FEDERAL REGISTER: 48 FR 22092 (May 16, 1983)

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

30 CFR Parts 701, 780, 784, 816, and 817
Surface Coal Mining and Reclamation Operations; Permanent Regulatory Program; Topsoil

ACTION: Final rule.

SUMMARY: The Office of Surface Mining Reclamation and Enforcement (OSM) is adopting final rules for the removal, storage, and redistribution of topsoil, topsoil substitutes and supplements, and other subsoil layers to ensure soil capability consistent with the approved postmining land use. The final rules provide greater flexibility to the States to accommodate local conditions, clarify intent, and improve the organization of the regulations.

EFFECTIVE DATE: June 15, 1983.

FOR FURTHER INFORMATION CONTACT: LeRoy A. DeMoulin, Soil Scientist, Office of Surface Mining, U.S. Department of the Interior, 1951 Constitution Avenue NW., Washington, DC 20240; 202-343-3190.

SUPPLEMENTARY INFORMATION:

I. BACKGROUND

On March 11, 1982 *(47 FR 10742),* the Office of Surface Mining Reclamation and Enforcement (OSM) proposed to amend 30 CFR 816.21-816.25 (surface mining activities) and 817.21-817.25 (underground mining activities) to allow regulatory authorities more flexibility to develop topsoil-protection rules consistent with local soils, climate, and topography.

The final rules implement specifically the requirements of Sections 515(b)(5), 515(b)(6), and 516(b)(10) of the Surface Mining Control and Reclamation Act of 1977 (the Act), *30 U.S.C. 1201* et seq ., as well as certain other statutory requirements relating to revegetation, protection of the hydrologic balance, minimization of air and water pollution attendant to erosion, and prompt reclamation. The new rules require persons conducting surface coal mining and reclamation operations to remove topsoil, or other approved plant-growth material and subsoil strata when necessary to ensure soil capability, before beginning mining operations; to store these materials for later use; to protect them from contamination and erosion; and to redistribute them in a manner which enhances their capability to support vegetation and to control erosion. Other important goals of the new rules are to fulfill the requirements of Section 515(b)(2) of the Act to restore mined land to its premining land-use capabilities, or to higher or better uses for which there is reasonable likelihood of success.

The performance standards proposed March 11, 1982, for topsoil removal, storage, and redistribution during surface mining and reclamation operations offered two alternatives for underground mining activities. Alternative I was identical to the proposed changes for Part 816. Considering the long life of surface disturbances from certain facilities associated with underground mining, Alternative II offered two approaches for dealing with problems peculiar to topsoil reclamation for areas with long-term facilities.

Under the first of these approaches, when long-term stockpiling of topsoil would be impractical, a regulatory authority could allow an operator to distribute topsoil over an approved site for current use and to retrieve it later for purposes of reclaiming the originally disturbed site at the end of the mining operation. Under the second approach, when the site being disturbed would not have sufficient suitable topsoil material for reclamation purposes or when soil salvage would be impractical, for example because of erosion, excessive stoniness, or steep slopes, the regulatory authority could allow an operator to use topsoil or topsoil substitutes from borrow areas within the permit area at the time of reclamation.

During the comment period, which extended through September 10, 1982, OSM received comments from approximately 55 sources representing industry and associations, environmental groups, individuals, and Federal and State agencies. No one requested a public hearing or meeting and therefore none was held.

After analyzing the recommendations made by the various commentors, OSM has adopted rules for underground mining activities that are the same as those for surface mining activities. Additionally, in response to numerous public comments recommending either the adoption of Alternative II for underground mining activities or its inclusion in the regulation of the long-term facilities associated with surface mining activities as well, OSM has incorporated aspects of Alternative II in its rules for both Parts 816 and 817. These and other changes to the proposed rules are addressed in detail in the discussion that follows.

II. DISCUSSION OF RULES ADOPTED AND RESPONSE TO COMMENTS

In the final rules, OSM has reorganized certain of the sections dealing with topsoil performance standards.

As an aid to the reader, the following table shows the relationship of the final rules to the proposed and previous rules.

DERIVATION TABLE

New section No.	Proposed section No. 1	Previous section No.
780.18(b)(4)	816.22(e) [part]	816.22(e) [part].
784.13(b)(4)	817.22(e) [part]	817.22(e) [part].
		816.21.
		817.21.
Parts 816 and 817:		
.22(a)(1)	.22(a) [part]	.22(b).
.22(a)(2)	.22(b)	.22(c).
.22(a)(3)	.22(a) [part]	
.22(a)(4)	.22(c)	.22(a).
.22(b)	.22(e) [part]	.22(e) [part].
.22(c)(1)	.23(a)	.23(a).
.22(c)(2)	.23(b)	.23(b).
.22(c)(3)	. (2)	
.22(d)(1)	.24(b)	.24(b).
.22(d)(2)	.24(a)	.24(a).
.22(d)(3)	.24(c)	
.22(d)(4)		.25.
.22(e)	.22(d)	.22(d).

1 Alternative I unless otherwise indicated.

2 Section 817.22(a) [part], Alternative II.

A. SECTION 701.5 - DEFINITIONS OF "SOIL HORIZONS" AND "TOPSOIL"

A number of comments were received suggesting revisions to the definition of topsoil in 30 CFR 701.5. The Illinois Department of Mines and Minerals suggested that OSM clarify its "topsoil" definition in relation to the new classification established by the U.S. Department of Agriculture Soil Conservation Service (SCS) in the National Cooperative Soil Survey. The original definition of topsoil included the A horizon only. The A horizon contained a number of subclassifications including the A1 and A2 subhorizons. Recently, the SCS has redesignated the A2 subhorizon as a separate master horizon, identified as the E horizon. Thus, to ensure consistency between the two agencies and to avoid confusion as to which horizons are properly includable in the topsoil definition, OSM has revised its definition to

specifically include both the A and E horizons. This is not a substantive change from the previous definition but is intended merely to conform to the new SCS classification system. Similarly, the definition of "soil horizons" is amended to reflect the addition of the E horizon and the SCS change from "major" to "master" horizons.

One commenter suggested that many problems relating to the topsoil requirements stemmed from the lack of an adequate definition. He recommended using the definition developed in the Conservation Glossary of the Soil Conservation Society of America. This commenter, and another, thought that the definition for topsoil should include both the A and B horizons.

The comments recommending the combination of both the A and B horizons have been rejected. Performance standards in Parts 816 and 817 are predicated upon the new definition which describes topsoil as the A and E horizons layers of the four master horizons. Any change that would include the B or C horizons would necessitate a restructuring of the performance standards and would be inconsistent with the requirements of the Act.

