DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

30 CFR Parts 780, 784, 816, and 817

[Docket ID No.: OSM–2007–0007]

RIN 1029–AC04

Excess Spoil, Coal Mine Waste, and Buffers for Perennial and Intermittent Streams

AGENCY: Office of Surface Mining Reclamation and Enforcement, Interior.

ACTION: Final rule.

SUMMARY: We, the Office of Surface Mining Reclamation and Enforcement (OSM), are amending our regulations concerning stream buffer zones, stream-channel diversions, siltation structures, impoundments, excess spoil, and coal mine waste. Among other things, this rule requires that surface coal mining operations be designed to minimize the creation of excess spoil and the adverse environmental impacts of fills constructed to dispose of excess spoil and coal mine waste. We have revised the stream buffer zone rule to more closely reflect the underlying provisions of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), to adopt related permit application requirements, to require that disturbance of perennial and intermittent streams and their buffer zones generally be avoided unless it is not reasonably possible to do so, to identify exceptions to the requirement to maintain an undisturbed buffer zone for perennial and intermittent streams, and to clarify the relationship between SMCRA and the Clean Water Act.

DATES: This rule is effective January 12, 2009. The incorporation by reference of the publication listed in the rule is approved by the Director of the Federal Register as of January 12, 2009.

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You can find additional information concerning OSM, this rule, and related documents on OSM's home page on the Internet at *http://www.osmre.gov*.

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I. What does SMCRA say about surface coal mining operations in or near streams?

SMCRA contains three references to streams, two references to watercourses, and several provisions that indirectly refer to activities in or near streams.

Section 507(b)(10) [1] requires that permit applications include ''the name of the watershed and location of the surface stream or tributary into which surface and pit drainage will be discharged.'' However, this provision has no relevance to mining-related activities in or near streams or to the existing or proposed buffer zone rules.

Section 515(b)(18) requires that surface coal mining and reclamation operations ''refrain from the construction of roads or other access ways up a stream bed or drainage channel or in such proximity to such channel so as to seriously alter the normal flow of water.''

Section 516(c) requires the regulatory authority to suspend underground coal mining under permanent streams if an imminent danger to inhabitants exists. However, this provision is not relevant to a discussion of the stream buffer zone rules because, in response to litigation concerning the 1983 version of 30 CFR 817.57, we stipulated that ''this regulation is directed only to disturbance of surface lands by surface activities associated with underground mining.'' *In re: Permanent Surface Mining Regulation Litigation II-Round II,* 21 ERC 1725, 1741, footnote 21 (D.D.C. 1984).

Section 515(b)(22)(D) provides that sites selected for the disposal of excess spoil must ''not contain springs, natural water courses or wet weather seeps unless lateral drains are constructed from the wet areas to the main underdrains in such a manner that filtration of the water into the spoil pile will be prevented.'' In adopting this provision, Congress could have chosen to exclude perennial and intermittent streams (or other waters) from the scope of ''natural water courses,'' but it did not do so. In addition, the fact that this provision of the Act authorizes disposal of excess spoil in areas containing natural watercourses, springs, and seeps further suggests that Congress did not intend to prohibit placement of excess spoil in perennial or intermittent

[1] 30 U.S.C. 1257(b)(10). SMCRA, Pub. L. 95–87, is codified at 30 U.S.C. 1201–1328. Thus, for example, SMCRA section 102 is codified at 30 U.S.C. 1202, SMCRA section 515 is codified at 30 U.S.C. 1265, and SMCRA section 516 is codified at 30 U.S.C. 1266.

streams. The term ''natural watercourses'' includes all types of streams—perennial, intermittent, and ephemeral. Springs and seeps are groundwater discharges. To the extent that those discharges provide intermittent or continuous flow in a channel, they are included within the scope of our definitions in 30 CFR 701.5 of ''intermittent stream'' and ''perennial stream,'' respectively. The definition of ''intermittent stream,'' which is based upon technical literature, includes any ''stream or reach of a stream that is below the local water table for at least some part of the year, and obtains its flow from both surface runoff and ground water discharge.'' Furthermore, in litigation under the Clean Water Act, the U.S. Court of Appeals for the Fourth Circuit cited section 515(b)(22) of SMCRA as supporting the statement in its decision that ''it is beyond dispute that SMCRA recognized the possibility of placing excess spoil material in waters of the United States even though those materials do not have a beneficial purpose.'' See *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh,* 317 F.3d 425, 443 (4th Cir. 2003).

Section 515(c)(4)(D) provides that, in approving a permit application for a mountaintop removal operation, the regulatory authority must require that ''no damage will be done to natural watercourses.'' The regulations implementing this provision clarify that the prohibition applies only to natural watercourses ''below the lowest coal seam mined.'' See 30 CFR 824.11(a)(9). Furthermore, section 515(c)(4)(E) of the Act specifies that ''all excess spoil material not retained on the mountaintop shall be placed in accordance with the provisions of subsection (b)(22) of this section.'' By including this proviso, Congress recognized that not all excess spoil generated by mountaintop removal operations could be retained on benches or placed within the mined-out area. And by cross-referencing section 515(b)(22), Congress authorized placement of excess spoil from mountaintop removal operations in natural watercourses, provided all requirements of section 515(b)(22) are met. In the steep-slope terrain of central Appalachia, excess spoil typically can most feasibly be placed in valley fills.

In addition, the legislative history of section 515(f) of SMCRA indicates that Congress anticipated that coal mine waste impoundments would be constructed in perennial and intermittent streams:

> In order to assure that mine waste impoundments used for the disposal of liquid or solid waste material from coal mines are constructed or have been constructed so as to safeguard the health and welfare of *downstream* populations, H.R. 2 gives the Army Corps of Engineers a role in determining the standards for construction, modification and abandonment of these impoundments.
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> Thus, the corps' experience and expertise in the area of design, construction, maintenance, et cetera, which were utilized for carrying out the congressionally authorized surveys of mine waste embankments in West Virginia following the disastrous failure of the mine waste impoundments on *Buffalo Creek,* is to be applied in order to prevent *similar* accidents in the future.

H. Rep. No. 95–218; at 125 (April 22, 1977) (emphasis added).

Section 515(f) provides that—

> The Secretary, with the written concurrence of the Chief of Engineers, shall establish within one hundred and thirty-five days from the date of enactment, standards and criteria regulating the design, location, construction, operation, maintenance, enlargement, modification, removal, and abandonment of new and existing coal mine waste piles referred to in section 515(b)(13) and section 516(b)(5).

Sections 515(b)(13) and 516(b)(5) concern ''all *existing and new* coal mine waste piles consisting of mine wastes, tailings, coal processing wastes, or other liquid and solid wastes and used either temporarily or permanently as dams or embankments.'' (Emphasis added.) Sections 515(f), 515(b)(13), and 516(b)(5) do not specifically mention streams or watercourses.

However, the reference to dams and embankments, the requirement for the concurrence of the U.S. Army Corps of Engineers (for its expertise in dam construction and flood control), and the legislative history documenting that the 1972 Buffalo Creek flood was the driving force behind adoption of those SMCRA provisions demonstrate that Congress was aware that coal mine waste impoundments had been constructed in perennial and intermittent streams in the past and would be constructed there in the future. Furthermore, the fact that all three paragraphs specifically apply to both new and existing structures (rather than to just existing structures) implies that new structures would and could be built in streams under SMCRA. As mentioned in the legislative history, Congress' intent was to prevent a recurrence of the Buffalo Creek impoundment failure and to ensure that all coal mine waste impoundments either are or have been constructed in a manner that protects the safety of downstream residents. There is no indication that Congress intended to prohibit construction of those structures in perennial or intermittent streams.

Finally, sections 515(b)(11) and 516(b)(4) of the Act govern the construction of coal refuse piles that are not used as dams or embankments. While those paragraphs do not mention constructing refuse piles in watercourses, neither do they prohibit such construction. Because of the similarity of those piles to excess spoil fills, the regulations implementing sections 515(b)(11) and 516(b)(4) incorporate language similar to that of section 515(b)(22)(D) for the construction of excess spoil disposal facilities. Specifically, the regulations at 30 CFR 816.83(a)(1) and 817.83(a)(1) allow the construction of non-impounding coal refuse piles on areas containing springs, natural or man-made watercourses, or wet-weather seeps if the design includes diversions and underdrains. Not all areas containing springs, watercourses, or wet-weather seeps are perennial or intermittent streams, but some are, which means that refuse piles may be constructed in streams.

II. What provisions of SMCRA form the basis for our stream buffer zone rules?

Paragraphs (b)(10)(B)(i) and (24) of section 515 of SMCRA served as the basis for all three previous versions (1977, 1979, and 1983) of the stream buffer zone rule with respect to surface mining activities. Those sections also serve as the basis for the revised rule at 30 CFR 816.57 that we are adopting today. Section 515(b)(10)(B)(i) requires that surface coal mining operations be conducted so as to prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible using the best technology currently available. Section 515(b)(24) requires that surface coal mining and reclamation operations be conducted to minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values ''to the extent possible using the best technology currently available.''

In context, section 515(b)(10)(B)(i) provides that the performance standards adopted under SMCRA must require that surface coal mining and reclamation operations—

> (10) minimize the disturbances to the prevailing hydrologic balance at the mine-site and in associated offsite areas and to the quality and quantity of water in surface and ground water systems both during and after surface coal mining operations and during reclamation by—
>
> (A) * * *

(B)(i) conducting surface coal mining operations so as to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow, or runoff outside the permit area, but in no event shall contributions be in excess of requirements set by applicable State or Federal law.

