize disturbance of the hydrologic balance". This change, the commenter contended, would make the rules consistent with Section 515(b)(3) of the Act.

OSM agrees that the phrase in proposed Section 816.102(b)(2)(iii) repeated the language of Section 816.41(a) on minimizing the disturbance to the hydrologic balance and, therefore, does not need repeating. The phrase "prevent slides" has been added to final Section 816.102(a)(3) in response to the comment. The remaining segment of the suggested phrase has been added to Section 816.102(a)(4), with the substitution of "minimize" for "prevent". Although the commenter believed the latter term would make the rule consistent with Section 515(b)(3) of the Act, the phrase is used in the Act only with respect to the thick-overburden condition (to which proposed Section 816.102(b)(2)(iii) would also have applied). OSM believes this performance standard should apply to all backfilling and grading operations in order to ensure that the standards of Section 515 (b)(4) and (b)(21) of the Act are met. Section 515(b)(4) requires all operations to stabilize and protect all surface areas, including the backfilled area, to control erosion and attendant air and water pollution. Section 515(b)(21) requires the operator to protect offsite areas from slides or damage during the operation. To provide the protection cited in the Act, OSM has clarified final Section 816.102(a)(4) to require that the disturbed areas be backfilled and graded so that erosion and water pollution will be minimized. The goal of the Act is to minimize these conditions, so that language is used in the final provision.

Final Section 816.102(a)(5) states that the disturbed areas shall be backfilled and graded to support the approved postmining land use and is the same as proposed Section 816.102(b)(2)(iv). No substantive comments were received concerning this provision.

SECTION 816.102(b) [Proposed Section 816.102(b)(1)]

Final Section 816.102(b) states that the spoil, except excess spoil disposed of in accordance with Sections 816.71-816.74, must be returned to the mined-out area. This provision was proposed as Section 816.102(b)(1), which stated that the spoil must be retained in the mined-out area unless disposal elsewhere in the permit area is approved. The rule has been changed to specifically identify the section for disposal of excess spoil and to replace the phrase "retained in" with "returned to" in response to comments.

Two commenters wanted the term "mined-out area" defined. One commenter pointed out that the mined-out area for underground mines could be either the mine workings or the surface area overlying them. The commenter further suggested that instead of using the phrase "mined-out area," OSM should require the spoil to be retained in the "area where overburden has been removed."

OSM has decided not to define the phrase "mined-out area" in the final rules. OSM believes the term "mined-out area" is sufficiently descriptive for surface mining activities to mean the area of the mining pit where the coal has been removed. Additional discussion of the meaning of this term in relation to underground mines is included in the preamble to Section 817.102 covering underground mining activities.

Several commenters wanted to allow disposal of spoil anywhere in the permit area instead of being limited to the mined-out area and suggested deleting the phase requiring approval to dispose of spoil elsewhere in the permit area. They believed the mined-out area was too restrictive and that this limited the flexibility of the operator. They pointed out that spoil from first cuts of surface mines and faceup areas of underground mines cannot be retained in the mined-out area because there is no mined area at that time. The commenters suggested requiring only that the spoil be retained in a permitted area. They argued this would give the operator flexibility to place the spoil on the downslope in nonsteep slope areas, along the contour, or anywhere else in the permit area in keeping with "common practice." Environmental protection would be ensured, they argued, because any spoil disposal area would have to be permitted.

OSM has not adopted the proposed provisions specifically requiring the regulatory authority to approve the location for disposal of spoil within the permit area which is outside the mined-out area. A specific approval process is unnecessary because the rule prohibits the indiscriminate placement of spoil in the permit area since upon permanent placement it must either be returned to the mined-out area, disposed of as excess spoil, or placed in accordance with Section 816.102(d). Also, the reclamation plan prepared in accordance with Section 780.18(a)(3), which requires a plan for backfilling, would show the anticipated locations for the disposal of spoil and must be approved by the regulatory authority. The approval process for placement and disposal of spoil is a part of the total process of reviewing and approving a permit application for a surface coal mining operation under 30 CFR Parts 780 and 784 and would be covered by these parts.

The commenters are correct in stating that spoil generated by the first cut of an area mine or during faceup operations of an underground mine may be temporarily placed in the permit area on a surface outside the precise area from which the spoil was removed. Ultimately, however, it must be returned to the area from which it was removed or disposed of as excess spoil. Thus, the phrase "returned to" rather than "retained in" the minded-out area is used in final Section 816.102(b).

One commenters advocated adding the language "in accordance with the approved postmining land use in the reclamation plan" after introducing backfilling and grading at the beginning of proposed Section 816.102(b)(2). By using this language, the commenter believed the regulatory authority would be able to ensure that the procedures to eliminate highwalls, spoil piles, and depressions were presented to its satisfaction and the operator had an approved set of plans to follow during the reclamation operation. Also, the inspector would then have a set of plans against which to check actual performance.

The final rule has not been changed from the proposed rule because final Section 816.102(a)(5) states that the area must be backfilled and graded to support the approved postmining land use. Since mining cannot begin without an approved permit, it is not necessary to add the language suggested by the commenter.

SECTION 816.102(c) [Proposed Section 816.102(b)(3)]

Final Section 816.102(c) was proposed as Section 816.102(b)(3) and states that spoil and waste materials must be compacted where advisable to ensure stability or to prevent leaching of toxic material. Because of the reorganization of the section and because waste materials may be used for backfilling under Section 816.102(e), the term "spoil and waste materials" is added as the subject of the sentence. The term "toxic material" is added as a phrase modifying "leaching," in keeping with the language of Section 515(b)(3) of the Act. No comments were received on this provision.

SECTION 816.102(d) [Proposed Section 816.102(c)]

Final Section 816.102(d) allows spoil to be placed on the area outside the mined-out area in nonsteep slope areas in order to restore the AOC by blending the spoil into the surrounding terrain, if the following three requirements are met: (1) All vegetation and organic material must be removed from the area, (2) topsoil must be treated in accordance with Section 816.22, and (3) spoil must be backfilled and graded in accordance with Section 816.102. OSM has replaced the proposed phrase "active mine working" with the phrase "mined-out area" and has made an editorial change to Section 816.102(d) to clarify that the provision provides for requirements for the area outside the mined-out area in nonsteep slope areas.

The comments generally supported the proposal to allow spoil to be placed on the area outside the mined-out area in nonsteep slope areas for blending purposes. One commenter asserted that spoil from the first cuts on area mines should not be treated as excess spoil, but gave no justification for this position. Spoil from the first cut or any other cut may be treated as excess spoil if it is not needed to achieve AOC. One commenter proposed allowing spoil to be placed in draws and valleys where slopes are too steep for safe topsoil removal. The commenter seemed to indicate that rather than removing the topsoil, a topsoil substitute would be used in the area to adequately facilitate quality reclamation. The commenter offered no background information or justification for this procedure.

The provision allowing blending of spoil has been retained in the final rule. OSM does not intend that there be a difference between the treatment of areas used for blending and the areas mined for coal. The environmental protection performance standards in Section 515 of the Act apply to the blended area to the same extent as they do to other disturbed areas. Paragraph (d)(3) states that the blended area must be backfilled and graded in accordance with this section; therefore, the blended area must be reclaimed to the same performance standards as other disturbed areas.

Another commenter advocated adding a fourth requirement in Paragraph (d) to state that the blended areas must meet all the other performance standards of Part 816. Such a provision is unnecessary since Section 816.102(d)(3) makes all of the backfilling and grading provisions mandatory and the rest of the provisions of Part 816 will apply where relevant.

One commenter contended it was unclear how the regulatory authority and the mine operator would distinguish between material used for blending and excess overburden [excess spoil]. The commenter asserted that under the previous rules, excess overburden [excess spoil] was any material placed outside the active mine workings. The commenter concluded by saying that OSM should discuss methods of making the distinction in this preamble to the final rules.

As previously discussed, OSM is changing the definition of excess spoil to mean material not required to achieve AOC that is disposed of outside the mined-out area but not including material used in blending under this section. The distinction between the applicability of the excess spoil rules and this rule depends upon whether the material is being used to achieve AOC. If the spoil used for blending the mined-out area into the surrounding terrain is used to achieve AOC, it may be so placed in accordance with Section 816.102(d). If it is not used to achieve AOC, it is excess spoil to which the provisions of Section 816.71 apply. It is only in nonsteep slope areas that a distinction needs to be made between material used for blending and that placed in an excess spoil fill. In steep slope areas, all spoil disposed of outside the mined-out area requires approval according to the provisions of Section 816.71.