B. SECTIONS 780.18(b)(4) AND 784.13(b)(4) - RECLAMATION PLAN

The factors which an operator must evaluate to demonstrate to the regulatory authority that the soil medium to be removed is equal to, or more suitable for sustaining vegetation than, the existing topsoil and that the resulting soil medium is the best available in the permit area to support revegetation were described in proposed Sections 816.22(e) and 817.22(e). However, these requirements have been moved to the permitting rules at final 30 CFR 780.18(b)(4) and 784.13(b)(4), respectively, because such demonstrations will be central to any topsoil-reclamation plan an operator will submit with a permit application. The movement of the analysis requirements to Parts 780 and 784 is not a substantive change but rather one of organization

Two commenters objected to OSM's deletion of the requirements in previous Sections 816.22(e) and 817.22(e) for test such as net acidity or alkalinity, phosphorus, and potassium and for the standardized testing procedures. One commenter supported the addition of the test parameters that OSM did include. The other commenter characterized OSM's proposed tests as "vague" and "marginally useful."

Another group of commenters preferred to have the reference to specific tests eliminated. They thought it was better for the regulatory authority to have the option to select the appropriate parameters for testing in order to account for local conditions.

OSM has chosen A middle ground. Section 780.18 and 784.13 specify the basic level of testing needed to determine topsoil-substitute or supplement suitability. Sufficient flexibility has been built into the final rules to allow the regulatory authority to look at local conditions and to require other kinds of tests as may be appropriate.

One commenter was concerned that under the proposal the regulatory authority could require additional tests if desirable. The commenter thought this could lead to arbitrary testing requirements by the regulatory authority.

This commenter's concern is groundless. OSM has purposely included the "necessary or desirable" options for the regulatory authority so that adequate flexibility is built into these rules. There is no evidence to infer that the discretion will be used in an arbitrary manner. Moreover, OSM's oversight responsibilities will help ensure proper implementation of these provisions.

A State commenter pointed out that the test analyses were for soil characteristics, yet the proposed provision related to the evaluation of overburden materials. The commenter thought this created confusion.

The term "overburden," as used in new Sections 816.22(b) and 817.22(b), encompasses the B and C soil horizons and other underlying strata. Since the materials being selected are to be used as topsoil substitutes or supplements, the information necessary for their evaluation pertains to their soil characteristics.

C. SECTIONS 816.21 AND 817.21 - TOPSOIL: GENERAL REQUIREMENTS

The general requirements for topsoil removal, storage, and redistribution were discussed in previous Sections 816.21 and 817.21 and were reported in detail in subsequent sections. Consequently, in order to eliminate that redundancy, OSM has removed previously Sections 816.21 and 817.21 in the final rules.

One commenter, who wished to minimize erosion and other losses, objected to the proposed deletion of this section and argued that the other proposed rules did not emphasize that redistribution or storage should be handled expeditiously.

Another commenter viewed the deletion as involving no substantive change.

The recommendation to retain previous Sections 816.21 and 817.21 has been rejected. Other sections in the final rules deal with the questions of timing for topsoil storage or redistribution and erosion control.

D. SECTIONS 816.22 AND 817.22 - TOPSOIL AND SUBSOIL

All of the topsoil-removal, storage, and redistribution requirements have been incorporated in Sections 816.22 and 817.22 (see derivation table).

1. Paragraph (a) Removal.

Paragraph (a) deals with the kinds of material to be removed and the timing of removal. It contains an exception to the topsoil-removal requirement. Proposed Paragraph (a)(3) has been redesignated as Paragraph (e) because the rule relates specifically to the handling of subsoil, rather than the handling of topsoil.

Paragraph (a)(1). Paragraph (a)(1) requires that all topsoil, which is defined at 30 CFR 701.5 as the A and E soil horizons, be separately removed and segregated. If the topsoil is of insufficient quantity or of poor quality for sustaining vegetation, the operator must separately remove the topsoil, together with the overburden material that will be used as a substitute for, or as a supplement to, the topsoil. However, the operator must first demonstrate to the regulatory authority that the resulting medium is equal to, or more suitable for sustaining vegetation than, the existing topsoil and is the best available in the permit area.

The language of the proposed rule has been revised editorially to describe in new paragraphs (a)(1) (i) and (ii) the soil conditions most likely to be present. In addition, the phrase "and segregated" has been added to each of the paragraphs to make it clear that both the topsoil and the other materials approved by the regulatory authority under paragraph (b) must be segregated, as is required by Section 515(b)(5) of the Act.

One commenter suggested language changes to the general topsoil-removal provision to make it clear that on lands other than prime farmland, segregation of the soil horizons will not always be required. The commenter thought that the regulatory authority could approve the intermixing of all strata to be redistributed.

Section 515(b)(5) of the Act requires topsoil to be removed in a "separate layer" and "segregate[d] . . . in a separate pile from other spoil. . . ." The same section requires similar treatment for other strata which are being used as topsoil substitutes or supplements. Paragraph (a)(1) describes the topsoil materials which must be separately removed. This material may consist of either topsoil or topsoil substitutes and supplements.

Two commenters with opposing points of view raised questions about the amount of topsoil to be removed. One commenter recommended amending proposed paragraph (a) so that the removal of topsoil would be limited to that amount necessary to meet the objectives of the approved postmining land use. In contrast, a representative of the National Forest Service objected to the proposed language because it did not clearly state that all topsoil was to be removed unless substitutes were approved.

OSM agrees with the latter commenter. Except where the topsoil is of insufficient quantity or of poor quality, Section 515(b)(5) of the Act mandates the removal and redistribution of all topsoil. To make this clear, the word "all" has been included in final paragraph (a)(1).

Paragraph (a)(2). Paragraph (a)(2) concerns situations where the existing topsoil layer is less than 6 inches thick. Under such circumstances, an operator may remove and treat as an acceptable soil medium the mixture that includes the topsoil and the unconsolidated material immediately below it. The mixture need not be separately removed provided the operator has obtained approval to use a topsoil substitute under paragraph (b).

Several commenters objected to the proposed thin-topsoil provision. One thought that since operators would be required to meet specific revegetation requirements, they should have the choice not to jeopardize the quality of the soil medium by being forced to mix it with lower quality materials. Another recommended removing the paragraph because if no topsoil is present, the topmost material may be the worst rooting medium in the overburden. A third commenter wanted the language to make it clear that operators would have to remove only the unconsolidated material that is available, even if it is less than 6 inches thick.

OSM has modified the proposed rule for clarity and in response to the comments. The final rule encourages operators to use the existing topsoil layer, even if very thin, but recognizes the practical limitations on topsoil removal in thin-topsoil situations. Thus, where the topsoil is less than 6 inches thick, the rule allows the operator to remove the topsoil and the unconsolidated materials immediately below and to treat the mixture as topsoil.

Paragraph (a)(3) . Paragraph (a)(3), which was proposed as paragraph (a)(4), allows the regulatory authority to grant narrow exceptions to the general requirement to remove topsoil. These exceptions are applicable if minor disturbances result from the construction of small structures such as power poles, signs, or fence lines or if the activity will not destroy the existing vegetation and will not cause erosion. OSM has replaced the phrase "light traffic" in the proposed rule with the phrase "minor disturbances" to make it clear that the activity being covered is distinct from the kinds of traffic which occur on roads (see 30 CFR 816.150, 816.151, 817.150, and 817.151).