* * * * *

Section 515(b)(24) requires that surface coal mining and reclamation operations be conducted in a manner that—

To the extent possible using the best technology currently available, minimize[s] disturbances and adverse impacts of the operation on fish, wildlife, and related environmental values, and achieve[s] enhancement of such resources where practicable.

The common thread in both provisions is the requirement for use of the best technology currently available to achieve the requirements of those provisions to the extent possible.

Paragraphs (b)(9)(B) and (11) of section 516 of SMCRA form the basis for the stream buffer zone rule at 30 CFR 817.57, which applies to surface activities associated with underground mines. Those provisions of section 516 are substantively equivalent to paragraphs (b)(10)(B)(i) and (24) of section 515 of SMCRA, respectively, except that section 516(b)(9)(B) also includes the provisions found in section 515(b)(10)(E) regarding the avoidance of channel deepening or enlargement. In the remainder of this preamble, we often refer only to the section 515 paragraphs, with the understanding that, unless otherwise stated or implied by context, references to those paragraphs should be read as including their section 516 counterparts.

III. What is the history of our stream buffer zone rules?

A. Legislative History of SMCRA

SMCRA does not establish or require a buffer zone for streams or other waters. In 1972, the U.S. House of Representatives passed a bill (H.R. 6482) that included a flat prohibition on mining within 100 feet of any ''body of water, stream, pond, or lake to which the public enjoys use and access, or other private property.'' This prohibition appeared in the counterpart to what is now section 522(e) of the Act. However, the bill never became law and the provision did not appear in subsequent versions of SMCRA legislation.

B. Initial Regulatory Program

As part of the regulations implementing the initial regulatory program under SMCRA, we adopted the concept of a 100-foot buffer zone around intermittent and perennial streams as a means ''to protect stream channels from abnormal erosion'' from nearby upslope mining activities. See 30 CFR 715.17(d)(3) and 42 FR 62652 (December 13, 1977). The regulation reads as follows:

No land within 100 feet of an intermittent or perennial stream shall be disturbed by surface coal mining and reclamation operations unless the regulatory authority specifically authorizes surface coal mining and reclamation operations through such a stream. The area not to be disturbed shall be designated a buffer zone and marked as specified in § 715.12.

The rule does not specify the conditions under which the regulatory authority may authorize operations within the buffer zone.

C. Permanent Regulatory Program (1979 Rules)

The original version of our permanent program regulations, as published on March 13, 1979, included more extensive stream buffer zone rules at 30 CFR 816.57 (for surface mining operations) and 817.57 (for underground mining operations). Specifically, the 1979 version of section 816.57 provided that no land within 100 feet of a perennial stream or a stream with a biological community shall be disturbed by surface mining activities, except in accordance with §§ 816.43–816.44 [the stream diversion regulations], unless the regulatory authority specifically authorizes surface mining activities closer to or through such a stream upon finding that the original stream channel will be restored; and during and after the mining, the water quantity and quality from the stream section within 100 feet of the surface mining activities shall not be adversely affected. Paragraph (c) of the 1979 rule provided that a biological community existed if the stream at any time contained an assemblage of two or more species of arthropods or molluscan animals that were adapted to flowing water for all or part of their life cycle, dependent upon a flowing water habitat, reproducing or could reasonably be expected to reproduce in the water body where they are found, and longer than 2 millimeters at some stage of the part of their life cycle spent in the flowing water habitat.

The counterpart regulation for underground mining at 30 CFR 817.57 was identical except that it substituted the term ''surface operations and facilities'' for ''surface mining activities'' and clearly indicated that the restrictions were limited to ''surface areas.''

The preamble to the 1979 rules explains that the purpose of the revised rules was to implement paragraphs (b)(10) and (b)(24) of section 515 of the Act. 44 FR 15176, March 13, 1979. It states that ''[b]uffer zones are required to protect streams from the adverse effects of sedimentation and from gross disturbance of stream channels,'' but that ''if operations can be conducted within 100 feet of a stream in an environmentally acceptable manner, they may be approved.'' *Id.* In addition, it states that ''[t]he 100-foot limit is based on typical distances that should be maintained to protect stream channels from sedimentation,'' but that, while the 100-foot standard provides a simple rule for enforcement purposes, ''site-specific variation should be made available when the regulatory authority has an objective basis for either increasing or decreasing the width of the buffer zone.'' *Id.*

D. Permanent Regulatory Program Revisions (1983 Rules)

In 1983, we revised the stream buffer zone rules to delete the requirement that the original stream channel be restored, to replace the biological community criterion for determining which non-perennial streams must be protected under the rule with a requirement for protection of all intermittent streams, and to add a requirement for a finding that the proposed mining activities will not cause or contribute to a violation of applicable state or federal water quality standards and will not adversely affect the environmental resources of the stream. See 48 FR 30312, June 30, 1983.

In 1983, we also adopted revised performance standards for coal preparation plants not located within the permit area of a mine. We decided not to apply the stream buffer zone rule to those preparation plants. See 30 CFR 827.12 and the preamble to those rules at 48 FR 20399, May 5, 1983.

The preamble to the 1983 stream buffer zone rules reiterates the general rationale for adoption of a stream buffer zone rule that we specified in the preamble to the 1979 rules. It identifies the reason for replacing the biological community threshold with the intermittent stream threshold as a matter of improving the ease of administration and eliminating the possibility of applying the rule to ephemeral streams and other relatively insignificant water bodies:

The biological-community standard was confusing to apply since there are areas with ephemeral surface waters of little biological or hydrologic significance which, at some time of the year, contain a biological community as defined by previous

§ 816.57(c). Thus, much confusion arose when operators attempted to apply the previous rule's standards to springs, seeps, ponding areas, and ephemeral streams. While some small biological communities which contribute to the overall production of downstream ecosystems will be excluded from special buffer-zone protection under final § 816.57(a), the purposes of Section 515(b)(24) of the Act will best be achieved by providing a buffer zone for those streams with more significant environmental-resource values.

48 FR 30313, June 30 1983. The preamble further states that ''[i]t is impossible to conduct surface mining without disturbing a number of minor natural streams, including some which contain biota'' and that ''surface coal mining operations will be permissible as long as environmental protection will be afforded to those streams with more significant environmental-resource value.'' *Id.* It further provides that the revised rules ''also recognize that intermittent and perennial streams generally have environmental-resource values worthy of protection under Section 515(b)(24) of the Act.'' *Id.* at 30312. In addition, the preamble notes that ''[a]lthough final § 816.57 is intended to protect significant biological values in streams, the primary objective of the rule is to provide protection for the hydrologic balance and related environmental values of perennial and intermittent streams.'' *Id.* at 30313. It further states that ''[t]he 100-foot limit is used to protect streams from sedimentation and help preserve riparian vegetation and aquatic habitats.'' *Id.* at 30314.

We also stated that we removed the requirement to restore the original stream channel in deference to the stream-channel diversion requirements of 30 CFR 816.43 and 817.43 and to clarify that there does not have to be a stream diversion for mining to occur inside the buffer zone. *Id.*

Finally, the preamble states that we added the finding concerning ''other environmental resources of the stream'' to clarify ''that regulatory authorities will be allowed to consider factors other than water quantity and quality in making buffer-zone determinations'' and ''to provide a more accurate reflection of the objectives of Sections 515(b)(10) and 515(b)(24) of the Act.'' *Id.* at 30316.

Revised 30 CFR 816.57(a) (1983) provided that ''[n]o land within 100 feet of a perennial stream or an intermittent stream shall be disturbed by surface mining activities, unless the regulatory authority specifically authorizes surface mining activities closer to, or through, such a stream.'' The rule further provided that the regulatory authority may authorize such activities only upon finding that surface mining activities will not cause or contribute to the violation of applicable State or Federal water quality standards, and will not adversely affect the water quantity and quality or other environmental resources of the stream; and if there will be a temporary or permanent stream-channel diversion, it will comply with § 816.43.

The 1983 version of the stream buffer zone rule for underground mining at 30 CFR 817.57 is identical except for substitution of the term ''underground mining activities'' for ''surface mining activities.''

The National Wildlife Federation challenged this regulation as being inconsistent with sections 515(b)(10) and (24) of the Act, primarily because it deleted the biological community threshold for stream protection. However, the court rejected that challenge, finding without elaboration that the ''regulation is not in conflict with either section 515(b)(10) or 515(b)(24).'' *In re: Permanent Surface Mining Regulation Litigation II—Round II,* 21 ERC 1725, 1741–1742 (D.D.C. 1984).

The court also noted that the Secretary had properly justified the rule change on the grounds that the previous rule was confusing and difficult to apply without protecting areas of little biological significance. Unfortunately, the new criterion (intermittent streams) has proven as difficult to apply as the biological community standard that it replaced. The definition of ''intermittent stream'' in 30 CFR 701.5 has two parts, separated by an ''or.'' The first part defines all streams with a drainage area of one square mile as intermittent. This part of the definition is the aspect that was litigated and upheld for its clarity of application. However, the second part of the definition includes all streams and stream segments that are below the local water table for part of the year and that derive at least part of their flow from groundwater discharge. This part of the definition has been more difficult to apply in practice. In fact, some States use biological criteria for making that determination.

Industry also challenged 30 CFR 817.57(a) to the extent that it included all underground mining activities. However, industry withdrew its challenge when the Secretary stipulated that the rule would apply only to surface lands and surface activities associated with underground mining. See footnote 21, *id.* at 1741.