One commenter believed that the requirement to remove all vegetative and organic material from the area to be used for blending is too restrictive, especially if the topsoil has already been removed from the area. The commenter believed early successional herbaceous and/or shrubby species should not be regrubbed but that larger trees should be removed.

The commenter did not explain why the delay between removing topsoil and placing spoil on the area would be long enough to allow reestablishment of vegetation. In fact, allowing such a long time to elapse after topsoil removal could likely cause increased erosion. The provision has not been changed in the final rule and the requirement to remove all vegetation and organic material applies to an area whether it has been grubbed once or not. Clearing, grubbing, and removing the topsoil should be done just prior to placing spoil over the area to prevent erosion and regrowth of vegetation. The preparation and reclamation of areas outside the mined-out area used for placement of spoil should follow the same process as is used in the areas from which the overburden and coal is removed and where spoil is normally placed.

SECTION 816.102(e) [Proposed Section 816.102(d)]

Section 816.102(e) allows disposal of coal processing waste and underground development waste in the mined-out area if it is done in accordance with Sections 816.81 and 816.83, except that a long-term static safety factor of 1.3 rather than 1.5 must be achieved. The term "mined-out" is substituted for the word "backfilled" in the final rule to accurately describe the area suitable for disposal of such waste materials. No changes were made to the paragraph as a result of comments.

Section 816.102(d) was supported by industry commenters who believed coal processing waste and underground development waste could be safely placed in the mined-out area without harm to the hydrologic regime. The proposal was opposed by commenters who believed that OSM was allowing waste in the mined-out area without adequate regulation, which might result in numerous and serious problems. One of the commenters continued that by deleting the previous 4-foot-cover requirement, OSM would be seriously deficient in meeting its responsibility to establish minimum national environmental protection performance standards.

OSM does not believe it is necessary to include additional design criteria, such as the previous 4-foot-cover requirement for acid- and toxic-forming materials in this section. That provision was suspended pending rulemaking to allow treatment of those materials as an alternative to covering them *(47 FR 67943,* November 27, 1979).

Referencing the coal mine waste disposal performance standards of Sections 816.81 and 816.83 provides the necessary environmental protection requirements for placing coal processing waste and underground development waste in the mined-out area. In addition, the provision allowing disposal of waste in the mined-out area does not waive any other applicable requirements, such as those pertaining to the protection of the hydrologic balance and controlling drainage from acid- and toxic-forming materials. Thus, there is no basis for the assertion that the provisions allows for waste disposal without adequate regulation.

One commenter stated that by allowing coal waste in the mined-out area, OSM would be increasing the possibility of acid mine drainage and the release of toxic metals. OSM is aware that there is the possibility of problems caused by the disposal of coal mine waste in mined-out areas. However, this potential is no greater, and may be less than, disposal in any other area. In fact, this method can be the most environmentally desirable approach provided there is enough space and suitable nontoxic overburden to cover both the wastes and any toxic material from the mine. With proper burial and treatment, there should be no long-term problems with placing coal waste in mined-out areas.

Another commenter stated that because of the potential fire hazard in coal processing refuse, it must be placed no less than 10 feet from a coal seam and isolated from the seam with a noncombustible barrier. The commenter continued that if more than one coal seam is exposed in the highwall, the barrier must be the length and height of the highwall. Also the material must have 90-percent Proctor compaction. In addition, the commenter said that because of changes in drainage requirements, waste should be eliminated from fill, but that if it was to be allowed, impermeable material must be used as a barrier to isolate the refuse from the water-drainage areas.

OSM does not believe it is necessary or appropriate to establish specific design criteria, as proposed by the commenter. Incorporation in Section 816.102(e) of OSM's revised rules on coal processing waste should alleviate these concerns. A full discussion on the treatment of coal processing waste will be contained in the preamble to the revised coal mine waste disposal rules, Sections 816.81-816.89. Those rules will incorporate the rules of the U.S. Mine Safety and Health Administration, 30 CFR 77.214, which require clay or inert material to be placed between new refuse piles and old refuse piles or exposed coal beds. Also, 30 CFR 77.215 specifies the compaction requirements to minimize air and water infiltration into refuse piles and reduce the possibility of combustion (OSM's proposed rules at *47 FR 26602-26603,* June 18, 1982). For contour surface mining situations, it has been recommended that the waste be encapsulated by 3 feet of impermeable material at the base of the cut (U.S. Environmental Protection Agency, 1973, pp. 79-80). According to another article, on fires in coal processing waste, burning refuse has been extinguished by sealing and smothering with 2 feet of compacted clay (U.S. Mining Enforcement and Safety Administration, 1975, p. 7.15). OSM has not been able to locate references that show it is necessary to isolate coal processing waste from a coal seam by a distance of 10 feet, or, for more than one coal seam, that the barrier must be the length and height of the highwall as advocated by the commenter. By adhering to the above-cited rules, coal processing can be successfully disposed of in backfilled areas.

One commenter suggested that if it was allowable to mix the waste throughout the backfilled spoil the results might be better than if the waste was in flat, compacted layers, as long as the hydrologic regime is not significantly changed in the area. Another commenter believed there would be no problem in placing waste materials in mined-out areas as long as the waste is sufficiently covered with 4 or more feet of overburden or topsoil.

The final rules do not prevent coal processing wastes from being mixed with the overburden material if the performance standards are met. This is one factor that could be considered during the design of a backfill area containing coal waste.

A State regulatory authority explained that under its program when waste material is placed in a backfilled area, the area is treated as a waste structure and must be designed to a 1.5 safety factor. It stated that with a 1.3 safety factor, the operator will need to make a greater demonstration of stability and that there will need to be a more stringent review by the regulatory authority.

A State regulatory authority could adopt a 1.5 static safety factor for such situations. However, OSM believes that a 1.3 static safety factor is adequate. The mere characterization of a material as waste does not make it less stable than other materials not so classified. The specific properties of the material, such as water content, particle size, coefficient of friction, and others, must be accounted for in achieving fill stability. If the required static safety factor can be achieved, it is irrelevant for stability purposes that waste is included in the backfill. In addition, OSM believes that a 1.3 static safety factor provides the necessary level of confidence because, in general, backfilling occurs on solid benches or mining-pit areas for which the foundation characteristics have been reasonably determined. Furthermore, a State has the prerogative of setting more stringent criteria for the disposal of coal waste than the performance standards published by OSM.

One commenter proposed deleting the references in Section 816.102(e) to Sections 816.81 and 816.83 and the 1.3 long-term static safety factor and replacing them with a reference to the hydrologic-balance rules. The commenter expressed the need for giving the design professional more latitude. Further, the commenters contended that the rules should address backfilling in such a manner as to prevent detrimental impacts to vegetation and water quality and added that a reference to Sections 816.41 and 816.48 would be more appropriate.

The language of the proposed paragraph has not been changed. OSM believes the reference to the coal mine waste rules is appropriate to ensure the proper disposal of coal waste. Reference to the coal waste rules, moreover, does not waive the general requirements for protection of the hydrologic balance.

SECTION 816.102(f) [Proposed Section 816.102(e)]

Final Section 816.102(f) contains the requirements for covering or treating exposed coal seams, acid- and toxic-forming materials, and combustible materials to control the impact on surface and ground water, to prevent sustained combustion, and to minimize adverse effects on plant growth and land use. After evaluating the comments, OSM has made no substantive changes to the proposed rules except to clarify that the "land use" referenced in the proposal is the approved postmining land use.

One commenter supported OSM's proposed deletion of the 4-foot-cover requirement for acid- and toxic-forming materials from the previous rules and replacement with a provision to either treat or bury these materials. The commenter continued that this provides the operator with a heretofore unavailable option for disposing of these materials because some spoils do not require 4 feet of cover and treatment can be more economical and adequate than coverage under such conditions.

Two commenters advocated that OSM retain the minimum 4-foot-cover requirement for acid- and toxic-forming material. They believed that without a design criterion, the term "adequate" in Section 816.102(f) would lead to arguments between the regulatory authority and the operators as to how much cover was adequate. Also, they believed the changed requirements would require more effort in the review of the design for the cover. The commenters concluded that the regulatory authority needs to be as certain as possible about adequacy of cover because if the cover fails, the operator may need to redisturb additional areas to borrow materials to cover the toxic materials properly.