Several commenters addressed the proposed "light traffic" exception. Some supported the concept because in their opinion it would enhance the objectives of decreasing surface disturbances and reducing erosion. They preferred to see the rule applied to both surface and underground mining activities. OSM generally agrees with this assessment and has adopted the provision, as described above, for both Parts 816 and 817.

Other commenters wanted to see the provision modified or expanded. One of these felt that the language should be broadened to include small semi-permanent facilities such as ground-water monitoring wells and meteorologic stations situated outside the area to be mined. Another suggested eliminating the condition not to destroy existing vegetation because, in the opinion of the commenter, the purpose was to preserve topsoil rather than vegetation. A third commenter thought that the light-traffic exemption should be mandatory and he proposed language to assure application of the exception. Additionally, this and another commenter thought that the exception should apply where removal of topsoil would result in needless damage to soil characteristics. A State commenter thought that not causing compaction should be included among the conditions for approval.

One commenter suggested having the term "light traffic" defined because of its vagueness. One State regulatory authority had found from experience that actual enforcement of the standard is difficult. The State recommended requiring a management technique such as posting signs to limit the frequency of use and heavy equipment. The same commenter wanted it made clear to operators that departures from the general topsoil-removal requirements would be limited to the kinds of small construction structures listed or similar to those listed in the rule. As far as the State was concerned, even construction activities for those kinds of structures could necessitate topsoil removal.

To clarify OSM's intent that the provision could be applied to activities such as the movement of equipment over frozen ground, or to small areas such as the construction sites of power poles, signs or fence lines, the final rule includes the term "minor disturbances" rather than the phrase "light traffic." This language change is coupled with two disjunctive tests: either that the minor disturbance must occur at the site of small structures or that the minor disturbance will not destroy the existing vegetation and will not cause erosion. Although some topsoil could be lost at the site of small structures, the amount would be minimal.

Applying the tests provided, the regulatory authority has the discretion not to require topsoil removal for a variety of minor disturbances. Although the examples provided in the rule are not meant to be exhaustive, they are illustrative of the

kinds of small structures that may be eligible for the exemption.

Except for minor disturbances that occur at the sites of small structures, the suggestion to delete as a test the destruction of existing vegetation is rejected because the loss of vegetation or the presence of erosion would indicate conditions where the removal and preservation of topsoil is appropriate. If heavy use is anticipated or local soil conditions exist so that vegetation would be destroyed under light traffic, then the exception in paragraph (a)(4) is not applicable. Moreover, a road used in a mining operation must meet the appropriate regulatory standards (Sections 816.150, 816.151, 817.150, and 817.151). OSM agrees that the possibility of needless soil removal and damage to soil properties should be considered, as well as vegetative cover, terrain, and climate, when determining the need for topsoil removal under this exception. Finally, OSM agrees that avoiding compaction is a factor which regulatory authorities may wish to consider when deciding whether to apply this exception.

Paragraph (a)(4). Paragraph (a)(4), which was proposed as paragraph (a)(5), sets the time frame for removal of the material to be salvaged under paragraph (a)(1). The removal of this material must occur after clearing the vegetative cover that would interfere with the soil-retrieval process, but before any surface disturbance such as drilling, blasting, or mining occurs.

One commenter recommended substituting the word "salvage" for the word "use" in the paragraph to make it clear that the material in question is being stored for later use. OSM has accepted this recommendation and has made an appropriate change in the final rule.

2. Paragraph (b) Substitutes and supplements.

The regulatory language for final paragraph (b) is basically the same as was proposed at paragraph (e), except that the factors which an operator must evaluate will appear in the permitting rules at Sections 780.18(b)(4) and 784.13(b)(4), rather than in Parts 816 and 817, as proposed. The rule provides that selected overburden materials may be substituted for, or used as a supplement to, topsoil if the operator demonstrates to the regulatory authority that the resulting soil medium is equal to, or more suitable for sustaining vegetation than, the existing topsoil, and the resulting soil medium is the best available in the permit area to support revegetation. The phrase "in the permit area" has been added in the final rule to make it clear that the operator need not go outside the permit area to secure the topsoil substitute or supplement material. Most of the comments on proposed paragraph (e) concerned the kinds of tests being required to demonstrate the suitability of topsoil substitutes and supplements. These comments are discussed in this preamble under Sections 780.18(b)(4) and 784.13(b)(4).

One commenter objected to the proposed finding that the substitute material is "the best available to support revegetation." The commenter thought that this placed an unnecessary requirement on the operator, whereas showing the medium to be equal to, or more suitable than, the existing topsoil for sustaining vegetation was reasonable. This comment must be rejected. The requirement that the soil medium resulting from the use of topsoil substitutes or supplements must be the best available in the permit areas to support revegetation derives directly from the last clause of Section 515(b)(5) of the Act.

3. Paragraph (c) Storage.

Paragraph (c)(1). Paragraph (c)(1) provides that materials removed under paragraph (a) must be stockpiled when it is impractical to redistribute such materials promptly on regraded areas. This requirement was proposed as Sections 816.23(a) and 817.23(a).

One commenter objected to the use of the word "only" in specifying when stockpiling could occur. The commenter believed that this exceeded the requirements of the Act. The commenter thought that there could be times when an operator would want to stockpile topsoil from areas where it was abundant so that it could be used later on areas where the topsoil was thin. OSM has accepted this suggestion because it gives the operator increased flexibility without lessening protective standards.

Paragraph (c)(2). Paragraph (c)(2) sets out certain performance standards to be met when stockpiling occurs. These standards were in proposed Sections 816.23(b) and 817.23(b). It provides that stockpiled materials must be selectively placed on a stable site within the permit area; be protected from contaminants and unnecessary compaction that would

interfere with revegetation; be protected from wind and water erosion through prompt establishment and maintenance of an effective, quick-growing vegetative cover or through other measures approved by the regulatory authority; and not be moved until required for redistribution unless approved by the regulatory authority.

The proposed rule prohibited moving the stockpiled material before redistribution. In response to commenter objections to this limitation, the final rule allows the material to be moved if approved by the regulatory authority.

Two commenters objected to the term "selectively placed." They thought that the language implied a requirement to segregate the material. They did not think that the Act requires such action. In a related vein, another commenter suggested language which would have allowed stockpiled materials to be placed in contact with other spoil if approved by the regulatory authority.

OSM intends the rule to require segregation of topsoil and topsoil substitutes and supplements. Section 515(b)(5) of the Act prohibits anyone from allowing segregated topsoil materials from mixing with other spoil.

One commenter wanted to know whether the stockpiled material referred to by the phrase "selectively placed" is the topsoil, the subsoil, or some other material. The phrase refers to whatever materials are to be used as a soil medium under paragraph (a)(1), whether topsoil or topsoil substitute or supplement.