E. How has the 1983 stream buffer zone rule been applied and interpreted?

Historically, we and the State regulatory authorities have applied the 1983 stream buffer zone rule in a manner that allowed the placement of excess spoil fills, refuse piles, slurry impoundments, and sedimentation ponds in intermittent and perennial streams. However, as discussed at length in the preamble to the January 7, 2004 proposed rule (69 FR 1038–1042), which we never finalized, there has been considerable controversy over the proper interpretation of both the Clean Water Act and our 1983 rules as they apply to the placement of fill material in or near perennial and intermittent streams. As evidenced by past litigation and the comments that we received on the proposed rule that we published on August 24, 2007, some interpretations of our 1983 rule are at odds with the underlying provisions of SMCRA.

We first placed our interpretation of the 1983 stream buffer zone rules in writing in a document entitled ''Summary Report—West Virginia Permit Review—Vandalia Resources, Inc. Permit No. S–2007–98.'' According to our annual oversight reports for West Virginia for 1999 and 2000, that document stated that the stream buffer zone rule does not apply to the footprint of a fill placed in a perennial or intermittent stream as part of a surface coal mining operation. On June 4, 1999, in *West Virginia Highlands Conservancy* v. *Babbitt*, Civ. No. 1:99CV01423 (D.D.C.), the plaintiffs challenged the validity of that document, alleging that it constituted rulemaking in violation of the Administrative Procedure Act. In an order filed September 23, 1999, the court approved an unopposed motion to dismiss the case as moot.

In a lawsuit filed in the U.S. District Court for the Southern District of West Virginia in July 1998, plaintiffs asserted that the stream buffer zone rule allows mining activities through or within the buffer zone for a perennial or intermittent stream only if the activities are minor incursions. They argued that the rule did not allow substantial segments of the stream to be buried underneath excess spoil fills or other mining-related structures. On October 20, 1999, the district court ruled in favor of the plaintiffs on this point, holding that the stream buffer zone rule applies to all segments of a stream, including those segments within the footprint of an excess spoil fill, not just to the stream as a whole. The court also stated that the construction of fills in perennial or intermittent streams is inconsistent with the language of 30 CFR

816.57(a)(1), which provides that the regulatory authority may authorize surface mining activities within a stream buffer zone only after finding that the proposed activities ''will not adversely affect the water quantity and quality or other environmental resources of the stream.'' See *Bragg* v. *Robertson*, 72 F. Supp. 2d 642, 660–663 (S.D. W. Va., 1999).

The U.S. Court of Appeals for the Fourth Circuit ultimately reversed the district court on other grounds (lack of jurisdiction under the Eleventh Amendment to the U.S. Constitution) without reaching the merits of the district court's holding on the applicability of the stream buffer zone rule. *Bragg* v. *West Virginia Coal Association*, 248 F.3d 275, 296 (4th Cir. 2001), *cert. denied*, 534 U.S. 1113 (2002).

In a different case, the same district court stated that SMCRA and the stream buffer zone rule do not authorize disposal of overburden in streams: ''SMCRA contains no provision authorizing disposal of overburden waste in streams, a conclusion further supported by the buffer zone rule.'' *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh*, 204 F. Supp. 2d 927, 942 (S.D. W. Va. 2002).

The U.S. Court of Appeals for the Fourth Circuit subsequently rejected the district court's interpretation, stating that ''SMCRA does not prohibit the discharge of surface coal mining excess spoil in waters of the United States.'' *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh*, 317 F.3d 425, 442 (4th Cir. 2003). The court further stated that ''it is beyond dispute that SMCRA recognizes the possibility of placing excess spoil material in waters of the United States even though those materials do not have a beneficial purpose.'' *Id.* at 443.

The court explained the basis for its statements as follows:

> Section 515(b)(22)(D) of SMCRA authorizes mine operators to place excess spoil material in ''springs, natural water courses or wet weather seeps'' so long as ''lateral drains are constructed from the wet areas to the main underdrains in such a manner that filtration of the water into the spoil pile will be prevented.'' 30 U.S.C. § 1265(b)(22)(D). In addition, § 515(b)(24) requires surface mine operators to ''minimize disturbances and adverse impacts of the operation on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable,'' implying the placement of fill in the waters of the United States. 30 U.S.C. § 1265(b)(24). It is apparent that SMCRA anticipates the possibility that excess spoil material could and would be placed in waters of the United States, and this fact cannot be juxtaposed with § 404 of the Clean Water Act to provide a clear intent to limit the term ''fill material'' to material deposited for a beneficial primary purpose.

Id. at 443.

The preamble to the proposed rule that we published on January 7, 2004, but which we never adopted in final form, contains additional discussion of litigation and related matters arising from the 1983 stream buffer zone rules. See especially Part I.B.1. at 69 FR 1038–1040.

F. What rulemaking actions have we proposed to clarify the 1983 rule?

On January 7, 2004 (69 FR 1036), we proposed to revise our stream buffer zone rules to retain the prohibition on disturbance of land within 100 feet of a perennial or intermittent stream, but alter the findings that the regulatory authority must make before granting a variance to this requirement. The revised rule would have replaced the Clean Water Act-oriented findings in the 1983 rule with a SMCRA-based requirement that the regulatory authority find in writing that the activities will, to the extent possible, use the best technology currently available to prevent additional contributions of suspended solids to the section of stream within 100 feet downstream of the mining activities and outside the area affected by mining activities; and minimize disturbances and adverse impacts on fish, wildlife, and other related environmental values of the stream. The proposed rule also would have required that operations be designed to minimize the creation of excess spoil.

Numerous commenters asked us to consider other alternatives to the proposed rule. Some commenters also asked that we prepare an environmental impact statement (EIS) on the proposed action. On June 16, 2005 (70 FR 35112), we announced our intent to prepare an EIS on the proposed rule changes. We also stated that we intended to consider additional alternatives and to publish a new proposed rule to coincide with the release of a draft EIS.

On August 24, 2007 (72 FR 48890), we published a new, extensively revised proposed rule and a notice of availability of the draft EIS. That proposed rule replaced the one we published on January 7, 2004. The August 24, 2007, proposed rule forms the basis for the final rule that we are adopting today. This final rule is intended to clarify the scope and meaning of the stream buffer zone rule, consistent with underlying statutory authority, and to ensure that regulatory authorities, mine operators, other governmental entities, landowners, and citizens all can have a common understanding of what the stream buffer zone rule does and does not require. The final rule also includes additional permitting requirements intended to ensure that operations are designed to minimize the creation of excess spoil and to require consideration of alternatives to the disposal of excess spoil and coal mine waste in perennial or intermittent streams or their buffer zones to minimize the adverse impacts on fish, wildlife, and related environmental values to the extent possible using the best technology currently available.

The revised stream buffer zone rule that we are adopting today attempts to minimize disputes and misunderstandings associated with application of the 1983 rule. The revised rule distinguishes between those situations in which maintenance of an undisturbed buffer between mining and reclamation activities and a perennial or intermittent stream constitutes the best technology currently available to implement the underlying statutory provisions (sections 515(b)(10)(B)(i) and (24) and 516(b)(9)(B) and (11) of SMCRA) and those situations in which maintenance of a buffer is neither feasible nor appropriate.

IV. What is the relationship between SMCRA and the Clean Water Act with respect to this rule?

In this final rule, we are adding paragraph (f) of sections 780.28 and 784.28 and paragraph (d) of sections 816.57 and 817.57 to clarify the relationship between SMCRA and the Clean Water Act with respect to activities conducted in or near perennial and intermittent streams. We are adopting these paragraphs to address concerns arising from the fact that this final rule removes language that previously appeared in sections 816.57(a) and 817.57(a) that specifically prohibited the conduct of mining activities within 100 feet of a perennial or intermittent stream unless the regulatory authority found that those activities would not cause or contribute to the violation of applicable State or Federal water quality standards and would not adversely affect the water quantity and quality or other environmental resources of the stream. We are removing that requirement because its language more closely resembles the Clean Water Act than the underlying provisions of SMCRA. See Parts II, VIII.C., and VIII.I. of this preamble for further discussion of sections 780.28, 784.28, 816.57, and 817.57 and the provisions of SMCRA

that provide the basis for the stream buffer zone rule.

None of the revisions to the stream buffer zone rule or other elements of this final rule affect a mine operator's responsibility to comply with effluent limitations or other requirements of the Clean Water Act. The requirements of the Clean Water Act have independent force and effect regardless of the terms of the SMCRA permit. The independent effect of the Clean Water Act is recognized in section 702(a) of SMCRA, which provides that—

> Nothing in this Act shall be construed as superseding, amending, modifying, or repealing the * * * [t]he Federal Water Pollution Control Act [Clean Water Act] [*citations omitted*], the State laws enacted pursuant thereto, or other Federal laws relating to the preservation of water quality.

30 U.S.C. 1292(a).

In interpreting this statutory provision with respect to effluent limitations adopted as part of our initial regulatory program, the U.S. Court of Appeals for the D.C. Circuit held that ''where the Secretary's regulation of surface coal mining's hydrologic impact overlaps EPA's, the Act expressly directs that the Federal Water Pollution Control Act and its regulatory framework are to control so as to afford consistent effluent standards nationwide.'' *In re Surface Mining Regulation Litigation*, 627 F.2d 1346, 1367 (D.C. Cir. 1980).

In today's final rule, we are adding paragraph (f)(2) of sections 780.28 and 784.28 and paragraph (d) of sections 816.57 and 817.57(d) to reiterate and further clarify this relationship between SMCRA and the Clean Water Act. The new rules emphasize that issuance of a SMCRA permit is not a substitute for the reviews, authorizations, and certifications required under the Clean Water Act and does not authorize initiation of surface coal mining operations for which the applicant has not obtained all necessary authorizations, certifications, and permits under the Clean Water Act.