OSM is aware of the many potential problems that attend the proper disposal of toxic materials. However, a national standard for cover thickness is not the solution to these problems. Instead, the regulatory authority should set whatever

standards, specific or otherwise, which provide the best solution within the State. The problems of interpretation will be avoided by allowing the State regulatory authorities to set and explain standards designed for local conditions. These standards must be based on the national performance standard requiring successful covering or treatment in accordance with the provisions of Section 816.102(f) .

One commenter indicated that problems such as inadequate rooting depth for plant growth and contamination and damage to the hydrologic balance would be caused by removing the 4-foot-depth requirement. The commenter stated that OSM provided no analysis, data, or technical literature to support the deletion of the requirement. Also, the commenter pointed out that one study (Murray, 1978) recommended that in Appalachia, toxic spoil be covered with 5 feet of soil.

In one respect, this comment actually supports OSM's new rule. The commenter asserts that some areas need 5 feet of cover. In such situations, OSM would not be adequately protecting the environment by specifying only 4 feet as a national standard.

Also, the above-referenced document points out that the characteristics of the cover material may cause burial depth to vary from place to place and region to region. In a study on acid formation from a restored refuse pile, no significant variation in acid production resulted with a cover of 1 foot, 2 feet, or 3 feet of soil (Murray, 1978, p. 321). Since the proper burial depth for acid- and toxic-forming material will vary in different locations, OSM will rely on regulatory authorities to ensure that the performance standard is met. Some considerations for establishing the depth of cover are the approximate rooting depth for the plants, the depth needed to place the refuse below the zone of significant oxidation (Murray, 1978, p. 140), the difficulty of placing the cover material in layers, and the erosion potential of the site. In addition, OSM believes that treatment of acid- and toxic-forming materials or a combination of treatment and cover may, in some situations, be a more effective method of eliminating the problem. Therefore, the final rule allows this as an alternative to covering with nontoxic material.

SECTION 816.102(g) [Proposed Section 816.102(f)]

Cut-and-fill terraces are allowed by final Section 816.102(g) where they are compatible with the approved postmining land use and are needed to conserve moisture, ensure stability, and control erosion or where specialized grading, foundation conditions, or roads are required. The proposed rule has been changed as a result of a commenter's suggestion to clarify that the regulatory authority must approve cut-and-fill terraces.

Mixed comments were received on the proposed revision of the cut-and-fill terrace provisions. Commenters supporting revision of the rules cited increased operator discretion in constructing the width of the terraces and no foreseeable impacts from wider terraces as long as the fill material is retained on the solid bench. One of the commenters recommended that the rule state that the regulatory authority must approve the cut-and-fill terraces. Those commenters in opposition to the changes said that the change is no more than an attempt to defeat the AOC requirements and that OSM has established a major loophole in the AOC requirements. The commenters believed that the only way to remedy the problem is to return to the design standards of the previous rule.

Terraces are an acceptable grading technique for achieving the surface configuration after a mining operation. They are specifically authorized by the definition of AOC in Section 701(2) of the Act as long as "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 * * *." At the suggestion of a commenter, the proposed rule has been changed to show that the regulatory authority may approve cut-and-fill terraces. The final rule clarifies that the regulatory authority will review the terrace design for meeting the objectives of the approved postmining land use. Regulatory authority approval of cut-and-fill terraces shall prevent potential abuse. Thus, additional design standards are not necessary for proper execution of the provision. Terraces are standard soil-conservation practices for controlling the runoff of water and reducing the soil loss caused by erosion.

For terraces to be most effective in reducing sheet and rill erosion and retaining runoff in areas of inadequate rainfall, the terrace design must follow accepted engineering practices including considering the specific conditions of the site. Terrace design involves selecting the proper spacing and location of the terraces and the design of the channel with adequate capacity to carry the runoff from the land area above the terrace. In determining the physical features of terraces, the operator and the reviewing officials should consider such soil characteristics as infiltration and water-holding

capacity, cropping and soil-management practices, and climate, which includes intensity, duration, and distribution of precipitation (Schwab and others, 1966, pp. 224-248). The necessity for site-specific design of terraces was emphasized for surface mining operations in arid and semiarid regions of the western U.S. where terraces are used for erosion control and moisture conservation. Some of the terraces in those regions are designed to retain all of the onsite precipitation. (Verma and Thames, 1978, pp. 401-402).

One commenter remarked that if terraces are wider than 20 feet; which was not allowed in previous rules, it is harder to stabilize the backfill. No additional clarification of the statement was given by the commenter. OSM believes that properly designed terraces using accepted engineering practices could enhance the stability of the disturbed area.

Another commenter believed that the qualifiers in the provisions for cut-and-fill terraces set requirements that seem to discourage the use of agricultural terraces. The provision of special concern was that terraces had to be compatible with the approved postmining land use and that their width had to be adequate to ensure the safety, stability, and erosion control of the postmining land-use plan. The commenter wanted the section redrafted to encourage the use of contour and level bench terraces on reclaimed lands to facilitate sediment control and successful revegetation. The commenter suggested using terraces for enhancing the value of reclaimed areas for agricultural lands, but added that agricultural terraces should not be used in lieu of reducing postmining slopes to at least premining slope conditions.

The language in the final rule does not discourage agricultural use of reclaimed land. Terraces are a physical feature that could be compatible with various postmining land uses, including agriculture. They should be identified in the land-use plan and approved by the regulatory authority. An agricultural land use could be approved just as could any other postmining land use.

SECTION 816.102(h) [Proposed Section 816.102(g)]

Final Section 816.102(h) states that small depressions may be constructed if they are needed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation. The creation and enhancement of wildlife habitat was not included in the proposed rule.

One commenter advocated constructing small depressions to create and enhance wildlife habitat. It was suggested that this new use for small depressions be added to proposed Section 816.102(g). OSM has accepted the comment that benefiting wildlife is a reasonable use of small depressions. Section 515(b)(3) of the Act allows small depressions as authorized pursuant to the Act. Section 515(b)(24) of the Act requires fish, wildlife, and related environmental values to be enhanced where practicable. OSM believes small depressions could, in certain cases, be a practicable means of benefiting wildlife and increasing wildlife habitat. The final rule reflects this position.

Another commenter described using depressions as a means of requiring less backfilling in the final cut of an area mine. A depression would be created between the sloped highwall and the last spoil ridge which would be terraced. The depression would undoubtedly collect water during some periods of the year. However, the Act, in section 515(b)(3), does not allow depressions to circumvent the AOC restoration requirements. Also, the depressions described by the commenter would not qualify as small depressions under Section 816.102(h). Depressions cannot substitute for fully backfilling the mining pit. Congress intended that depressions that would collect and store water be barred from the surface area unless permanent impoundments are approved (Senate Report 95-128, 95th Congress, 1st Session, 1977, p. 99). Therefore, the depressions described by the commenter are not allowable.

SECTION 816.102(i) [Proposed Section 816.102(h)]

Permanent impoundments on backfilled areas may be approved according to final Section 816.102(i) if they meet the requirements of Sections 816.49 and 816.56 and if they are suitable for the approved postmining land use. No changes in the rule resulted from OSM's evaluation of comments; the only change will be to note the proper reference for impoundments, Sections 816.49 and 816.56. A commenter stated that construction of impoundments should be forbidden in overburden which contains high concentrations of sulfur or iron because impoundments in these areas will increase the potential for acid mine drainage. The commenter also stated that OSM has not addressed how this rule will affect the stability of the backfilled and graded spoil. Section 515(b)(8) of the Act provides performance standards for permanent water impoundments. That section requires that water impoundments not degrade the water quality below established water-quality standards. Under Section 816.102(i), the water impoundments must be designed and

constructed according to the provisions of Section 816.49, which considers the quality of water and the stability of the structure as part of the design process. Since properly designed impoundments may be authorized in the approved mining and reclamation plan and permit, there is no need to duplicate those provisions as part of this rulemaking. Properly designed impoundments will not increase the potential for acid mine drainage nor decrease the stability of the backfill. The impoundment should not affect the stability of the backfilled area since the operator must achieve a static safety factor of 1.3 for the backfilled area, and the static safety factor for the impoundment must comply with the requirements of Section 816.49. The permit review process will allow the regulatory authority to determine the feasibility of impoundments.