Several commenters thought that the rule should indicate when the operator must begin to take steps to protect stockpiled materials. One thought that failure to specify a time limit would make it difficult for the regulatory authority to enforce the performance standard and asserted that this could lead to delays in protecting topsoil, resulting in erosion and air- and water-quality impacts. Two other commenters suggested allowing seeding at the first seasonal opportunity.

The final rule has not been changed from the proposed rule because the performance standards specified in paragraph (c)(2) should accommodate all situations. The specific methods used to meet the performance standards should be determined on a case-by-case basis. If a regulatory authority finds these standards difficult to enforce, it may develop other no less effective standards.

Another commenter objected to the deletion of the specific protection measures which appeared in the previous rules. The commenter thought it necessary to specify the establishment of both annual and perennial plants on topsoil stockpiles, because even if the reclamation plan called for the pile to be in place for less than 1 year, unanticipated delays could develop.

In developing these performance standards, OSM has given operators more flexibility in the choice of methods used to meet the standards. The standards are not less protective than those appearing in the previous rule. Moreover, the purpose of the final rule is to protect against wind and water erosion, not to establish diverse temporary vegetation. Questions about the kinds of plant species to use should relate to the reestablishment of vegetation, not to stockpiling. See the revegetation rules at 30 CFR 816.111 through 816.116 and 817.111 through 817.116.

One commenter pointed out that there was some confusion in the proposed language concerning the avoidance of contamination and compaction by maintenance of a vegetative cover. OSM agrees with the commenter and has written the final rule to eliminate the misunderstanding.

A commenter recommended including language which appeared in the previous rule describing the kind of contaminants to be avoided. According to the commenter, the Act does not require that topsoil be kept free of all contaminants, but only of acid- and toxic-forming materials.

OSM has adopted the commenter's suggestion in part and has modified the final rule so that stockpiled materials must be protected from contaminants that would interfere with revegetation. Such contaminants need not be limited to acid- and toxic-forming materials.

Paragraph (c)(3) . In Paragraph (c)(3), OSM has included a modified version of the Alternative II proposal for Section 817.22(a) that pertained to long-term surface disturbances associated with underground mining activities. The Alternative would have allowed the temporary distribution of soil materials on an approved "host" site. OSM agrees with several commenters that the alternative is equally applicable to certain long-term facilities associated with surface mining

activities. Thus, in Paragraph (c)(3) OSM has authorized an alternative to stockpiling material removed under Paragraph (a)(1), provided that certain conditions are met. First, stockpiling must be detrimental to the quality or quantity of the material to be stored. Second, the material so removed must be moved to an approved site within the permit area. Third, the temporary redistribution of the soil must not permanently diminish the capability of the soil of the host site. And fourth, the material being so stored must be kept in a condition more suitable for redistribution than if it had been stockpiled.

Two commenters were concerned with the proposed provision. One commenter thought that it would result in more extensive and costly stabilizing measures than stockpiling; it could increase bulk density, compaction, and topsoil loss through excessive handling; and it would increase reclamation costs by disturbing previously undisturbed "borrow" areas and then reclaiming the borrow areas. The other commenter objected to it because he believed that topsoil should be segregated and preserved even where long-term disturbances occur. He thought that topsoil, even when stockpiled for decades, would be superior to the use of other earthen material. Additionally, according to this commenter, the retention of stockpiled topsoil would not result in the needless borrowing of soil from areas that would normally remain undisturbed.

Under the final rule, the regulatory authority must evaluate specific conditions to determine whether use of the option is appropriate. Furthermore, any regulatory authority may exclude this provision from its regulatory program under Section 505 of the Act. Whether application of this option would result in increased reclamation costs is a consideration which an operator must weigh.

Another commenter thought that although this proposal for storage of topsoil had promise, OSM had not provided technical data to support the procedure. The commenter felt that while the degradation of the removed topsoil, after placement and management on similar areas of undisturbed soil, would probably be less than if it had been stockpiled, nevertheless there might be adverse effects on the A horizon of the buried soil due to reduction in microbiological activity, compaction, and disturbances during the initial placement and subsequent removal of the overlying topsoil. The commenter wanted to know whether the possible detriment to the host soil would be greater or less than the likely degradation of stockpiled topsoil.

The trade-off between the effects on stored topsoil versus those on the host soil would be evaluated by the regulatory authority at the time of permit approval. The amount of topsoil to be removed, the thickness of the topsoil in the disturbed area, the acreage available for topsoil dispersal within the permit area, and other local factors will influence the regulatory authority's decision. Moreover, the operator will have to demonstrate that the action would enhance the current use of the host site, that it would not permanently diminish the capability of the topsoil of the host site, and that the material so stored would be retained in a condition more suitable for redistribution than if it were being stockpiled. Additionally, it is accepted in the industry that a 6-inch layer of soil is a minimum practical depth for root development. And since most A horizons are less than 10 inches thick, n1 and the roots of many plants penetrate several feet in a favorable material, the additional layer of topsoil placed on a site should enhance the vegetative cover and host soil rather than degrade them.

n 1 McCormack, D. E., 1976, Soil reconstruction -- Selecting materials for placement in mine reclamation: Mining Congress Journal, Vol. 62, No. 9, pp. 32-26.

Two commenters felt that the OSM proposal left several unanswered questions. One commenter thought that disturbance of a host area could substantially increase the cost of the performance bond. The commenter surmised that in Illinois, prime farmland would be used as host areas. Because, in the commenter's opinion, some adverse impacts on the host soil would likely occur, it would take some time to demonstrate restoration of the soil's capacity. The second commenter thought that it was unclear what alternative uses could be made of the stored topsoil during the life of the long-term facility.

The final rules have been written to make it clear that the host areas must be within the permit area. Whether prime farmland or other types of land are used as host areas, they will be subject to all of the bonding and reclamation protection afforded by the Act. With respect to the question of alternative uses for the topsoil during the storage period, the regulatory authority will consider the proposed use, which may include agricultural uses, during its review of the permit application.

One commenter thought that use of the proposed word "impractical" in reference to stockpiling of topsoil was inaccurate, assuming the intended meaning was "undesirable." The commenter felt that the proposal gave the impression that topsoil need not be removed or salvaged at all under some circumstances.

OSM has modified the rule to make it clear that the alternative storage option is not available simply because it is more desirable than stockpiling. Rather, the test for applying the provision is whether stockpiling would be detrimental to the quality or quantity of the materials removed under Paragraph (a)(1). Lastly, all topsoil must be removed except in the limited circumstances provided for in Paragraph (a).

One commenter thought that the proposal in Paragraph (a)(2) of Alternative II to have "borrow" areas for topsoil or suitable substitute material for reclamation of long-term facilities was less promising than the "host" arrangement. The commenter said that in order to reclaim an already disturbed area, another equivalent undisturbed area would have to be disturbed. The commenter thought this would violate Section 515(b)(2) of the Act.