Consistent with the approach described above, our existing regulations at 30 CFR 816.42 and 817.42 provide that discharges of water from areas disturbed by surface or underground mining activities shall be made in compliance with all applicable State and Federal water quality laws and regulations and with the effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR part 434. Nothing in the final rule that we are adopting today would alter or affect the requirements of 30 CFR 816.42 or 817.42.

SMCRA and the Clean Water Act provide for separate regulatory programs with different purposes and very different permitting requirements and procedures. In addition, SMCRA and the Clean Water Act differ considerably with respect to jurisdiction. For example, unlike SMCRA, the Clean Water Act does not directly regulate groundwater. The Clean Water Act focuses primarily on regulating discharges of pollutants into waters of the United States, whereas SMCRA regulates a broad universe of environmental and other impacts of surface coal mining and reclamation operations. As stated in the legislative history of SMCRA:

> Statutory authority to *regulate* the adverse environmental effects of surface and underground coal mining under the Federal Water Pollution Control Act [Clean Water Act], as amended, is limited to the treatment or removal of any pollutants into the waters of the United States. * * * The Federal Water Pollution Control Act, as amended, can deal only with a part of the problem. The FWPCA does not contain the statutory authority for the establishment of standards and regulations requiring comprehensive preplanning and designing for appropriate mine operating and reclamation procedures to ensure protection of public health and safety and to prevent the variety of other damages to the land, the soil, the wildlife, and the aesthetic and recreational values that can result from coal mining. The statute also lacks the regulatory authority to deal with the discharge of pollutants from *abandoned* surface and underground coal mines.

H. Rep. No. 94–1445 at 90–91 (1976), emphasis in original.

Section 508(a)(9) of SMCRA requires that each permit application include ''the steps to be taken to comply with applicable air and water quality laws and regulations and any applicable health and safety standards.'' Our regulations at 30 CFR 780.18(b)(9) and 784.13(b)(9) similarly require that each permit application include:

> A description of steps to be taken to comply with the requirements of the Clean Air Act (42 U.S.C. 7401 *et seq.*), and the Clean Water Act (33 U.S.C. 1251 *et seq.*), and other applicable air and water quality laws and regulations and health and safety standards.

In keeping with section 508(a)(9) of SMCRA, today's rule also includes new provisions in paragraph (f)(1) of sections 780.28 and 784.28 reiterating that every permit application must identify the authorizations that the applicant anticipates will be needed under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, and describe the steps that the permit applicant has taken or will take to procure those authorizations.

The Clean Water Act establishes a comprehensive program designed to ''restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'' 33 U.S.C. 1251(a). To achieve this goal, it prohibits the discharge of pollutants into navigable waters except as in compliance with specified provisions of the Clean Water Act, including a provision that allows for discharges authorized by a National Pollutant Discharge Elimination System (NPDES) permit. 33 U.S.C. 1311(a) and 1342(a). At 33 U.S.C. 1362(7), the Clean Water Act defines ''navigable waters'' as ''waters of the United States,'' a term which the Corps and EPA define at 33 CFR 328.3 and 40 CFR 232.2, respectively. The proper scope of that definition has been extensively litigated and EPA and the Corps have issued supplemental guidance to reflect the outcome of that litigation.

The Clean Water Act authorizes the discharge of pollutants into waters of the United States under two different permit programs. Section 404 authorizes discharges of dredged or fill material, while section 402 applies to all other pollutants. 33 U.S.C. 1344, 1342. Section 404 is primarily administered by the Corps, with the exception of those States and Indian tribes that have assumed the program pursuant to section 404(g). In both cases, EPA provides input and has oversight authority and responsibilities. Section 402 (NPDES) permits are issued by EPA or states and Indian tribes that EPA has authorized to administer the NPDES program under section 402(b).

Section 401 of the Clean Water Act requires that each applicant for a federal license or permit submit a certification from the state in which the discharge originates. The certification must state that the discharge will comply with federal and state water quality requirements. 33 U.S.C. 1341(a)(1). ''No license or permit shall be granted until the certification required by this section has been obtained or has been waived'' and ''[n]o license or permit shall be granted if certification has been denied by the State.'' *Id.* Section 401(d) further provides that the state certifications ''shall become a condition on any Federal license or permit subject to the provisions of this section.'' *Id.* at 1341(d).

Section 402 of the Clean Water Act governs discharges of pollutants other than dredged or fill material. 33 U.S.C. 1342. Permits issued under this section are known as NPDES permits. They typically contain technology-based numerical standards called effluent limitations that restrict the amount of specified pollutants that may be

discharged. 33 U.S.C. 1311, 1362(11). EPA has developed industry-wide technology-based wastewater effluent limitations for surface coal mining and reclamation operations. Those effluent limitations are codified in 40 CFR part 434. NPDES permits also must include any more stringent limitations necessary to meet state water quality standards. 33 U.S.C. 1311(b)(1)(C), 1342(a). EPA may authorize states to issue NPDES permits, but EPA retains authority to enforce the requirements of the Clean Water Act.

Section 404 of the Clean Water Act authorizes the Secretary of the Army, through the Corps, to regulate discharges of dredged and fill material through a permitting process. 33 U.S.C. 1344. On May 9, 2002 (67 FR 31129–31143), the Corps and EPA adopted a revised definition of ''fill material'' in 33 CFR 323.2(e) and 40 CFR 232.2, respectively, that includes ''overburden from mining or other excavation activities.'' In the same rulemaking, the Corps and EPA also adopted a revised definition of ''discharge of fill material'' in 33 CFR 323.2(f) and 40 CFR 232.2, respectively. The revised definition provides that ''[t]he term generally includes, without limitation, the * * * placement of overburden, slurry, or tailings or similar mining-related materials.'' Therefore, any mining overburden or coal mine waste used to replace any waters of the United States, or portion thereof, with dry land or to change the bottom elevation of any waters of the United States, or portion thereof, is classified as fill material for purposes of the Clean Water Act.

To implement section 404, the Corps may issue either individual permits under 33 CFR parts 320 through 328 or general permits under 33 CFR part 330. See 33 U.S.C. 1344(a) and (e). Both individual and general permits must comply with guidelines issued by EPA under section 404(b)(1), 33 U.S.C. 1344(b)(1). Those guidelines, which are codified at 40 CFR part 230, are referred to as the ''404(b)(1) Guidelines.'' The 404(b)(1) Guidelines generally prohibit the permitting of projects where there ''is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.'' 40 CFR 230.10(a). Under 40 CFR 230.10(a)(2), ''[a]n alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.''

The guidelines specify that the Corps must ensure that the proposed fill will not cause significantly adverse effects on human health or welfare, aquatic life, and aquatic ecosystems. 40 CFR 230.10(c)(1) through (c)(3). To comply with this requirement, the Corps must make a written determination of the effects of a proposed activity ''on the physical, chemical, and biological components of the aquatic environment.'' 40 CFR 230.11. *See also* 33 CFR 320.4(b)(4) and 325.2(a)(6) for requirements for individual permits.

The 404(b)(1) Guidelines also provide that ''no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.'' 40 CFR 230.10(d). One way the Corps can reduce the potential adverse impacts associated with filling activity is to require compensatory mitigation. See 33 CFR 325.4(a)(3) and 320.4(r) for individual permits and General Condition 20 (72 FR 11193, March 12, 2007) for nationwide permits under 33 CFR part 330. This differs substantially from SMCRA, which provides no authority to require compensatory mitigation.

Section 404(e) of the Clean Water Act authorizes the Corps to ''issue general permits on a State, regional, or nationwide basis for any category of activities involving discharges of dredged or fill material if the Secretary [of the Army] determines that the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effects on the environment,'' provided the general permit is based upon the guidelines developed under section 404(b)(1) of the Clean Water Act.

The Corps has exercised its authority under section 404(e) to issue general nationwide permits (NWPs) for surface coal mining operations under SMCRA (NWP 21), coal remining activities under SMCRA (NWP 49), and underground coal mining activities under SMCRA (NWP 50). Those permits apply only if the activities are authorized under a SMCRA permit or an application for the activities is being processed as part of an integrated permit processing procedure. See 72 FR 11092, 11184, and 11191, March 12, 2007. In issuing NWPs 21, 49, and 50, the Corps has determined that the activities covered by those permits are in compliance with the 404(b)(1) Guidelines. That is, the Corps has determined that these activities will cause only minimal adverse environmental effects when performed separately and will have only minimal cumulative adverse effects on the environment.

As the Corps states in the preamble to the most recent version of its general permits—

> When we issue the NWPs, we fully comply with the requirements of the 404(b)(1) Guidelines at 40 CFR 230.7, which govern the issuance of general permits under section 404. For the section 404 NWPs, each decision document contains a 404(b)(1) Guidelines analysis. Section 230.7(b) of the 404(b)(1) Guidelines requires only a ''written evaluation of the potential individual and cumulative impacts of the categories of activities to be regulated under the general permit.'' Since the required evaluation must be completed before the NWP is issued, the analysis is predictive in nature. The estimates of potential individual and cumulative impacts, as well as the projected compensatory mitigation that will be required, are based on the best available data from the Corps district offices, based on past use of NWPs.