PROPOSED SECTION 816.102(i)

Proposed Section 816.102(i), which stated that overland and shallow ground-water flow from undisturbed areas and flow in ephemeral streams must be controlled by diversions and other water-control measures in accordance with Section 816.41(f), has not been adopted. The provision concerning ground-water flow is not included in the final rules because all aspects of backfilling and grading are subject to the hydrologic-balance provisions of Sections 816.41-816.46. It was a redundant provision since it merely referred the operator to the appropriate section.

A commenter wanted the provision on controlling overland and shallow ground-water flow in proposed Section 816.102(i) removed from the final rule because existing Section 816.43 would have been removed under proposed OSM rule changes. Section 816.43 was deleted from the proposed hydrology rules published June 25, 1982 *(47 FR 27712)*, but the requirements of that section were to be incorporated in proposed Section 816.41(f). Subsequent to publication of those proposed rules, the provisions on controlling overland and shallow ground-water flow are returned to Section 816.43 and the reference to them in Section 816.102 is not needed.

SECTION 816.102(j)

Final Section 816.102(j) is unchanged from the proposed rule. This section states that preparation of final-graded surfaces must be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage. No comments were received on the provision. For further explanation of this provision, see the preamble to the proposed rule *(47 FR 26763*, June 21, 1982).

SECTION 816.102(k) [Proposed Section 816.102(a)]

Final Section 816.102(k) states that the postmining slope may vary from AOC under certain conditions. These conditions are limited to when the standards for thin overburden in Section 816.104 are met (Section 816.102(k)(1)); the standards for thick overburden in Section 816.105 are met (Section 816.102(k)(2)); or when approval is obtained for any of the following situations -- mountaintop removal in accordance with, a variance from 30 CFR 785.14 AOC requirements (in accordance with Section 785.16, or incomplete elimination of highwalls in previously mined areas in accordance with Section 816.106 (Sections 816.102(k)(3)(i), (k)(3)(ii), and (k)(3)(iii), respectively). Changes made to the proposed provisions included adding cross references where appropriate and clarifying some of the provisions of the proposed rule. Although the thick-overburden situation has been included as an exception to the AOC-restoration requirement, the exception is allowed only after AOC has been restored.

Proposed Section 816.102(a)(3) would have required the postmining slopes to be returned to AOC except when a variance was obtained from the regulatory authority for mountaintop removal, alternative postmining land use or remining. For the final rules, OSM has replaced the word " variance" with "approval" because the word "approval" more accurately describes the action of the regulatory authority during the permitting process with regard to mountaintop removal and incomplete elimination of highwalls. Not requiring a return to AOC for alternative postmining land uses under Section 785.16 is a variance process that is referred to as such in final Section 816.102(k)(3)(ii).

One commenter believed that proposed Section 816.102(a)(3)(ii) was totally inadequate in the treatment of variances from the AOC requirement. The commenter asserted that since there is little opportunity for operators to upgrade land-use classification as would be required by proposed Section 816.133(d), the postmining surface contour would have to be restored to AOC and consequently the operator would not be able to realize some environmental improvements on the land surface. The commenter provided examples of such environmental improvements as elimination of steep slopes, reduction of sedimentation, and improvement in grazing and wildlife habitat. At the same time, the commenter felt that a

cost savings could be realized through efficient earthwork design. The commenter believed that the rules should not ignore these possibilities and that requiring return to AOC was too great a restriction.

Returning the postmining land surface to AOC is generally required by Section 515(b)(3) of the Act, which is the basis for the backfilling and grading rules. The Act does not allow a general variance from the AOC-restoration requirement. The provisions for obtaining a variance from the requirements to restore the land to AOC, which were proposed in Sections 785.16 and 816.133(d) *(47 FR 16152,* April 14, 1982), must satisfy the conditions of Section 515(e) of the Act.

Section 785.16 contains the permitting procedures for obtaining a variance from AOC requirements, and proposed Section 816.133(d) contains the performance standards for the variance from AOC for an alternative postmining land use. Since final revisions to Sections 785.16 and 816.133(d) are in another rulemaking, there is no need in this preamble for a detailed discussion of variance procedures except for the reference to Section 785.16 in Section 816.102(k)(3)(ii). It is sufficient to note that in some situations the performance standards in Section 816.133(d) would allow many of the improvements cited by the commenter.

A commenter suggested that when the final rules are written, the land-use variance provision of Section 816.102(k)(3)(ii) should reference Section 816.133(d) as an aid to the reader. OSM has retained the reference to the permit application process in Section 785.16 in the final provision of Section 816.102(k)(3)(ii). OSM believes Section 785.16 is the proper cross reference because that section includes the permit application process for obtaining a variance from AOC for the postmining land use. The phrase "land-use variances" which was proposed to introduce the paragraph has been replaced by "a variance from approximate original contour requirements." This phrase is more in keeping with Sections 785.16 and 816.133(d).

Another commenter asserted that hill-and-depression topography is the result of backfilling and grading the final-cut area of an area mine. The commenter did not relate how the postmining surface contour would be different from the premining surface contour or why such a contour would not necessarily satisfy the AOC-restoration requirement. In response, it is possible for hill-and-depression topography to meet AOC requirements, depending on the premining topography. The regulatory authority would determine during the review and approval process of the permit if the proposed topography would meet AOC requirements.

An exception from the requirement to return to AOC for those situations in which the incomplete elimination of highwalls is allowed in previously mined areas is allowed by Section 816.102(k)(3)(iii). A commenter concurred with the variance from AOC for remining of previously mined areas but, without any explanation, did not agree with allowing a variance from elimination of the highwall. Another commenter believed that the rule should include a reference to the rules on remining. OSM agrees with the latter comment, and the final rule will include a reference to Section 816.107(e). If proposed Section 816.106, as set forth in OSM's "Final Environmental Impact Statement OSM-EIS-1: Supplement" is adopted, appropriate conforming amendments will be adopted.

PREVIOUS SECTION 816.103 - BACKFILLING AND GRADING: COVERING COAL AND ACID- AND TOXIC-FORMING MATERIALS

The preamble for the proposed rule discussed moving the requirements for this section to proposed Section 816.102(e), and the reasons were outlined at *47 FR 26763-27674* (June 21, 1982). OSM received no comments on this proposal; therefore, Section 816.103 will be deleted in the final rule and its essential provisions transferred to final Section 816.102(f) as discussed above.

SECTION 816.104 - BACKFILLING AND GRADING: THIN OVERBURDEN

Proposed Section 816.104 applied to thin-overburden situations where replacement of all spoil and waste materials in the permit area would be insufficient to restore the disturbed area to AOC. In addition, the proposed rule required the operator to "backfill, grade, and compact (where advisable)" those areas of thin overburden using all available spoil and waste materials to attain the lowest practicable grade but not more than the angle of repose and to meet the other requirements of Section 816.102. The language of the proposed rule was the same as that of Section 515(b)(3) of the Act. The proposed rule was changed as a result of comments in order to specify more clearly which provisions of Section 816.102 an operator must meet in thin-overburden conditions.

One commenter objected to using the term "insufficient" in describing the amount of spoil available to the operator to use in achieving AOC. The commenter believed that the term "insufficient" was unenforceable and provided too much discretion. The commenter asserted that such usage would require that regulatory authority would be required to develop specific guidelines for mining in thin-overburden areas. OSM disagrees with this comment. In a thin-overburden situation the operator must meet all of the performance standards, except for the AOC-restoration requirement. The operator must demonstrate in the permit application that there is insufficient material to return to AOC. With this demonstration, the regulatory authority will have an objective decision to make as to whether there is enough spoil to return to AOC. There are no unreasonable problems of discretion associated with the final rule. The final rule follows the thin-overburden language in the first proviso of section 515(b)(3) of the Act.

Two commentors pointed out some areas of confusion as to which provisions in Section 816.102 apply to thin-overburden situations. The commenters were not sure which requirements in Section 816.102 would be waived if insufficient spoil was available to the operator. As previously discussed, the only exception to the performance standards of the Act for thin-overburden conditions is the return to AOC provision. The rule that requires all available spoil and waste material be used to attain the lowest practicable grade but not to exceed the angle of repose. All of the provisions in Section 816.102 apply to thin overburden except Paragraph (a)(1). The backfilling, grading, and compacting process is the same regardless of the thickness of the overburden above the coal. Therefore, the phrase "backfill, grade, and compact" has not been adopted from proposed Section 816.104(a). Section 816.104(b) specifically addresses which backfilling and grading performance standards must be met when the overburden is thin. The final rule will show that the only requirement waived for thin-overburden situations is return to AOC.