OSM has not adopted that portion of the proposed Alternative II, which would have explicitly authorized the use of topsoil or other suitable soil material from approved borrow areas if the originally disturbed site had insufficient topsoil or when topsoil salvage would have been impractical because of erosion, excessive stoniness and steep slopes. This provision is unnecessary because operators are not precluded from obtaining topsoil or substitutes from borrow areas if such areas are included within the permit area. Section 515(b)(5) of the Act specifically recognizes the need to deal with situations where an area to be disturbed has topsoil of insufficient quantity or of poor quality for sustaining vegetation. In such situations, the operator is authorized to use other strata which are best able to support vegetation. However, if this results in the disturbance of a previously undisturbed area, reclamation of that area will have to meet performance standards of the Act, including those in Section 515(b)(2).

4. Paragraph (d) Redistribution.

Paragraph (d)(1) sets forth the standards under which the material removed under Paragraph (a) must be redistributed. These are the same as were proposed at Sections 816.24(b) and 817.24(b). Paragraph (d)(2) deals with treatment of the disturbed area to reduce the potential for slippage. This provision is basically the same as was proposed at Sections 816.24(a) and 817.24(a), except that the treatment will be applied "to reduce potential slippage of the redistributed material" rather than "to eliminate slippage surfaces." This change was made because slippage surfaces generally cannot be totally eliminated. Paragraph (d)(3) specifies those limited circumstances under which the regulatory authority may choose not to require the redistribution of topsoil or topsoil substitutes and supplements. As described below, the language adopted by OSM restricts the application of this paragraph to specific kinds of embankments. Paragraph (d)(4) authorizes the use of nutrients and soil amendments. A similar requirement had appeared in the previous rules. In response to several comments, OSM has authorized the use of these aids for the initial establishment of the vegetative cover.

Paragraph (d)(1). Two commenters objected to a performance standard requiring the material removed under Paragraph (a) to be redistributed so as to achieve an approximately uniform, stable thickness. They thought that this was really a design criterion that could lead to the development of a monoculture vegetative community rather than a diverse native species community. One of the commenters went on to say that the proposed topsoil rules were not compatible with the revegetation aims and planned reclamation objectives.

The final rules are compatible with revegetation aims and planned reclamation objectives. Topsoil thickness is but one of several factors affecting plant growth and species diversification. Soil horizons commonly develop in variable thicknesses, with abrupt changes occurring within short linear distances that make it difficult at times to remove the soil layers exactly as they occur. Likewise, it is not always easy to redistribute soil layers to the same depth as when they were removed. In consideration of these facts, the final rule requires redistribution to an approximately uniform soil thickness, "consistent with the approved postmining land uses." This is the common-sense approach to provide a workable standard that will sufficiently protect the environment and achieve the goals of the Act.

In keeping with a concern raised in a related context, the U.S. Forest Service felt that the requirement for a uniform distribution of topsoil material could result in Forest Service lands getting a lesser amount than they originally had if not all of the topsoil were salvaged in areas of mixed ownership.

The requirement for the redistributed material to have an approximately uniform, stable thickness will protect the interests of all landowners, including the Forest Service, for several reasons. Generally, most contiguous areas which are part of the same contour will have approximately the same topsoil thickness. Also, the performance standard requires that the thickness of the topsoil-material layer be consistent with the postmining land use.

A commenter requested an explanation for the term "excess compaction" in proposed Sections 816.24(b)(2) and 817.24(b)(2). After redistribution, a loose structureless soil surface is susceptible to wind and water erosion. A certain amount of compaction will increase soil stability and reduce the erosion hazard. However, excessive compaction will reduce soil pore space, thereby reducing infiltration and permeability, increasing runoff, and encouraging erosion. Compaction that restricts root penetration and water infiltration (excessive compaction) must be avoided during topsoil redistribution. Such factors as soil properties and soil-moisture content at the time of redistribution should guide the soil-handling procedures to prevent excessive compaction as required by Paragraph (d)(1)(ii).

Paragraph (d)(2). One commenter opposed deletion of the requirement to scarify regraded land which had appeared in previous Sections 816.24(a) and 817.24(a). The commenter viewed scarification as a standard best practice for soil construction. Another commenter supported the rewording of the proposed rule. He saw little benefit in scarifying regraded land to eliminate slippage zones when postmining slopes were required by law to be gentle enough to preclude slippage problems. Furthermore, he thought the benefits of scarifying regraded soil were nullified by the use of heavy equipment to redistribute topsoil.

OSM's decision to remove the specific reference to scarification is in keeping with the general policy to establish performance standards rather than design criteria. OSM believes that the regulatory authority will be in the best position to determine what forms of treatment will be necessary to reduce potential slippage of the redistributed materials and to promote root penetration. Scarification is one such treatment that the regulatory authority may require.

Another commenter recommended substituting the phrase "agrees with" in proposed Sections 816.24(a) and 817.24(a) for the word "approves" in connection with the timing of treatment to reduce slippage of the redistributed material. OSM has not adopted the proposed requirement for obtaining regulatory authority approval for treating slippage after redistribution of material removed under Paragraph (a). However, an operator may treat the land after redistribution occurs only if no harm will be caused to the redistributed material and reestablished vegetation.

Paragraph (d) (3). Several commenters supported proposed Sections 816.24(c) and 817.24(c), which would have allowed the regulatory authority to approve the "selective placement of topsoil materials." The general language in the proposed rule caused confusion among some of the commenters. Although the preamble described OSM's intent, the proposed rule language was susceptible to varying interpretation. Therefore, changes have been made in new Paragraph (d)(3) to clarify OSM's intent.

One commenter thought that where final-cut lakes and their associated access roads were approved, it would be counterproductive to require additional grading of slopes simply to provide a surface to which topsoil would cling. Some commenters suggested language modifications. One of these recommended substituting the phrase "other methods" for "selective placement" (Sections 816.24(c) and 817.24(c)). He also suggested that the provision be made applicable to situations other than those described in the preamble to the proposal *(47 FR 10744)* pertaining to cut slopes where conditions such as low water availability may warrant alternative methods. Yet another commenter recommended deleting the words "choose to," believing that without this change an operator's ability to obtain a bond release could be severely impaired.

The final rule clarifies OSM's intent, which was expressed in the preamble to the proposed rule. In certain circumstances, placing topsoil material on approved postmining embankments of permanent impoundments or of roads would likely be impractical and could cause the loss of topsoil that could be better used elsewhere in the permit area. To avoid such losses, the regulatory authority must be in a position to choose not to require topsoil redistribution in such locations. Under the final rule, the regulatory authority, as the governmental entity having the most familiarity with local conditions, can make that choice if the placement of topsoil material on such embankments would be inconsistent with the requirement to use the best technology currently available to prevent sedimentation and the embankments will be otherwise stabilized to control erosion.

Another commenter opposed the provision, believing it would encourage regulatory authority approval of angle-of-repose slopes which, in the commenter's opinion, are undesirable because they tend to be unstable, difficult to revegetate, and highly susceptible to erosion. The commenter thought that no provision of the Act could be interpreted to allow exceptions to topsoil replacement. The commenter believed that authorizing angle-of-repose slopes would run counter to the requirements of Section 515(b)(3) of the Act, which calls for restoration of the approximate original contour (AOC).