72 FR 11094, March 12, 2007.

In the preamble to NWP 21, the Corps states that ''the analyses and environmental protection performance standards required by SMCRA, in conjunction with the pre-construction notification requirement, are generally sufficient to ensure that NWP 21 activities result in minimal individual and cumulative adverse impacts on the aquatic environment.'' 72 FR 11114. The most critical element in the Corps' determination that NWP 21 meets the Clean Water Act requirements for general permits is the fact that NWP 21 requires a preconstruction notification from the applicant, followed by a review of the project by the Corps, and then a written determination from the Corps before the activities covered by NWP 21 may be initiated. As the Corps states in the preamble—

> We believe our process for NWP 21 ensures that activities authorized by the NWP result in no more than minimal adverse impacts to the aquatic environment because each project is reviewed on a case-by-case basis and the district engineer either makes a minimal impacts determination on the project or asserts discretionary authority and requires an individual permit. Also, because of the case-by-case review and the requirement for written verification, we do not agree that it is necessary to prohibit discharges of dredged or fill material into perennial streams.
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> * * * * *
>
> The pre-construction notification requirements of all NWPs allows for a case-by-case review of activities that have the potential to result in more than minimal adverse effects to the aquatic environment. If the adverse effects on the aquatic environment are more than minimal, then the district engineer can either add special conditions to the NWP authorization to ensure that the activity results in no more than minimal adverse environmental effects

or exercise discretionary authority to require an individual permit.

72 FR 11114.

Furthermore, at 72 FR 11117, the Corps states that—

The Corps does not assume that other state or Federal agencies conduct a review that is comparable to the section 404(b)(1) Guidelines. Although analysis of offsite alternatives is not required in conjunction with general permits, each proposed project is evaluated for onsite avoidance and minimization, in accordance with general condition 20, and is not authorized under the NWP if the adverse impacts to waters of the United States are more than minimal.

At 72 FR 11094, the Corps explains that—

NWPs 21, 49, and 50 are a special case, in that they authorize activities for which review of environmental impacts, including impacts to aquatic resources, is separately required under other Federal authorities (e.g., Surface Mining Control and Reclamation Act (SMCRA) permits for coal mining activities). The Corps believes it would be unnecessarily duplicative to separately require the same substantive analyses through an individual permit application as are already required under SMCRA. However, through the pre-construction notification review process, the district engineer will consider the analyses prepared for the SMCRA permit and exercise discretionary authority to require an individual permit in cases where the district engineer determines, after considering avoidance and reclamation activities undertaken pursuant to SMCRA, that the residual adverse effects are not minimal. The project sponsor is required to obtain written verification prior to commencing work.

Thus, the Corps uses SMCRA permit application data and analyses as a starting point to determine whether a proposed operation qualifies for authorization under NWP 21, but it does not rely upon that information exclusively. Nor does the Corps presume that issuance of a SMCRA permit is evidence of compliance with Clean Water Act requirements. See 72 FR 11115, which states that—

The Corps understands coal mining is covered by many environmental regulations; however the Corps has determined that SMCRA, in its current form, does not remove the need, either legally or substantively, for independent authorization under Section 404 of the Clean Water Act. Consequently, this NWP does not duplicate the SMCRA permit process.

The principles in the preceding discussion concerning NWP 21 also apply to NWPs 49 and 50. See 72 FR 11148–49 and 11151–52.

The preamble to General Condition 27, which applies to NWPs 21, 49, and 50, describes the Corps' decisionmaking process as follows:

In reviewing the PCN [preconstruction notification] for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. * * * If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. * * *

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

72 FR 11195–1196, March 12, 2007.

The preamble also notes that, before beginning any activities covered by the preconstruction notification, the person submitting the notification must obtain a state water quality certification under section 401 of the Clean Water Act in those states that do not issue an unconditional certification for the nationwide permits.

As the preceding discussion demonstrates, we believe that maintaining the distinction between the SMCRA and Clean Water Act regulatory programs is both administratively and legally appropriate. We do not believe the requirements of this final rule are duplicative of requirements under the Clean Water Act. However, consistent with section 713(a) of SMCRA, we encourage SMCRA regulatory authorities and the agencies administering the Clean Water Act to share permit application data and environmental analyses to streamline the permitting processes under SMCRA and the Clean Water Act.

V. How did we obtain public input?

We published the proposed rule on which this final rule is based on August 24, 2007, (72 FR 48890–48926). In response to requests from the public, we held public hearings on the proposed rule in Charleston, West Virginia; Hazard, Kentucky; Knoxville, Tennessee; and Washington, Pennsylvania on October 24, 2007. We also held public meetings in Big Stone Gap, Virginia on October 24, 2007, and in Alton, Illinois on November 1, 2007. In addition, we extended the comment period, which was originally scheduled to close October 23, 2007, until November 23, 2007. See 72 FR 57504, October 10, 2007.

Approximately 750 persons attended the public hearings and meetings. Of the attendees, 212 provided testimony, with 21 supporting the proposed rule and the remainder opposed. In addition to the testimony offered at the hearings and meetings, we received more than 43,000 written or electronic comments on the proposed rule. In general, most commenters opposed the proposed rule, primarily because they viewed the rule as facilitating mountaintop mining and construction of excess spoil fills in streams. Commenters representing the coal industry generally supported the proposed rule, except for the proposed revisions to (1) apply the buffer zone requirement to waters of the United States rather than to perennial and intermittent streams and (2) require an analysis of alternatives for disposal of excess spoil and coal mine waste. Comments from state regulatory authorities and other governmental entities were mixed in terms of support for or opposition to the rule.

In developing the final rule, we considered all comments that were germane to the proposed rule. In the remainder of this preamble, we summarize the comments received and discuss our disposition of those comments.

VI. What general comments did we receive on the proposed rule?

A. We Should Discourage the Mining and Use of Coal as a Power Source Because of the Role That the Combustion of Coal Plays in Climate Change

Many commenters expressed opposition to the use of coal as a fuel for the generation of electricity, expressing concern about its role in climate change. We acknowledge the commenters' concerns. However, regulations adopted under SMCRA are not the appropriate venue to address climate change issues. Coal-fired power

plants produce more than half of the electricity used in the United States and the use of coal as a fuel for power generation is likely to increase. Nothing in SMCRA authorizes us to regulate electric power generation facilities or to adopt regulations or take other actions for the purpose of reducing the use of coal for the generation of electricity or to require carbon sequestration. Indeed, in SCMRA, Congress repeatedly mentions the importance of coal to the Nation, including the continued production of coal as an energy source. Section 101(b) of SMCRA states that ''coal mining operations presently contribute significantly to the Nation's energy requirements.'' Section 101(d) refers to ''the expansion of coal mining to meet the Nation's energy needs'' and section 101(j) notes that ''surface and underground coal mining operations * * * contribute to the economic well-being, security, and general welfare of the Nation.'' Section 102(f) specifies that one of the purposes of SMCRA is to ''assure that the coal supply essential to the Nation's energy requirements and to its economic and social well-being is provided.'' That paragraph also provides that one of the purposes of SMCRA is to ''strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy.'' Taken together, these passages and the other purposes of SMCRA listed in section 102 indicate that the regulatory provisions of SMCRA were enacted not to discourage the production or use of coal but rather to ensure that coal is mined in a manner that respects property rights and minimizes adverse impacts on land and water resources and communities. As stated in section 102(a) of SMCRA, in enacting SMCRA, Congress intended to ''establish a nationwide program to protect society and the environment from the adverse effects of *surface coal mining operations.*'' (Emphasis added.) There is no indication that Congress intended that the Act operate as a means of regulating the burning and use of coal as opposed to the manner and locations in which coal is mined.

The lack of regulatory authority does not mean that we are indifferent to the potential problems posed by climate change from greenhouse gas emissions like carbon dioxide. In cooperation with industry, academia, conservation organizations, individual landowners, and others, we developed the Appalachian Regional Reforestation Initiative, which encourages both the reclamation of mined lands in a manner that is favorable to tree growth and the planting of trees as part of the mine reclamation process. Young forests, especially robustly growing young hardwood forests like those found on reclaimed minesites that use the forestry reclamation approach encouraged under the Appalachian Regional Reforestation Initiative, are generally recognized as an effective means of removing carbon dioxide from the atmosphere.

B. We Should Withdraw the Proposed Rule and Enforce the 1983 Stream Buffer Zone, the Meaning of Which Is Clear as Written

Many commenters argued that we should withdraw the proposed rule and instead fully implement and enforce the 1983 version of the stream buffer zone rule at 30 CFR 816.57 and 817.57. According to the commenters, there is no need to clarify the meaning of the 1983 rule because the plain language of that rule precludes the construction of excess spoil and coal mine waste fills in perennial and intermittent streams. The commenters stated that the proposed rule is a reversal of the 1983 rule, not a clarification, because it specifies that excess spoil fills, refuse piles, and certain other activities conducted in the stream as part of surface coal mining operations are not subject to the prohibition on disturbance of the stream buffer zone.

We disagree with the commenters' interpretation of the 1983 rule. Historically, both the 1983 rule and its state counterparts have been applied in a manner that has allowed the construction of fills in perennial and intermittent streams as part of surface coal mining operations, provided those fills comply with all other applicable requirements of the SMCRA regulatory program and with all pertinent requirements under the Clean Water Act. In other words, the 1983 stream buffer zone rule applied only to activities within 100 feet of a perennial or intermittent stream. It did not apply to activities planned to occur in intermittent or perennial streams. Maintaining a 100-foot buffer zone to protect the stream's water quality and environmental resources makes sense only if the stream segment adjacent to the buffer zone is to remain intact. This historical interpretation and application of the stream buffer zone rule is in harmony with a statement of the U.S. Court of Appeals for the Fourth Circuit in *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh,* 317 F.3d 425, 443 (4th Cir. 2003) (''it is beyond dispute that SMCRA recognized the possibility of placing excess spoil material in waters of the United States''). Several industry commenters stated that to apply the rule in any other way would be nonsensical and that applying the rule to activities that are designed to take place in stream channels would seriously impair the viability of coal mining in central Appalachia. The historical application of the 1983 rule closely resembles the revised stream buffer zone rules that we are adopting today. Consequently, the revised rules are in fact a clarification of the 1983 rule, not a reversal of that rule.