In addition, one commenter wanted the rule to state that use of borrow areas is not intended for thin-overburden situations. The commenter indicated this could be accomplished by specifying that only spoil and waste materials generated from the mined-out areas would be used for backfilling and grading in Section 816.104(a). Since return to AOC is not mandated, borrow areas are not required in thin-overburden situations to reach AOC.

In summary, the final rule for thin-overburden situations includes the same description of thin overburden as did the proposed rule, the phrase "backfill, grade and compact" has been deleted in Section 816.104(a), and Section 816.104(b) provides that thin overburden must meet the requirements of Sections 816.102(a)(2)-816.102(j). Except for these changes, the final rule is the same as the proposed rule, which is further explained in the preamble to the proposed rule *(47 FR 26764*, June 21, 1982).

SECTION 816.105 - BACKFILLING AND GRADING: THICK OVERBURDEN

Proposed Section 816.105 applied to thick-overburden situations where the volume of the spoil and other waste materials was more than sufficient to restore the disturbed area to AOC. In addition, the proposed rule required the operator to "backfill, grade, and compact (where advisable)" the excess overburden to attain the lowest practicable grade but not more than the angle of repose, meet the other requirements of Section 816.102, and dispose of any excess spoil in accordance with Sections 816.71-816.74. The language of the proposed rule was the same as that of the second proviso of Section 515(b)(3) of the Act. The final rule has been changed as a result of evaluation of comments to specify more clearly the provisions of Section 816.102 that an operator must meet for thick-overburden conditions.

One commenter objected to using the term "more than sufficient" to describe the amount of spoil available to the operator for achieving the AOC. The commenter believed it was unenforceable and provided too much discretion to use the term "more than sufficient". This would require the regulatory authority to develop specific guidelines for mining coal in a thick-overburden area, the commenter argued.

Another commenter wanted OSM to emphasize the exclusion of thick-overburden operations from the requirements of proposed Section 816.102(a) by requiring that they meet the other requirements of proposed Section 816.102(b).

In a thick-overburden situation the operator must meet all of the performance standards of the rules except that the operator, after achieving AOC, may exceed the AOC requirement. The amount of excess overburden is a site-specific condition and easily documented. Therefore, each permit application requesting consideration under this section should be evaluated by the regulatory authority. The final rule follows the thick-overburden language in Section 515(b)(3) of the Act and will retain the proposed description of thick overburden.

As discussed above, the only exception to the Act's performance standards for thick-overburden conditions operation is from the requirement to return to AOC. The Act replaces the AOC standards with a requirement that the operator, after achieving AOC, shall use the additional spoil to attain the lowest practicable grade but not exceeding the angle of repose. Thus, all of the provisions in Section 816.102 would apply to thick overburden except Paragraph(a)(1). The backfilling, grading, and compacting process is the same regardless of the amount of overburden removed and backfilled, and therefore, those terms have not been adopted from proposed Section 816.105(a). Section 816.105(b) specifically addresses the particular backfilling and grading performance standards which must be met.

One commenter was concerned that there be no prohibition in Section 816.105 on disposing of excess spoil before the backfilling is completed to restore AOC. The commenter indicated that the amount of excess spoil is based on design estimates and is often disposed of before the backfilling operation is completed.

Section 816.105(c) refers to the provisions in Sections 816.71-816.74 for the disposal of excess spoil. Section 816.105(c) does not require excess spoil to be retained until backfilling is completed. Therefore, excess spoil may be disposed of anytime in the mining operation. However, adequate spoil must be available for backfilling to meet the AOC requirements.

In summary, the final rule for thick-overburden situations will include the same description of thick overburden as the proposed rule; the phrase "backfill, grade, and compact" has been deleted in Section 816.105(a), and Section 816.105(b) provides that in thick-overburden situations operators must meet the requirements of Sections 816.102(a)(2)-816.102(j). For editorial clarity, the word "use" will be the first word in Section 816.105(a). For further explanation of this rule, see the preamble to the proposed rule *(47 FR 26764,* June 21, 1982).

SECTION 816.107 - BACKFILLING AND GRADING: STEEP SLOPES

OSM proposed to transfer the requirements of Sections 826.11 and 826.12, the special backfilling and grading requirements for steep slope operations, from Part 826 to form a new Section 816.107. The new section contains only the requirements needed for steep slopes and removes the repetition in the rules that was needed when Part 826 was a self-contained part. OSM received no comment on the proposed transfer, and Section 816.107 will be adopted as proposed. For a complete explanation of this proposal, the reader is referred to the standards for the proposed rule *(47 FR 26764,* June 21, 1982).

New Section 816.107(a) describes the conditions under which the steep slope rules apply. Section 816.107(b) prohibits placing the following materials on the downslope: spoil, waste materials of any type, debris and abandoned or disabled equipment. The reference to haul-road construction debris in the proposed rule has been changed in the final rule to include all debris, without specifying haul-road debris. Section 816.107(c) provides that land shall not be disturbed above the highwall except with the approval of the regulatory authority. Section 816.107(d) states the conditions under which woody material may be buried in the backfill. After considering the comments received on the steep slope provisions, OSM has decided to adopt the final rules as described above.

One additional consideration has arisen because of the removal of Part 826. Its removal has required the redesignation of Section 816.12(b) as Section 816.107(e). Section 816.107(e) states that the highwall does not have to be fully eliminated in contour-mining operations in steep slope areas that affect previously mined, unreclaimed lands if it is demonstrated that the volume of all reasonable available spoil is insufficient to completely backfill the highwall. The provision is the same as interim final Section 826.12(b) published on November 12, 1982 *(47 FR 51316)* with appropriate changes in the references to backfilling and grading rules to conform with other changes adopted. For further information and discussion of comments relevant to this provision, see the interim final rule. If the June 25, 1982, proposed remaining rules *(47 FR 27734)* become final, Section 816.107(e) may be incorporated in Section 816.106.

Several commenters believed that the provisions in Section 816.107(c) on disturbing land above the highwall were not completely consistent with Section 515(d)(3) of the Act. In explaining their rationale, two commenters wanted to replace "shall not" in the proposed rules with "may not" to repeat the exact language of the Act. Another commenter suggested changing the sentence from the negative to the positive by having the sentence read "[l]and above the highwall may be disturbed if the regulatory authority * * *" instead of "[l]and above the highwall shall not be disturbed unless the

regulatory authority * * *." The commenter continued by stating that this change would allow the flexibility for steep slope mining that Congress intended when it wrote the Act.

Section 515(d)(3) of the Act provides that "[t]he operator may not disturb land above the top of the highwall unless the regulatory authority finds that such disturbance will facilitate compliance with the environmental protection standards applicable to steep slope operations." The phrase "may not" is used in this context to create a condition precedent to allowing disturbance above the highwall. Since such actions are not permitted until the proper finding has been made, OSM used the standard regulatory language for describing mandatory actions. OSM believes that substituting "shall not" for "may not" does not change congressional intent regarding disturbance above the highwall. Also, using a positive or negative sentence structure does not change the flexibility of the provision. The paragraph has not been changed; the operator will not be allowed to disturb land above the highwall unless permission is received from the regulatory authority after the proper finding is made.

It should noted that final Section 816.107(c) neither supersedes nor waives the Mine Safety and Health Administration rule at 30 CFR 77.1001 which requires that loose hazardous material be stripped for a safe distance from the top of highwalls to protect miners from falling material hazards.

Two commenters believed that the provisions in Section 816.107(d) should apply only to the prohibition of woody materials in the backfill area and not to any mulching provisions. They reasoned that the revegetation rules, Sections 816.111-816.116, would cover the mulching requirements and that the language in Section 816.107(d) would be repetitive.

OSM has accepted these comments and revised proposed Section 816.107(d) accordingly. Since the revegetation rules separately provide that the regulatory authority may require mulching where deemed necessary, similar language is not needed in Section 816.107(d) to clarify that mulch may be used in steep slope areas.