Paragraph(d)(3) does not authorize angle-of-repose slopes. Restoration of AOC is governed by the backfilling and grading rules. The purpose of this paragraph is to provide the regulatory authority with flexibility to specify that the operator need not redistribute topsoil in those situations where stability of the topsoil layer is likely to be low due to erosion. Moreover, the option not to require redistribution of topsoil in such areas should conserve topsoil for distribution elsewhere and should reduce the potential for water pollution.

One commenter asserted that the topsoil-redistribution requirement of final Paragraph (d)(3), which appeared as the preferred alternative in OSM's "Final Environmental Impact Statement OSM-EIS-1: Supplement" (EIS), allowed two "categorical exclusions" that were not part of the proposed rule. He also argued that the change in language between the proposed rule and the preferred alternative was environmentally significant.

OSM rejects both contentions. First, the preamble to the proposed rule described the situations OSM was trying to address by proposing to authorize selective placement of topsoil material. In that preamble, OSM expressed concern for the loss of topsoil material if distributed on embankments which would exist as part of the postmining land-use configuration. This final rule implements that expressed intention for treatment of embankments. With regard to the commenter's second assertion, the environmental consequences of this change are analyzed in the final EIS and are not considered to be significant (see Vol. I, p. VI-28). Moreover, the adopted language for Paragraph (d)(3) is more environmentally protective than the proposed language referred to by the commenter. The proposed rule did not restrict selective placement of topsoil material on embankments, as does the final rule. In addition, the proposed standard to prevent erosion has been replaced by a comparable requirement allowing nonplacement of topsoil only where the redistribution would be inconsistent with the use of the best technology currently available to prevent sedimentation. The proposed standard requiring the promotion of revegetation by selective placement of topsoil material was not an appropriate standard because allowing topsoil not to be placed in a particular location would not contribute to the revegetation efforts at that location.

Paragraph (d)(4). Six State commenters opposed deleting the provision which would require the use of nutrients and soil amendments. In the experience of one State commenter, failure to fertilize and lime properly was a principal reason for failure to establish vegetative cover on mined land. The commenter preferred not having to wait until the question of bond release was raised before requiring corrective action. Another commenter considered the provision to be an unnecessary requirement.

In response to the majority of these commenters, OSM has included a provision authorizing the regulatory authority to require the use of nutrients and soil amendments on the initially redistributed materials in amounts necessary to establish the vegetative cover.

Paragraph (e) Subsoil segregation. Paragraph (e) provides the regulatory authority the option of requiring the removal and segregation of underlying strata, such as the B and C horizons, if it finds that retention of such material for redistribution as subsoil is necessary to comply with the revegetation requirements.

Proposed Sections 816.22(d) and 817.22(d) would have required the segregation of the underlying layers to be used as topsoil substitutes and supplements. Such activity is covered by final Paragraphs (a)(1)(ii) and (b). The provision dealing with the segregation of underlying layers that has been adopted as Paragraph (e) is similar to previous Sections 816.22(d) and 817.22(d) and permits the regulatory authority to require the removal, segregation, stockpiling, and redistribution of underlying layers if necessary to comply with the revegetation requirements.

One commenter objected to inclusion of a provision addressing subsoil segregation on the grounds that the only requirement in the Act for segregation of soil horizons applies to prime farmlands. Another commenter objected to the use of the word "segregate" and recommended limiting the provision to removal of the B horizon and its use as a topsoil substitute. A third commenter viewed the proposal as unduly restrictive and an unnecessary economic burden on large

western operations because the chemical and physical nature of soils in the arid West make subsoil segregation a generally unproductive endeavor. This commenter thought that the provision should be restricted to prime farmlands or agricultural postmining land uses. Two commenters approved of the proposal. One of these was a State commenter who viewed the proposal as an improvement over the existing requirement because it would authorize the regulatory authority to require the B horizon to be segregated and used as a topsoil supplement without necessitating chemical and physical analysis.

OSM believes that in order to achieve successful revegetation, attention must be given to the profile of the soil and thus has adopted a rule that authorizes the regulatory authority to require the segregation and preservation of subsoil layers in order to fulfill the revegetation requirements. OSM has sufficient statutory authority under Sections 515(b)(2), (b)(5), (b)(6), (b)(19), and (b)(20) and 201(c)(2) of the Act to authorize such a provision.

Another commenter approved of the basic thrust of the proposal but did not think it adequately addressed the issue of when the subsoil segregation should occur. OSM agrees that the proposed rule was somewhat confusing and has revised the final rule to provide a simpler standard. Subsoil segregation may be required when the regulatory authority determines that it is necessary to achieve compliance with the revegetation requirements. The regulatory authority will be in the best position to determine the extent of soil reconstruction needed to achieve the desired physical or chemical soil characteristics for revegetation. Since revegetation is required elsewhere, this rule does not impose an undue burden on operators; it provides recognition that in some limited circumstances separate handing of subsoil strata may be necessary to meet those standards.

Two commenters thought that the regulatory authority should first have to show that the subsoil material being segregated is better than any other material in the permit area. One of these also wanted it made clear that the operator would not have to go outside the permit boundaries to obtain borrow material.

Where underlying strata are used as a topsoil substitute or supplement, the responsibility for demonstrating its suitability rests with the operators in the first instance. This requirement is dealt with in final Paragraph (b) and Sections 780.18(b)(4) and 784.13(b)(4). Where such material should be preserved for later use as subsoil, OSM has established the standards that will allow a regulatory authority to determine the optimum utilization of the available material. OSM agrees that operators need not go outside the permit area to obtain topsoil-substitute material.

E. MISCELLANEOUS ISSUES

Limiting topsoil-removal areas. OSM did not include a provision in its proposed rules to require limiting the size of the removal area or the timing of redistribution in order to protect against erosion. This had been specified in previous Sections 816.23(f) and 817.23(f). Two commenters opposed this decision; one commenter approved it.

OSM has chosen not to include such a paragraph because other final rules are in place that limit the size of topsoil-removal areas. The operator is required to complete reclamation as contemporaneously as possible (Sections 816.100 and 817.100), store and protect topsoil (Sections 816.22(c) and 817.22(c)), protect against erosion (Sections 816.95 and 817.95), and meet the effluent limitations of the final rules (Sections 816.42 and 817.42). The requirement for redistribution of topsoil in a manner that protects against erosion is contained in Sections 816.22(d) and 817.22(d) of the final rules. Furthermore, the regulatory authority has the discretion to limit the size of disturbed areas if local soil and climatic conditions necessitate such action.