C. We Should Not Adopt Any Rule That Facilitates Mountaintop Mining Operations or the Filling of Streams

Many commenters objected to the proposed rule based on the perception that the rule would facilitate mountaintop removal operations and other large-scale surface mines and related mining techniques currently used to extract coal from the mountainous regions of central Appalachia. The commenters cited the damage that those operations allegedly cause to streams, hardwood forests, fish and wildlife, water supplies, and the landscape and culture of Appalachia as justification for prohibiting that type of mining. We understand the commenters' concerns.

However, the perception that the proposed rule or this final rule would remove an obstacle to mountaintop removal operations or other large-scale mining operations is inaccurate. As we explained in the preamble to the proposed rule, our changes to the stream buffer zone rule are intended to clarify when and how that rule applies, consistent with the historical application of the 1983 rule under both SMCRA and the Clean Water Act. Our revisions are not intended to restrict coal removal. Nor are they intended to promote or discourage any particular method of mining, including mountaintop removal.

In enacting SMCRA, Congress did not ban mountaintop removal operations or the construction of excess spoil fills in streams. Indeed, section 515(c) of SMCRA specifically authorizes the use of mountaintop removal methods to recover coal seams in steep-slope areas, and section 515(b)(22)(D) allows the construction of excess spoil fills in areas that ''contain springs, natural water courses, or wet weather seeps'' if a proper drainage system is installed. As stated in section 102(f), two of the Act's purposes are to ''assure the coal supply essential to the Nation's energy requirements and to its economic and social well-being is provided'' and to ''strike a balance between protection of the environment and agricultural productivity and the Nation's need for

coal as an essential source of energy.'' When Congress wanted to place certain lands off-limits to coal mining, in whole or in part, or to prohibit certain types of mining, in whole or in part, it did so by including provisions in the Act to that effect. See, e.g., section 522 [''Designating Areas Unsuitable for Surface Coal Mining''], section 510(b)(5) [alluvial valley floors west of the hundredth meridian], and section 516(c) [underground coal mining under urbanized areas]. Otherwise, SMCRA and its implementing regulations establish how coal is to be mined, not whether it may be mined. The regulations that we are adopting today are consistent with the statute in that they are intended to minimize the adverse impacts of surface coal mining operations on fish, wildlife, and related environmental values without prohibiting the use of specific methods of mining or the recovery of coal from lands that have not been designated as unsuitable for surface coal mining operations.

Most fill material placed in streams in connection with coal mining is a result of the need to dispose of excess spoil generated by mining operations conducted in areas consisting of steep slopes and narrow valleys. To remove coal by surface mining methods, the formerly solid rock strata overlying the coal seam must be broken up into fragments and excavated. The broken rock fragments (referred to as spoil) are separated by numerous voids, resulting in a significant increase in volume over the volume of solid rock in place before mining. The increase in volume varies considerably depending upon the nature of the rock and the mining method, but the industry average is about 25 percent. Returning all spoil to the mined-out area in steep-slope terrain would create highly unstable conditions and in most cases is physically impossible. Consequently, some spoil must be permanently placed outside the mined-out area in engineered fills, typically in the upper reaches of valleys adjacent to the mine. As defined in 30 CFR 701.5, spoil not needed to restore the approximate original contour and disposed of in locations other than the mined-out area is considered ''excess spoil.''

The central Appalachian coalfields are characterized by highly eroded plateaus dissected by numerous narrow, deeply incised valleys with steep side slopes. In this region, even small valleys may contain intermittent and perennial streams. For example, in a study conducted in West Virginia, the United States Geological Survey found that, on average, perennial streams begin in watersheds as small as 40.8 acres and intermittent streams in watersheds as small as 14.5 acres. See Katherine S. Paybins, *Flow Origin, Drainage Area, and Hydrologic Characteristics for Headwater Streams in Mountaintop Coal-Mining Region of Southern West Virginia,* Water Resources Investigations Report 02–4300, U.S. Geological Survey, 2003, p. 1. Consequently, the construction of excess spoil fills in those valleys often involves burying the upper reaches of perennial and intermittent streams.

A further description of the existing environment of the central Appalachian coalfields can be found in the draft and final environmental impact statements issued in 2003 and 2005, respectively, by the U.S. Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers (COE or the Corps), the U.S. Fish and Wildlife Service (FWS), OSM, and the West Virginia Department of Environmental Protection. The draft EIS, which the final EIS incorporates by reference, contains the bulk of that description. The draft EIS is entitled ''Mountaintop Mining/Valley Fills in Appalachia Draft Programmatic Environmental Impact Statement'' (EPA 9–03–R–00013, EPA Region 3, June 2003) and is available at *http://www.epa.gov/region3/mtntop/eis.htm*. The final EIS, which is entitled ''Mountaintop Mining/Valley Fills in Appalachia Final Programmatic Environmental Impact Statement'' (EPA 9–03–R–05002, EPA Region 3, October 2005), is available at *http://www.epa.gov/region3/mtntop/pdf/mtm-vf_fpeis_full-document.pdf*.

Underground mines also may result in the filling of some stream segments where other viable options may not exist, especially in steep-slope areas. Rock and other overburden materials removed as part of the cut made to expose the coal seam into which the mine entries and ventilation shafts are driven typically are used to construct an adjoining bench upon which mine offices, parking lots, equipment, and other support facilities are located. This process is referred to as ''facing up'' the mine. Any material removed as part of the face-up operation that is not used to construct the bench or placed in temporary storage for use in restoring the approximate original contour and reclaiming the face-up area once the mine closes permanently is excess spoil. Should such excess spoil exist, it would be placed in fills on adjacent hillsides or in adjoining valleys. Underground mining operations also may involve the excavation of non-coal waste rock from underground tunnels. The waste rock, which we define as underground development waste, is typically brought to the surface and placed either in refuse piles or in excess spoil fills that meet the requirements for refuse piles, as required by 30 CFR 817.71(i).

Activities associated with coal preparation plants also may result in the filling of some stream segments. These plants clean coal by removing impurities, especially ash, incombustible rock, and sulfur. They create large quantities of coal processing waste, including both a very fine fraction, which is often suspended in water in a semi-liquid form (slurry) and a coarse fraction (refuse). The slurry is usually impounded behind dams constructed of coarse refuse in a valley adjacent to the plant.

One industry commenter stated that underground coal mining in central Appalachia depends on fills in mostly intermittent streams to store material from mine bench and stockpile construction and for sedimentation ponds and road crossings. The commenter also noted that coal processing waste is deposited in valley fills associated with coal preparation plants. Therefore, according to the commenter, without valley fills, coal mining in central Appalachia is doomed. While the commenter's statement may be somewhat of an exaggeration, there is little doubt that a prohibition on placement of excess spoil and coal mine waste in perennial or intermittent streams would have a significant adverse impact not only on surface mines, but also on underground mines and coal preparation plants.

Pages 7–8 of the final report dated January 13, 2003, for an economic study prepared for us by Hill & Associates, Inc. (Contract No. CT212142) contains the following discussion:

> We received strong input from the mining community that it is an egregious mistake to ignore impacts of the valley fill limitations on deep mines, especially new ones. First, many deep mines are co-dependent on related surface mines for quality blending requirements and even economic averaging arrangements. Eliminating or reducing the surface mining has a direct impact on the viability of the deep mining in these instances. Second, the typical reject rate in Central Appalachia from a wash plant associated with a deep mine is about 50%. Thus, for every one ton of coal mined, one ton of refuse is placed in a valley fill or related impoundment. In fact, the valley fills associated with wash plant refuse are generally among the larger valley fills associated with coal mining (with generally larger watershed) but are fewer in number than surface mining valley fills. Third, the construction of a new deep mine involves other valley fill issues. Often, a new deep mine is accompanied by a new wash plant with a new valley fill for refuse.

The Hill & Associates report uses the term ''deep mines'' for underground mines and the term ''wash plants'' for coal preparation plants. In addition, in the report, the term ''valley fills'' includes all excess spoil fills and coal mine waste disposal facilities constructed as part of a surface mine.

The following excerpt from a colloquy between Senators Howard Baker of Tennessee and Henry Jackson of Washington concerning S. 425, a 1973 bill that was a precursor to SMCRA, illustrates that Congress was cognizant of the potential scale of mountaintop removal operations and the attendant fills:

> Mr. BAKER. Mr. President, the last question I have to put, so that we may look this squarely in the face, is this: Would the distinguished chairman of the committee say certainly that what we are doing is sanctioning mountain top mining to the extent where whole mountains may be stripped down to ground level, and the storage of millions of tons of overburden may be placed in the hollows, creating hundreds of thousands of acres of new flat land, and that if we are going to adopt this variance which I intend to support, we should do it with our eyes wide open to the fact that whole mountains may disappear from the landscape?
>
> Mr. JACKSON. The answer is, yes, of course * * *. What we want to do is achieve the twin objectives, here, of being able to maintain a mining operation that will be satisfactory from an economic point of view, but also that will be environmentally acceptable.

119 Cong. Rec. S33314 (daily ed. October 9, 1973).

D. We Should Ensure the Protection of Headwater Streams by Requiring Maintenance of an Undisturbed Buffer Between Mining Activities and Streams

A number of commenters emphasized that headwater streams and mature forest cover are important to maintain the health of the ecological and biological functions of the entire stream. According to the commenters, numerous studies have clearly demonstrated that stream buffer zones of native vegetation (generally hardwood forests in the central Appalachian coal mining region) represent the best technology currently available for protecting the functions of headwater streams.