PART 817 -- PERMANENT PROGRAM PERFORMANCE STANDARDS -- UNDERGROUND MINING ACTIVITIES

The changes in proposed Sections 816.101-816.107 will also be made to the corresponding provisions of Sections 817.101-817.107 and will not be discussed any further under this portion of the preamble.

The discussion below refers only to specific comments received and changes made on requirements that pertain specifically to underground mining activities.

SECTION 817.102 - BACKFILLING AND GRADING: GENERAL REQUIREMENTS

The backfilling and grading requirements proposed for the surface effects of underground mining activities were the same as those proposed for surface mining activities, except that the nonapplicable exceptions to the requirement to restore AOC listed in Section 816.102 were not proposed for Part 817 and a Paragraph (k) was added to consider the situation of settled, revegetated fills for underground mining activities. The rationale for proposed Paragraphs 817.102(a)-(j) is the same as that for proposed Paragraphs (a)-(j) of Section 816.102. For comments which pertain to these sections, the reader is referred to the preamble for Part 816.

In the earlier discussion of Section 816.102, it was noted that a commenter pointed out that the mined-out area for underground mines could be either the mine workings or the surface area overlying them. Because of the possible ambiguity, OSM has decided to use the term "mined-out surface area" in reference to underground mining activities. OSM believes the term is appropriate for underground mining activities because OSM's primary concern is the surface impacts incident to an underground coal mine rather than the underground workings. Therefore, these rules concern activities completed on surface areas such as faceup operations for underground coal mine development or other types of surface excavation incident to the underground mining activity.

SECTION 817.102(l) [Proposed Section 817.102(k)]

OSM has added a new Section 817.102(l) to provide flexibility for settled fills that have become stabilized and revegetated, as a result of the U.S. District Court remanding the rule requiring return to AOC for underground mines. In

re: Permanent Surface Mining Regulation Litigation, No. 79-1144 (D.D.C. May 16, 1980) (Slip Op. at 17-18). For additional discussion of the reasons for the new paragraph, see the preamble for the proposed rules *(47 FR 26765-26767* June 21, 1982).

Under final Section 817.102(l), fills that are sufficiently stable and revegetated to the standards of the Act can remain in place if they meet the following four criteria: That the fill be composed only of spoil or non-acid or non-toxic-forming underground development waste Paragraph (1)(i)); that the spoil not be located so as to be detrimental to the environment, to the health and safety of the public, or to the approved postmining land use (Paragraph (1)(ii)); that the spoil also be stable as demonstrated by geotechnical analysis (Paragraph (1)(iii)); and that the fill be sufficiently vegetated to prevent erosion and contribution of suspended solids to streams from normal runoff (Paragraph (1)(iv)). In addition, the regulatory authority may decide to leave the spoil in place if more environmental harm or injury to the public health and safety would be caused by moving it (Paragraph (2)). Finally, the regulatory authority may require stabilization of the spoil if it does not meet the criteria of Paragraphs (l)(1)(i)-(l)(1)(iv).

Except for minor renumbering and as discussed below, the proposed rule was not changed as a result of consideration of comments received. OSM has added some clarifying language to the rule and also indicated that the spoil or underground development waste shall not be detrimental to the approved postmining land use.

Three commenters suggested alternative regulatory language to implement the District Court order to provide some flexibility for settled fills that have become stabilized and revegetated. In re: Permanent Surface Mining Regulation Litigation, No. 79-1144 (D.C.C. May 16, 1980) (Round II). They suggested replacing the term "fill" or its contents in Paragraph (l) with "area."

OSM will retain the proposed language in the final rule. In remanding the rule, the court used the term "fills," not "areas." This is significant since the plaintiffs (commenters here) had argued that stabilized and revegetated "areas" should not be required to be regraded. OSM believes the proper course is to use the term actually used by the court rather than a term that was not used even though it was brought to the attention of the court. Therefore, OSM is of the opinion that the court order was correctly interpreted in the proposed rule. For additional discussion of settled fills, see the preamble to the proposed rule *(47 FR 26766,* June 21, 1982).

Three commenters also suggested that proposed Section 817.102(k)(l), which referred to non-toxic or non-acidic-forming underground development waste and proposed Section 817.102(k)(l)(i), which referred to protection of the environment and public health and safety, be deleted from the rule. The rationale for this suggestion is that the court order included all types of fill material and did not exclude fills of toxic or acidic underground development waste from consideration as revegetated and stabilized. The commenters did not explain why proposed Section 817.102(k)(l)(i) on protection of the environment and public health and safety should be deleted.

One commenter stated that the rule should not be limited to spoil or non-toxic or non-acidic-forming underground development waste because the court's opinion was not so limited. The court directed OSM to provide "some flexibility for settled fills * * *." The final rule provides such flexibility. The court did not direct OSM to adopt any specific regulatory language. After considering all the comments, past experience, the court's opinion, and all other relevant factors, OSM has determined that only fills composed of spoil or non-acid- and non-toxic-forming underground development waste should be allowed to remain without regrading.

Thus, the limitation has been retained in the final rule. Although the above environmental conditions were not discussed in the court's opinion, OSM believes these provisions are necessary to fully implement the environmental protection performance standards for underground mining. Section 516(b)(9) of the Act provides the authority to limit the possibility of acid and toxic drainage. Section 516(b)(8) of the Act provides the authority to eliminate conditions which constitute a hazard to the health and safety of the public.

Regarding proposed Paragraph (k)(3) (now the last sentence of (1)(2)), one commenter stated that if the spoil is detrimental to the environment or to the public health and safety, then the regulatory authority must require stabilization of the spoil. The proposed language gives the regulatory authority the discretion to require stabilization.

The change suggested by the commenter was not made for the final rule. OSM agrees that generally the spoil should be stabilized to prevent further adverse impacts resulting from the spoil. However, to make stabilization mandatory could, in

certain situations, cause degradation of the spoil, which could cause more damage than the present conditions. The term "may" provides the regulatory authority the discretion to provide the best solution to a given situation and still retain the flexibility to specify the requirements for stabilization or relocation of the fill that best meet the site-specific conditions.

The same commenter believed that it was inappropriate in proposed Section 816.102(k)(3) to refer to proposed Section 817.102(k)(1)(i) on the detrimental aspects of the fill but instead should use the phrase "minimize adverse impacts to the environment and health and safety of the public."

The commenter provided no justification for this suggestion and OSM has not changed the language in the final rule. The language of final Section 817.102(l)(1)(ii) that "waste shall not be located so as to be detrimental to the environment, to the health and safety of the public, or to the approved postmining land use" is a clearer and more enforceable performance standard than the suggested language to "minimize adverse impacts." Therefore, OSM has adopted the language as proposed.

PART 826 -- SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS -- OPERATIONS ON STEEP SLOPES

The proposed rules indicated that Part 826, which applied to both surface and underground mining activities, would be removed from the rules and the provisions moved to Sections 816.107 and 817.107. The justification for this action was discussed in the preamble for the proposed rules *(47 FR 267565*, June 21, 1982) and the reader is referred to that preamble for more information. OSM received no comments on deleting Part 826, and the final rules reflect this change.

REFERENCE MATERIALS

Reference materials (on file in OSM's Administrative Record) used to develop these final rules are as follows:

Murray, F. X., editor, 1978, Where we agree: Report of the National Coal Policy Project, Vol. 2 Westview Press, Inc., Boulder, Colo. 477 pp.

Schwab, G. O., Frevert, R. K., and Edminister, T. W., 1966, Soil and water conservation engineering, Second edition. The Ferguson Foundation Agricultural Engineering Series. John Wiley and Sons, New York, 683 pp.

U.S. Environmental Protection Agency, 1973, Processes, procedures, and methods to control pollution from mining activities. U.S. Environmental Protection Agency Report EPA-430/9-73-011. 390 pp. (Prepared by Skelly and Loy, Harrisburg, Pa., and Penn Environmental Consultants, Inc. Pittsburgh, Pa.; available from U.S. Department of Commerce, NTIS PB 257-297).

U.S. Mining Enforcement and Safety Administration, 1975, Engineering and design manual -- Coal refuse disposal facilities: U.S. Mining Environmental and Safety Administration report. Various pagings. (Prepared by D'Appolonia Consulting Engineers, Inc., Pittsburgh, Pa.)