III. PROCEDURAL MATTERS

Executive Order 12291 and the Regulatory Flexibility Act

The Department of the Interior (DOI) has determined that this rule is not a major rule requiring a regulatory impact analysis under Executive Order 12291. Also, DOI has determined that this rule will not have a significant economic effect on a substantial number of small entities and therefore does not require a regulatory flexibility analysis under Public Law 96-354. The rule is expected to ease the regulatory burden on small operators by providing regulatory authorities flexibility in determining the amount of information that must be submitted with each permit application.

National Environmental Policy Act

OSM has analyzed the impacts of these final rules in its "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 EIS is available in OSM's Administrative Record, Room 5315, 1100 L Street, NW., Washington, DC, or by mail request to Mark Boster, Chief, Branch of Environmental Analysis, Room 134, Interior South Building, U.S. Department of the Interior, 1951 Constitution Avenue, NW., Washington, DC 20240. This preamble serves as the record of decision under NEPA. Changes to the rule that are not included in the preferred alternative published in Volume III of the EIS have been considered. For the most part these involve organizational and editorial changes, such as moving draft final Section 816.22(a)(3) as it appeared in the FEIS to a new Section 816.22(e). There are also a few words added or removed, but these do not markedly affect the FEIS analysis. For instance, these include the addition of the words "and segregated" in Section 816.22(a)(1)(i) and the removal of the words "and other transportation facilities" and "to control erosion" in Section 816.22(d)(3). The revisions to the two definitions in Section 701.5 will have no environmental effect because they merely reflect nomenclature differences.

Paperwork Reduction Act

The new information-collection requirements in Sections 780.18 and 784.13 have been approved by the Office of Management and Budget under *44 U.S.C. 3507* and assigned clearance numbers 1029-0047 and 1029-0048. The information is being collected by the regulatory authority to determine the suitability of topsoil substitutes or supplements. The obligation to respond is mandatory.

Agency Approval

Section 516(a) 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 701

Coal mining, Law enforcement, Surface mining, Underground mining.

30 CFR Part 780

Coal mining, Reporting and recordkeeping requirements, Surface mining.

30 CFR Part 784

Coal mining, Reporting and recordkeeping requirements, Underground mining.

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, Underground mining.

Accordingly, 30 CFR Parts 701, 780, 784, 816, and 817 are amended as set forth herein.

Dated: April 22, 1983.

Daniel N. Miller, Jr., Assistant Secretary, Energy and Minerals.

PART 701 -- PERMANENT REGULATORY PROGRAM

1. Section 701.5 is amended by revising the definitions of "soil horizons" and "topsoil" to read as follows:

SECTION 701.5 - DEFINITIONS.

* * * * *

SOIL HORIZONS means contrasting layers of soil parallel or nearly parallel to the land surface. Soil horizons are differentiated on the basis of field characteristics and laboratory data. The four master soil horizons are --

(a) A horizon . The uppermost mineral layer, often called the surface soil. It is the part of the soil in which organic matter is most abundant, and leaching of soluble or suspended particles is typically the greatest;

(b) E horizon . The layer commonly near the surface below an A horizon and above a B horizon. An E horizon is most commonly differentiated from an overlying A horizon by lighter color and generally has measurably less organic matter than the A horizon. An E horizon is most commonly differentiated from an underlying B horizon in the same sequum by color of higher value or lower chroma, by coarser texture, or by a combination of these properties;

(c) B horizon. The layer that typically is immediately beneath the E horizon and often called the subsoil. This middle layer commonly contains more clay, iron, or aluminum than the A, E, or C horizons; and

(d) C horizon. The deepest layer of soil profile. It consists of loose material or weathered rock that is relatively unaffected by biologic activity.

* * * * *

TOPSOIL means the A and E soil horizon layers of the four master soil horizons.

* * * * *

PART 780 -- SURFACE MINING PERMIT APPLICATIONS -- MINIMUM REQUIREMENTS FOR RECLAMATION AND OPERATION PLAN

2. Paragraph (b)(4) of Section 780.18 is revised to read as follows:

SECTION 780.18 - RECLAMATION PLAN: GENERAL REQUIREMENTS.

* * * * *

(b) * * *

(4) A plan for removal, storage, and redistribution of topsoil, subsoil, and other material to meet the requirements of Section 816.22 of this chapter. A demonstration of the suitability of topsoil substitutes or supplements under Section 816.22(b) of this chapter shall be based upon analysis of the thickness of soil horizons, total depth, texture, percent coarse fragments, pH, and areal extent of the different kinds of soils. The regulatory authority may require other chemical and physical analyses, field-site trials, or greenhouse tests if determined to be necessary or desirable to demonstrate the suitability of the topsoil substitutes or supplements.

* * * * *

PART 784 -- UNDERGROUND MINING PERMIT APPLICATIONS -- MINIMUM REQUIREMENTS FOR RECLAMATION AND OPERATION PLAN

3. Paragraph (b)(4) of Section 784.13 is revised to read as follows:

SECTION 784.13 - RECLAMATION PLAN: GENERAL REQUIREMENTS.

* * * * *

(b) * * *

(4) A plan for removal, storage, and redistribution of topsoil, subsoil, and other material to meet the requirements of Section 817.22 of this chapter. A demonstration of the suitability of topsoil substitutes or supplements under Section 817.22(b) of this chapter shall be based upon analysis of the thickness of soil horizons, total depth, texture, percent coarse fragments, pH, and areal extent of the different kinds of soils. The regulatory authority may require other chemical and physical analyses, field-site trials, or greenhouse tests if determined to be necessary or desirable to demonstrate the suitability of the topsoil substitutes or supplements.

* * * * *

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

SECTION 816.21 [Removed]

4. Section 816.21 is removed.

5. Section 816.22 is revised to read as follows:

SECTION 816.22 - TOPSOIL AND SUBSOIL.

(a) Removal.

(1)(i) All topsoil shall be removed as a separate layer from the area to be disturbed, and segregated.

(ii) Where the topsoil is of insufficient quantity or poor quality for sustaining vegetation, the materials approved by the regulatory authority in accordance with paragraph (b) of this section shall be removed as a separate layer from the area to be disturbed, and segregated.

(2) If topsoil is less than 6 inches thick, the operator may remove the topsoil and the unconsolidated materials immediately below the topsoil and treat the mixture as topsoil.

(3) The regulatory authority may choose not to require the removal of topsoil for minor disturbances which --

(i) Occur at the site of small structures, such as power poles, signs, or fence lines; or

(ii) Will not destroy the existing vegetation and will not cause erosion.

(4) Timing. All material to be removed under this section shall be removed after the vegetative cover that would interfere with its salvage is cleared from the area to be disturbed, but before any drilling, blasting, mining, or other surface disturbance takes place.

(b) Substitutes and supplements. Selected overburden materials may be substituted for, or used as a supplement to topsoil if the operator demonstrates to the regulatory authority that the resulting soil medium is equal to, or more suitable for sustaining vegetation than, the existing topsoil, and the resulting soil medium is the best available in the permit area to support revegetation.

(c) Storage.

(1) Materials removed under paragraph (a) of this section shall be segregated and stockpiled when it is impractical to redistribute such materials promptly on regraded areas.