We agree with the commenters that headwater streams make a significant contribution to ecosystem function and the ecological productivity of downstream flows. We also agree that, in the absence of other considerations, precluding surface coal mining and reclamation operations in or near headwater streams may be the best technology currently available to protect the fish, wildlife, and related environmental values associated with those streams.

However, the universal protection of mature forest cover and headwater streams all the way to the top of the ridge or the head of the stream would preclude viable surface mining operations in almost all cases, especially in Appalachia. Sections 515(b)(24) and 516(b)(11) of SMCRA provide that surface coal mining and reclamation operations must use the best technology currently available to minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values, but only ''to the extent possible.'' The ''to the extent possible'' clause in these statutory provisions recognizes that, because surface coal mining operations inherently involve significant disturbance of the land, those operations necessarily result in some disturbances to and adverse impacts on fish, wildlife, and related environmental values. Therefore, the determination of what constitutes the best technology currently available to minimize those adverse impacts is a site-specific determination that must be made in the context of the site's geologic, topographic, and ecological characteristics (including the location of the coal) and the nature of the mining operation. This approach is consistent with our regulatory definition of ''best technology currently available'' in 30 CFR 701.5, a definition that has remained unchanged since 1979. For example, it is almost never possible to conduct surface coal mining operations without disturbing ephemeral streams, especially in a mesic environment. In those cases, the best technology currently available would focus on how the site is reclaimed after mining, in particular, use of the revegetation, restoration, and fish and wildlife habitat enhancement measures mentioned in sections 816.97 and 817.97 of our rules.

In addition, many surface coal mining operations necessarily involve disturbance of intermittent or perennial streams and all or part of the buffer zone for the stream segment in which the activities listed in paragraphs (b)(1) through (b)(4) of sections 816.57 and 817.57 of this final rule occur. For example, in 2000 in West Virginia, a team consisting of representatives from OSM, the West Virginia Division of Environmental Protection, industry, and the environmental community completed an engineering evaluation of 14 proposed mine sites, which were representative of all proposed mining sites in West Virginia. As summarized on page 2 of the report, the team concluded that prohibiting construction of fills in intermittent and perennial streams would have a dramatic impact on coal recovery:

> Limiting valley fills to the ephemeral streams resulted in significant or total loss of the coal resource for 9 of the 11 mine sites when compared to the original mine site plans. All of the coal resource was lost for 6 of the 11 mine sites. By restricting fills to the ephemeral streams, the total coal recovery is estimated at 18.6 million tons, a 90.9 percent reduction. The original estimate was 186 million tons. The team noted that even if smaller fills could be constructed, they would impact nearly every available valley, possibly increasing the overall environmental impact.

Hence, this final rule does not absolutely prohibit the conduct of surface activities in intermittent or perennial streams, nor does it require maintenance of an undisturbed buffer between surface activities and the intermittent or perennial stream in situations where it is not possible to do so because of the nature of the proposed surface coal mining operations. In other words, avoidance of any disturbance to the stream and maintenance of an undisturbed buffer for the stream is not required if avoidance would preclude the conduct of surface coal mining and reclamation operations.

However, in keeping with the statutory requirement to use the best technology currently available to the extent possible, and in response to the commenters' concerns, we have revised the rule to include a requirement that, when a permit application includes a proposal to disturb a perennial or intermittent stream or land within 100 feet of such a stream, the permit applicant must demonstrate to the satisfaction of the regulatory authority that avoiding disturbance of a perennial or intermittent stream or lands within 100 feet of such a stream is not reasonably possible. See paragraphs (b)(1), (c)(1), (d)(1), and (e)(1) of sections 780.28 and 784.28, paragraph (d)(1)(i) of sections 780.25 and 784.16, and paragraph (a)(3)(i) of sections 780.35 and 784.19 of the final rule. Those provisions of our final rule use the term ''reasonably possible'' to clarify that the phrase ''to the extent possible'' in sections 515(b)(24) and 516(b)(11) of SMCRA should not be interpreted as requiring the use of any theoretically possible approach to compliance with the minimization requirement without regard to cost or other provisions of SMCRA. Those provisions include section 515(b)(1), which requires that surface coal mining operations be conducted ''so as to maximize the utilization and conservation of the solid

fuel resource being recovered so that reaffecting the land in the future through surface coal mining can be minimized,'' and section 102(f), which specifies that one of the purposes of SMCRA is to ensure that the coal supply essential to the nation's energy requirements is provided. Section 102(f) also calls for establishment of a regulatory program that balances environmental protection and coal production. We believe that our final rule strikes that balance by using the term ''reasonably possible'' to interpret and apply the requirements of sections 515(b)(24) and 516(b)(11) of the Act.

A survey of all coal mining permits issued between October 1, 2001, and June 30, 2005, indicates that coal mining activities authorized by those permits will directly affect about 535 miles of streams nationwide, of which 324 miles (60.6 percent) are in the central Appalachian coalfields. Based on data from the West Virginia permits, we estimate that approximately two-thirds of the 324 miles will be permanently covered by excess spoil fills and coal mine waste disposal facilities. When segments of headwater streams are buried permanently by excess spoil or mine waste fills, the discharge from the toe of the fill is equivalent to a spring. The groin ditches associated with the fill are too steep to fully replicate the buried stream segment. As discussed in the environmental impact statement for this rulemaking, typically, the stream segment downstream of the discharge from the toe of the fill has a higher base flow rate and lower peak flows than it did before construction of the fill. The temperature of the flow is also cooler and less variable than that of the original stream. Most of the remaining miles of stream directly affected by mining operations should experience only temporary adverse environmental impacts, chiefly as a result of mining through those streams. In those cases, the streams are diverted and relocated while the mining operation proceeds through the streambed. When mining is completed, the stream is restored to its original location unless the relocation is permanent.

Finally, our existing rules require that fills be revegetated in a manner consistent with the approved postmining land use. In time, we anticipate that hardwood forests will be reestablished on most fill surfaces in Appalachia.

E. We Have Not Accorded Sufficient Importance to the Environmental Protection Purposes of SMCRA

Several commenters objected to our repeated references to section 102(f) of SMCRA in the preamble to the proposed rule. Section 102(f) provides that one of the purposes of SMCRA is to ''assure that the coal supply essential to the Nation's energy requirements and to its economic and social well-being is provided'' and to ''strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy.'' 30 U.S.C. 1202(f). The commenters allege that, in developing our proposed rule, we completely ignored the other purposes listed in section 102, in particular those in paragraphs (a) [''establish a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations''], (c) [''assure that surface coal mining operations are not conducted where reclamation as required by this Act is not feasible''], and (d) [''assure that surface coal mining operations are so conducted as to protect the environment'']. The commenters argue that the result is to skew the analysis of SMCRA in favor of resource development while overlooking negative impacts to streams, water quality, and fish habitat. The commenters made these arguments in the context of advocating protection for headwater streams and interpreting the 1983 rule in a manner that would preclude the construction of excess spoil fills and coal mine waste disposal facilities in streams.

We disagree with the commenters' allegations. The purposes of SMCRA in section 102 explain what Congress intended to accomplish through the specific provisions found in the rest of the Act. They do not provide independent rulemaking authority. In particular, they do not provide authority to adopt regulations that would preclude surface coal mining operations on lands where those operations are not otherwise prohibited by SMCRA. Any regulations adopted under SMCRA (as well as any interpretation of an existing rule) must be consistent with the specific provisions of the Act. The environmental protection standards and other provisions of title V of the Act set out specific requirements, consistent with the environmental protection and other purposes of SMCRA, for the regulation of surface coal mining and reclamation operations. Therefore, any regulations implementing title V must be consistent with and based upon the provisions of that title. The purposes in section 102 can provide support or guidance for a regulation, but in and of themselves they do not establish requirements or authority for a regulation and they do not suffice to justify adoption of a regulation (or interpretation of an existing regulation) that is inconsistent with specific requirements or other provisions of the Act.

Within title V, section 515(c) expressly requires that our regulations establish provisions under which mountaintop removal mining operations may be permitted: ''Each State program may and each Federal program shall include procedures pursuant to which the regulatory authority may permit [mountaintop removal] operations.'' 30 U.S.C. 1265(c)(1). Adoption of a rule (or interpretation of an existing rule) to prohibit placement of excess spoil and coal mine waste in streams, as the commenters advocate on the basis of the environmental protection purposes of paragraphs (a), (c), and (d) of section 102 of SMCRA, would be inconsistent with this provision of SMCRA because mountaintop removal operations—and most other types of mining operations in steep-slope areas—typically cannot be conducted without construction of excess spoil fills in streams. In a study conducted in West Virginia, the United States Geological Survey found that, on average, perennial streams begin in watersheds as small as 40.8 acres and intermittent streams in watersheds as small as 14.5 acres. See Katherine S. Paybins, *Flow Origin, Drainage Area, and Hydrologic Characteristics for Headwater Streams in Mountaintop Coal-Mining Region of Southern West Virginia*, Water Resources Investigations Report 02–4300, U.S. Geological Survey, 2003, p.1. Industry commenters also asserted that underground mining operations in central Appalachia would be severely curtailed by such a limitation because those operations need to construct fills to contain underground development waste generated by the face-up and other aspects of mine construction. It would be difficult to construct those fills in steep-slope areas without impacting an intermittent or perennial stream.