Verma, T. K., and Thames, J. L., 1978, Grading and shaping for erosion and vegetative establishment in dry regions: Chapter 22 in Reclamation of drastically disturbed lands, Scheller, F. W., and Sutton, Paul, Eds., American Society of Agronomy, Inc., Crop Science Society of America, Inc., and Soil Science Society of America, Inc., Madison, Wis., pp. 399-409.

III. PROCEDURAL MATTERS

Executive Order 12291 and Regulatory Flexibility Act

The Department of the Interior (DOI) has examined these proposed rules according to the criteria of Executive Order 12291 (February 17, 1981). OSM has determined that these are not major rules and do not require a regulatory impact analysis because they will impose minor costs on the coal industry and coal consumers. In addition, the proposed rules emphasize the use of performance standards instead of design criteria, which will allow operators to utilize the most cost-effective means of achieving compliance.

The Department has also determined pursuant to the Regulatory Flexibility Act, *5 U.S.C 601* et seq ., that these rules will not have a significant economic impact on a substantial number of small entities. The regulatory authority will allow all operators adequate flexibility for regional conditions to be considered in backfilling and grading operations. This flexibility could result in cost savings for small operators in allowing for site-specific backfilling and grading operation design and in availing small operators of the opportunity to employ innovations in the design of backfilling and grading operations.

National Environmental Policy Act

OSM has analyzed the impacts of these final rules in the Final Environmental Impact Statement OSM EIS-1: Supplement according to Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA) *(42 U.S.C. 4332*(2)(C)). The final supplement is available in OSM's Administrative Record in Room 5315, 1100 L Street, N.W., Washington, D.C., or by mail request to Mark Boster, Chief, Branch of Environmental Analysis, Room 134, Interior South Building, U.S. Department of the Interior, Washington, DC 20240. This preamble serves as the record of decision under NEPA. The final rule is different from the draft final rules published in Volume III of the final EIS in that two paragraphs have been reorganized and additional clarifying language has been added to the rule which does not change the findings of the EIS analysis. In addition, one sentence of Section 816.107(d) in the final EIS relating to the distribution of woody material has not been included in the final rules. The removal of this sentence has no environmental effect because it would have been duplicative of a provision in the revegetation rules. Finally, until the adoption of Sections 816.106 and 817.106, final Sections 816.107(e) and 817.107(e) will reflect the substance of draft final Sections 816.106 and 817.106, as set forth in the FEIS, regarding contour remining on steep slopes. This was analyzed in the FEIS.

Paperwork Reduction Act

There are no information collection requirements established by these rules requiring approval of the Office of Management and Budget under *44 U.S.C. 3507* et seq.

Agency Approval

Section 516(a) of the Act requires that, with regard to rules directed toward the surface effects of underground mining, OSM must obtain written concurrence from the head of the department which administers the Federal Mine Safety and Health Act of 1977, the successor to the Federal Coal Mine Health and Safety Act of 1969. OSM has obtained the written concurrence of the Assistant Secretary for Mine Safety and Health, U.S. Department of Labor.

LIST OF SUBJECTS

30 CFR Part 816

Coal mining, Environmental protection, Reporting and recordkeeping requirements, Surface mining.

30 CFR Part 817

Coal mining, Environmental protection, Reporting and recordkeeping requirements, Surface mining, Underground mining.

30 CFR Part 826

Coal mining, Environmental protection, Reporting and recordkeeping requirements, Underground mining.

Accordingly, 30 CFR Parts 816, 817, and 826 are amended as set forth herein.

Dated: April 15, 1983.
William P. Pendley, Acting Assistant Secretary, Energy and Minerals.

PART 816 -- PERMANENT PROGRAM PERFORMANCE STANDARDS -- SURFACE MINING ACTIVITIES

SECTION 816.101 [Removed]

1. Part 816 is amended by removing Section 816.101.

2. Section 816.102 is revised to read as follows:

SECTION 816.102 - BACKFILLING AND GRADING: GENERAL REQUIREMENTS.

(a) Disturbed areas shall be backfilled and graded to --

(1) Achieve the approximate original contour, except as provided in paragraph (k) of this section;

(2) Eliminate all highwalls, spoil piles, and depressions, except as provided in paragraph (h) (small depressions) and in paragraph (k)(3)(iii) (previously mined highwalls) of this section;

(3) Achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and to prevent slides;

(4) Minimize erosion and water pollution both on and off the site; and

(5) Support the approved postmining land use.

(b) Spoil, except excess spoil disposed of in accordance with Sections 816.71-816.74, shall be returned to the mined-out area.

(c) Spoil and waste materials shall be compacted where advisable to ensure stability or to prevent leaching of toxic materials.

(d) Spoil may be placed on the area outside the mined-out area in nonsteep slope areas to restore the approximate original contour by blending the spoil into the surrounding terrain if the following requirements are met:

(1) All vegetative and organic material shall be removed from the area.

(2) The topsoil on the area shall be removed, segregated, stored, and redistributed in accordance with Section 816.22.

(3) The spoil shall be backfilled and graded on the area in accordance with the requirements of this section.

(e) Disposal of coal processing waste and underground development waste in the mined-out area shall be in accordance with Sections 816.81 and 816.83, except that a long-term static safety factor of 1.3 shall be achieved.

(f) Exposed coal seams, acid- and toxic-forming materials, and combustible materials exposed, used, or produced during mining shall be adequately covered with nontoxic and noncombustible material, or treated, to control the impact on surface and ground water in accordance with Section 816.41, to prevent sustained combustion, and to minimize adverse effects on plant growth and the approved postmining land use.

(g) Cut-and-fill terraces may be allowed by the regulatory authority where --

(1) Needed to conserve soil moisture, ensure stability, and control erosion on final-graded slopes, if the terraces are compatible with the approved postmining land use; or

(2) Specialized grading, foundation conditions, or roads are required for the approved postmining land use, in which case the final grading may include a terrace of adequate width to ensure the safety, stability, and erosion control necessary to implement the postmining land-use plan.

(h) Small depressions may be constructed if they are needed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation.

(i) Permanent impoundments may be approved if they meet the requirements of Sections 816.49 and 816.56 and if they are suitable for the approved postmining land use.

(j) Preparation of final-graded surfaces shall be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage.

(k) The postmining slope may vary from the approximate original contour when --

(1) The standards for thin overburden in Section 816.104 are met;

(2) The standards for thick overburden in Section 816.105 are met; or

(3) Approval is obtained from the regulatory authority for --

(i) Mountaintop removal operations in accordance with Section 785.14 of this chapter;

(ii) A variance from approximate original contour requirements in accordance with Section 785.16 of this chapter; or

(iii) Incomplete elimination of highwalls in previously mined areas in accordance with Section 816.107(e).

SECTION 816.103 [Removed]

3. Part 816 is amended by removing Section 816.103.

4. Section 816.104 is revised to read as follows:

SECTION 816.104 - BACKFILLING AND GRADING: THIN OVERBURDEN.

In surface coal mining which is carried out at the same location over a substantial period of time where the operation transects the coal deposit and where the thickness of the coal deposit relative to the thickness of the overburden is large and where the operator demonstrates that the spoil and other waste materials available from the entire permit area are insufficient, giving due consideration to volumetric expansion, to restore the disturbed area to its approximate original contour, the operator shall, at a minimum --

(a) Use all available spoil and waste materials to attain the lowest practicable grade, but not more than the angle of repose; and

(b) Meet the requirements of Sections 816.102(a)(2)-816.102(j).

5. Section 816.105 is revised to read as follows:

SECTION 816.105 - BACKFILLING AND GRADING: THICK OVERBURDEN.

In surface coal mining where the thickness of the overburden is large relative to the thickness of the coal deposit and where the operator demonstrates that the volume of the spoil and other waste materials is more than sufficient to restore the disturbed area to approximate original contour, the operator shall, at a minimum, after restoring to approximate original contour --

(a) Use the spoil and waste materials to attain the lowest practicable grade, but not more than the angle of repose;

(b) Meet the requirements of Sections 816.102(a)(2)-816.102(j); and

(c) Dispose of any excess spoil in accordance with Sections 816.71-816.74.

6. Section 816.107 is added to read as follows:

SECTION 816.107- BACKFILLING AND GRADING: STEEP SLOPES.