(2) Stockpiled materials shall --

(i) Be selectively placed on a stable site within the permit area;

(ii) Be protected from contaminants and unnecessary compaction that would interfere with revegetation;

(iii) Be protected from wind and water erosion through prompt establishment and maintenance of an effective, quick growing vegetative cover or through other measures approved by the regulatory authority; and

(iv) Not be moved until required for redistribution unless approved by the regulatory authority.

(3) Where long-term surface disturbances will result from facilities such as support facilities and preparation plants and where stockpiling of materials removed under paragraph (a)(1) of this section would be detrimental to the quality or quantity of those materials, the regulatory authority may approve the temporary distribution of the soil materials so removed to an approved site within the permit area to enhance the current use of that site until needed for later reclamation, provided that --

(i) Such action will not permanently diminish the capability of the topsoil of the host site; and

(ii) The material will be retained in a condition more suitable for redistribution than if stockpiled.

(d) Redistribution .

(1) Topsoil materials removed under paragraph (a) of this section shall be redistributed in a manner that --

(i) Achieves an approximately uniform, stable thickness consistent with the approved postmining land use, contours, and surface-water drainage systems;

(ii) Prevents excess compaction of the materials; and

(iii) Protects the materials from wind and water erosion before and after seeding and planting.

(2) Before redistribution of the material removed under paragraph (a) of this section the regraded land shall be treated if necessary to reduce potential slippage of the redistributed material and to promote root penetration. If no harm will be caused to the redistributed material and reestablished vegetation, such treatment may be conducted after such material is replaced.

(3) The regulatory authority may choose not to require the redistribution of topsoil or topsoil substitutes on the approved postmining embankments of permanent impoundments or of roads if it determines that --

(i) Placement of topsoil or topsoil substitutes on such embankments is inconsistent with the requirement to use the best technology currently available to prevent sedimentation, and

(ii) Such embankments will be otherwise stabilized.

(4) Nutrients and soil amendments. Nutrients and soil amendments shall be applied to the initially redistributed material when necessary to establish the vegetative cover.

(e) Subsoil segregation. The regulatory authority may require that the B horizon, C horizon, or other underlying strata, or portions thereof, be removed and segregated, stockpiled, and redistributed as subsoil in accordance with the requirements of paragraphs (c) and (d) of this section if it finds that such subsoil layers are necessary to comply with the revegetation requirements of Sections 816.111, 816.113, 816.114, and 816.116 of this chapter.

SECTION 816.23 [Removed]

SECTION 816.24 [Removed]

SECTION 816.25 [Removed]

6. Sections 816.23, 816.24, and 816.25 are removed.

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

SECTION 817.21 [Removed]

7. Section 817.21 is removed.

8. Section 817.22 is revised to read as follows:

SECTION 817.22- TOPSOIL AND SUBSOIL.

(a) Removal

(1)(i) All topsoil shall be removed as a separate layer from the area to be disturbed, and segregated.

(ii) Where the topsoil is of insufficient quantity or of poor quality for sustaining vegetation, the materials approved by the regulatory authority in accordance with paragraph (b) of this section shall be removed as a separate layer from the area to be disturbed, and segregated.

(2) If topsoil is less than 6 inches thick, the operator may remove the topsoil and the unconsolidated materials immediately below the topsoil and treat the mixture as topsoil.

(3) The regulatory authority may choose not to require the removal of topsoil for minor disturbances which --

(i) Occur at the site of small structures, such as power poles, signs, or fence lines; or

(ii) Will not destroy the existing vegetation and will not cause erosion.

(4) Timing. All materials to be removed under this section shall be removed after the vegetative cover that would interfere with its salvage is cleared from the area to be disturbed, but before any drilling, blasting, mining, or other surface disturbance takes place.

(b) Substitutes and supplements. Selected overburden materials may be substituted for, or used as a supplement to, topsoil if the operator demonstrates to the regulatory authority that the resulting soil medium is equal to, or more suitable for sustaining vegetation than, the existing topsoil, and the resulting soil medium is the best available in the permit area to support revegetation.

(c) Storage.

(1) Materials removed under Paragraph (a) of this section shall be segregated and stockpiled when it is impractical to redistribute such materials promptly on regraded areas.

(2) Stockpiled materials shall --

(i) Be selectively placed on a stable site within the permit area;

(ii) Be protected from contaminants and unnecessary compaction that would interfere with revegetation;

(iii) Be protected from wind and water erosion through prompt establishment and maintenance of an effective, quick growing vegetative cover or through other measures approved by the regulatory authority; and

(iv) Not be moved until required for redistribution unless approved by the regulatory authority.

(3) Where long-term surface disturbances will result from facilities such as support facilities and preparation plants and where stockpiling of materials removed under paragraph (a)(1) of this section would be detrimental to the quality or quantity of those materials, the regulatory authority may approve the temporary distribution of the soil materials so removed to an approved site within the permit area to enhance the current use of that site until needed for later reclamation, provided that --

(i) Such action will not permanently diminish the capability of the topsoil of the host site; and

(ii) The material will be retained in a condition more suitable for redistribution than if stockpiled.

(d) Redistribution.

(1) Topsoil materials removed under paragraph (a) of this section shall be redistributed in a manner that --

(i) Achieves an approximately uniform, stable thickness consistent with the approved postmining land use, contours, and surface-water drainage systems;

(ii) Prevents excess compaction of the materials; and

(iii) Protects the materials from wind and water erosion before and after seeding and planting.

(2) Before redistribution of the material removed under paragraph (a) of this section, the regraded land shall be treated if necessary to reduce potential slippage of the redistributed material and to promote root penetration. If no harm will be caused to the redistributed material and reestablished vegetation, such treatment may be conducted after such material is replaced.

(3) The regulatory authority may choose not to require the redistribution of topsoil or topsoil substitutes on the approved postmining embankments of permanent impoundments or of roads if it determines that --

(i) Placement of topsoil or topsoil substitutes on such embankments is inconsistent with the requirement to use the best technology currently available to prevent sedimentation, and

(ii) Such embankments will be otherwise stabilized.

(4) Nutrients and soil amendments. Nutrients and soil amendments shall be applied to the initially redistributed material when necessary to establish the vegetative cover.

(e) Subsoil segregation. The regulatory authority may require that the B horizon, C horizon, or other underlying strata, or portions thereof, be removed and segregated, stockpiled, and redistributed as subsoil in accordance with the requirements of paragraphs (c) and (d) of this section if it finds that such subsoil layers are necessary to comply with the revegetation requirements of Sections 817.111, 817.113, 817.114, and 817.116 of this chapter.

SECTION 817.23 [Removed]

SECTION 817.24 [Removed]

SECTION 817.25 [Removed]

9. Sections 817.23, 817.24, and 817.25 are removed.

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

FR Doc. 83-13072 Filed 5-13-83; 8:45 am]
BILLING CODE 4310-05-M