(a) Surface mining activities on steep slopes shall be conducted so as to meet the requirements of Section 816.102, and the requirements of this section except where mining is conducted on flat or gently rolling terrain with an occasional steep slope through which the mining proceeds and leaves a plain or predominantly flat area or where operations are conducted in accordance with Part 824 of this chapter.

(b) The following materials shall not be placed on the downslope:

(1) Spoil.

(2) Waste materials of any type.

(3) Debris, including that from clearing and grubbing.

(4) Abandoned or disabled equipment.

(c) Land above the highwall shall not be disturbed unless the regulatory authority finds that this disturbance will facilitate compliance with the environmental protection standards of this subchapter and the disturbance is limited to that necessary to facilitate compliance.

(d) Woody materials shall not be buried in the backfilled area unless the regulatory authority determines that the proposed method for placing woody material within the backfill will not deteriorate the stable condition of the backfilled area.

(e) The disturbed area shall be backfilled and graded to comply with the provisions of Section 816.102 to return the site to the approximate original contour and completely cover the highwall; Provided, however, that where contour-mining operations affect previously mined areas that were not reclaimed to the standards of this chapter and the volume of all reasonably available spoil is demonstrated in writing to the regulatory authority to be insufficient to completely backfill the highwall, the highwall shall be eliminated to the maximum extent technically practical in accordance with the following criteria:

(1) The person who conducts the surface coal mining and reclamation operation shall demonstrate to the regulatory authority that the fill, designed by a qualified registered professional engineer, has a minimum static safety factor for the stability of the backfill of at least 1.3.

(2) All spoil generated by the mining operation and other reasonably available spoil shall be used to backfill the area. Reasonably available spoil shall include spoil generated by the mining operation and other spoil located in the permit area that is accessible and available for use and that when rehandled will not cause a hazard to the public safety or significant damage to the environment.

(3) The backfill shall be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability.

(4) Any remnant of the highwall shall be stable and not pose a hazard to the public health and safety or to the environment.

(5) Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbances will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.

PART 817 -- PERMANENT PROGRAM PERFORMANCE STANDARDS -- UNDERGROUND MINING ACTIVITIES

SECTION 817.101 [Removed]

7. Part 817 is amended by removing Section 817.101.

8. Section 817.102 is revised to read as follows:

SECTION 817.102 - BACKFILLING AND GRADING: GENERAL REQUIREMENTS.

(a) Disturbed areas shall be backfilled and graded to --

(1) Achieve the approximate original contour, except as provided in paragraph (k) of this section;

(2) Eliminate all highwalls, spoil piles, and depressions, except as provided in paragraph (h) (small depressions) and in paragraph (k)(2) (previously mined highwalls) of this section;

(3) Achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and to prevent slides;

(4) Minimize erosion and water pollution both on and off the site; and

(5) Support the approved postmining land use.

(b) Spoil, except as provided in paragraph (l) of this section, and except excess spoil disposed of in accordance with Sections 817.71-817.74, shall be returned to the mined-out surface area.

(c) Spoil and waste materials shall be compacted where advisable to ensure stability or to prevent leaching of toxic materials.

(d) Spoil may be placed on the area outside the mined-out surface area in nonsteep slope areas to restore the approximate original contour by blending the spoil into the surrounding terrain if the following requirements are met:

(1) All vegetative and organic materials shall be removed from the area.

(2) The topsoil on the area shall be removed, segregated, stored, and redistributed in accordance with Section 817.22.

(3) The spoil shall be backfilled and graded on the area in accordance with the requirements of this section.

(e) Disposal of coal processing waste and underground development waste in the mined-out surface area shall be in accordance with Sections 817.81 and 817.83, except that a long-term static safety factor of 1.3 shall be achieved.

(f) Exposed coal seams, acid- and toxic-forming materials, and combustible materials exposed, used, or produced during mining shall be adequately covered with nontoxic and noncombustible materials, or treated, to control the impact on surface and ground water in accordance with Section 817.41, to prevent sustained combustion, and to minimize adverse effects on plant growth and the approved postmining land use.

(g) Cut-and-fill terraces may be allowed by the regulatory authority where --

(1) Needed to conserve soil moisture, ensure stability, and control erosion on final-graded slopes, if the terraces are compatible with the approved postmining land use; or

(2) Specialized grading, foundation conditions, or roads are required for the approved postmining land use, in which case the final grading may include a terrace of adequate width to ensure the safety, stability, and erosion control necessary to implement the postmining land-use plan.

(h) Small depressions may be constructed if they are needed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation.

(i) Permanent impoundments may be approved if they meet the requirements of Sections 817.49 and 817.56 and if they are suitable for the approved postmining land use.

(j) Preparation of final-graded surfaces shall be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage.

(k) The postmining slope may vary from the approximate original contour when approval is obtained from the regulatory authority for --

(1) A variance from approximate original contour requirements in accordance with Section 785.16 of this chapter; or

(2) Incomplete elimination of highwalls in previously mined areas in accordance with Section 817.107(e).

(l) Regarding of settled and revegetated fills to achieve approximate original contour at the conclusion of underground mining activities shall not be required if the conditions of Paragraph (l)(1) or (l)(2) of this section are met.

(1)(i) Settled and revegetated fills shall be composed of spoil or non-acid- or non-toxic-forming underground development waste.

(ii) The spoil or underground development waste shall not be located so as to be detrimental to the environment, to the health and safety of the public, or to the approved postmining land use.

(iii) Stability of the spoil or underground development waste shall be demonstrated through standard geotechnical analysis to be consistent with backfilling and grading requirements for material on the solid bench (1.3 static safety factor) or excess spoil requirements for material not placed on a solid bench (1.5 static safety factor).

(iv) The surface of the spoil or underground development waste shall be vegetated according to Section 817.116, and surface runoff shall be controlled in accordance with Section 817.43.

(2) If it is determined by the regulatory authority that disturbance of the existing spoil or underground development waste would increase environmental harm or adversely affect the health and safety of the public, the regulatory authority may allow the existing spoil or underground development waste pile to remain in place. The regulatory authority may require stabilization of such spoil or underground development waste in accordance with the requirements of paragraphs (l)(1)(i)-(l)(1)(iv) of this section.

Section 817.103 [Removed]

9. Part 817 is amended by removing Section 817.103.

10. Part 817 is amended by adding new Section 817.107 to read as follows:

SECTION 817.107 - BACKFILLING AND GRADING: STEEP SLOPES.

(a) Underground mining activities on steep slopes shall be conducted so as to meet the requirements of Section 817.102 and the requirements of this section.

(b) The following materials shall not be placed on the downslope:
(1) Spoil.
(2) Waste materials of any type.
(3) Debris, including that from clearing and grubbing.
(4) Abandoned or disabled equipment.

(c) Land above the highwall shall not be disturbed unless the regulatory authority finds that this disturbance will facilitate compliance with the environmental protection standards of this subchapter and the disturbance is limited to that necessary to facilitate compliance.

(d) Woody materials shall not be buried in the backfilled area unless the regulatory authority determines that the proposed method for placing woody material within the backfill will not deteriorate the stable condition of the backfilled area.

(e) The disturbed area shall be backfilled and graded to comply with the provisions of Section 817.102 of this chapter to return the site to the approximate original contour and completely cover the highwall; Provided, however, that where contour-mining operations affect previously mined areas that were not reclaimed to the standards of this chapter and the volume of all reasonably available spoil is demonstrated in writing to the regulatory authority to be insufficient to completely backfill the highwall, the highwall shall be eliminated to the maximum extent technically practical in accordance with the following criteria:
(1) The person who conducts the surface coal mining and reclamation operation shall demonstrate to the regulatory authority that the fill, designed by a qualified registered professional engineer, has a minimum static safety factor for the stability of the backfill of a least 1.3.
(2) All spoil generated by the mining operation and other reasonably available spoil shall be used to backfill the area. Reasonably available spoil shall include spoil generated by the mining operation and other spoil located in the permit area that is accessible and available for use and that when rehandled will not cause a hazard to the public safety or significant damage to the environment.
(3) The backfill shall be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability.
(4) Any remnant of the highwall shall be stable and not pose a hazard to the public health and safety or to the environment.
(5) Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbances will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.

PART 826 -- SPECIAL PERMANENT PROGRAM PERFORMANCE STANDARDS -- OPERATIONS ON STEEP SLOPES [REMOVED]

11. PART 826 is removed.

(Pub. L. 95-87, *30 U.S.C. 1201* et seq.)

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