In addition, section 515(b)(22)(D) of SMCRA authorizes the placement of excess spoil in areas that ''contain springs, natural water courses, or wet weather seeps'' if proper underdrains are constructed. Ephemeral, intermittent, and perennial streams are all natural watercourses. Springs are groundwater discharges. Discharges from springs typically form intermittent or perennial streams. In relevant part,

our rules at 30 CFR 701.5 define an ''intermittent stream'' as a stream or reach of a stream that obtains its flow from both surface runoff and ground water discharge.'' Therefore, by authorizing placement of excess spoil in areas that contain springs and natural watercourses, section 515(b)(22)(D) of SMCRA clearly allows construction of excess spoil fills in intermittent and perennial streams, provided the necessary underdrains are installed. Interpreting the purposes of SMCRA listed in paragraphs (a), (c), and (d) of section 102 as authorizing adoption of a rule (or interpretation of an existing rule) to effectively prohibit construction of excess spoil fills in perennial and intermittent streams thus would be inconsistent with section 515(b)(22)(D) of SMCRA and, by extension, section 515(c) of SMCRA.

F. EPA Cannot Legally Concur With the Revised Stream Buffer Zone Rules Because They Violate the Clean Water Act

Section 501(a)(B) of SMCRA specifies that we must obtain the written concurrence of the EPA Administrator with respect to regulations that relate to air or water quality standards published under the authority of either the Clean Air Act or the Clean Water Act. That provision applies to some of the changes that we are making in this final rule.

Several commenters stated that EPA cannot legally concur with the proposed rule because it would result in significant degradation to the aquatic ecosystem in violation of the Clean Water Act regulations at 40 CFR 230.10(c), which are part of the 404(b)(1) Guidelines. The commenters argue that, by eliminating the provision in the 1983 stream buffer zone rule that required a finding that the proposed activity would not cause or contribute to a violation of state or federal water quality standards and would not adversely affect the water quality, quantity, or other environmental resources of the stream, the proposed rule would implicitly allow effects that are both adverse and significant. According to the commenters, this result would be inconsistent with 40 CFR 230.10(c), which provides that, subject to an exception that is not germane here, ''no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States.'' In addition, 40 CFR 230.10(a) provides that ''no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.'' Therefore, according to the commenters, this final rule would violate the Clean Water Act, which would mean that EPA has no basis under the Clean Water Act for concurrence with the final rule. Another commenter argues the rule is not consistent with the Clean Water Act because it authorizes waste assimilation in streams, which the Clean Water Act prohibits.

We do not agree with the commenters. Section 501(a)(B) of SMCRA does not establish a requirement that the EPA Administrator's concurrence be based upon provisions of the Clean Water Act. Moreover, the requirements of the Clean Water Act apply independently of any regulations adopted under SMCRA. See section 702(a)(2) of SMCRA, which provides that nothing in SMCRA ''shall be construed as superseding, amending, modifying, or repealing'' the Clean Water Act or any regulations or state laws adopted under authority of that law. Our final rules at 30 CFR 780.28(f)(2), 784.28(f)(2), 816.57(a)(2), and 817.57(a)(2) reiterate this relationship between SMCRA and the Clean Water Act and emphasize that issuance of a SMCRA permit does not authorize initiation of surface coal mining operations for which the applicant has not obtained all necessary authorizations, certifications, and permits under the Clean Water Act. Therefore, EPA's concurrence with the final rule is not contrary to the Clean Water Act.

G. The Applicability of the Final Rules Should Be Limited to Steep-Slope Areas and Mountaintop Removal Operations

The Pennsylvania regulatory authority recommended that we not proceed with this rulemaking because it would impose additional burdens on Pennsylvania, create uncertainty for both citizen groups and mine operators, and would likely lead to extensive and costly litigation. According to the commenter, the rule's benefits would not offset the unfunded burdens, uncertainties and litigation that would result from adoption of the regulations. Pennsylvania also stated that if we proceed with a final rule, that rule should not require all states to change their programs to address a matter that is an issue only in those few states that have mountaintop removal operations and steep-slope mining. Instead, Pennsylvania recommended that we use the specific authority of section 515 of SMCRA to craft a rule tailored to mountaintop removal operations and steep-slope mining. The National Mining Association made similar comments with respect to our proposed excess spoil rules, arguing that the rulemaking record does not demonstrate a need for applying the excess spoil rules to any other areas.

We do not agree with the commenters' recommendations. We believe that perennial and intermittent streams potentially affected by excess spoil fills and coal mine waste disposal facilities in non-steep-slope areas and areas outside central Appalachia merit the same protection as streams in central Appalachia. Furthermore, states that may have very few operations involving placement of excess spoil or coal mine waste in perennial or intermittent streams would incur only minimal additional resource costs in processing applications for those operations.

The vast majority of excess spoil fills that involve placement of excess spoil in perennial or intermittent streams are located in steep-slope areas of central Appalachia. However, those structures are occasionally constructed in streams in other states and other areas. For example, with respect to excess spoil fills, a nationwide survey of all coal mining permits issued between October 1, 2001, and June 30, 2005, found that those permits included a total of 1,612 excess spoil fills, of which 1,589 (98.6 percent) are located in the central Appalachian coalfields. Specifically, most of the fills approved in those permits are located in Kentucky (1,079), West Virginia (372), and Virginia (125), with 13 approved in Tennessee. However, the remaining fills approved during that time are located in Alaska, Alabama, Ohio, Pennsylvania, and Washington, so we believe that sufficient basis exists for a national rulemaking. This survey is discussed in greater detail in the environmental impact statement that accompanies this rule.

Surface coal mining operations nationwide generate coal mine waste. Except in very flat terrain, refuse piles and especially slurry impoundments are constructed in stream valleys. There is no basis for limiting the scope of our coal mine waste rules to steep-slope areas or mountaintop removal mining.

In addition, the stream buffer zone rule is national in scope, as are the stream diversion rules. The frequency of use of those rules has little relationship to topography or type of mining. Surface coal mining operations routinely encounter perennial and intermittent streams in both steep-slope and non-steep-slope areas. The changes that we have made to the stream buffer zone rules, especially the new permit application requirements for operations

that propose to disturb the surface of lands within 100 feet of a perennial or intermittent stream and the revised findings that the regulatory authority must make before approving an exception to the buffer zone requirement, have universal applicability and utility, as do the changes to the stream diversion rules.

Finally, we do not agree with the commenter's characterization of the rule as creating uncertainty. To the contrary, this rule is intended in part to address and resolve the controversy and uncertainty surrounding the 1983 stream buffer zone rule. The permitting decisions that the regulatory authority must make under this final rule differ little in complexity from those that the regulatory authority must make under other provisions of the existing rules. As in the case of other situations in which the regulatory authority must apply subjective requirements, we anticipate that the regulatory authority will use best professional judgment in determining compliance. Therefore, we decline to adopt the commenter's recommendations.

H. The Stream Buffer Zone Rule Is Unnecessary and Should be Removed in Its Entirety

Several commenters advocated completely removing the stream buffer zone rule, noting that nothing in SMCRA mandates adoption of such a rule. One commenter noted that removal of the stream buffer zone rule would be the most effective method of eliminating ambiguity from the federal regulations concerning fill construction. The commenters stated that maintaining a stream buffer zone rule is not needed to provide SMCRA-mandated environmental protection and that the statute and regulations are replete with other regulatory requirements that directly address the concerns for which the stream buffer zone rule was adopted.

We considered the option recommended by the commenters, but decided to retain the stream buffer zone rule. With respect to perennial and intermittent streams, we believe that the rule serves a useful role in establishing a buffer zone as the best technology currently available to comply with the statutory requirements to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values, provided maintenance of a buffer zone is reasonably possible. See the discussion in Part VI.D. of this preamble.

VII. Why did we decide against applying the stream buffer zone rule to all waters of the United States (WOTUS)?

On August 24, 2007, we proposed to revise the scope of our stream buffer zone rules at 30 CFR 816.57 and 817.57, which applied to perennial and intermittent streams, to apply to all waters of the United States, which would include certain lakes, ponds, wetlands, and reaches of ephemeral streams. We had two reasons for proposing this change. First, the scope of the statutory provisions that form the basis for the stream buffer zone rule, i.e., sections 515(b)(10)(B)(i) and (24) and 516(b)(9)(B) and (11) of SMCRA, is not limited to perennial or intermittent streams. Instead, those provisions broadly require that, to the extent possible using the best technology currently available, surface coal mining operations be conducted so as to prevent additional contributions of suspended solids to streamflow or runoff outside the permit area and that surface coal mining and reclamation operations be conducted so as to minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values. Sedimentation and sediment-laden runoff from mine sites could degrade those values. Second, we anticipated that achieving greater consistency with the terminology used in regulatory programs under the Clean Water Act would remove one obstacle to better coordination and streamlining of the SMCRA and Clean Water Act permitting processes.

In the preamble to the proposed rule, we requested comment on whether the increased regulatory consistency and other benefits of adopting the term WOTUS would outweigh the jurisdictional and other problems associated with use of that term as part of the SMCRA regulatory program. See 72 FR 48900, August 24, 2007. We found little public support for the proposed change.

All three iterations of the stream buffer zone rule that we adopted since the enactment of SMCRA have applied only to perennial and intermittent streams or subsets thereof. Many commenters opposed disturbing that regulatory stability, noting that our rules at 30 CFR 701.5 define perennial and intermittent streams in a well-understood manner consistent with other generally accepted definitions of those terms. They expressed concern that use of WOTUS would be confusing because that term has no clearly established legal or programmatic meaning. The commenters stated that the various organizational units of the Corps and EPA vary greatly in their interpretation and application of the term WOTUS and that the scope of that term is constantly evolving as the courts struggle to define the jurisdictional reach of the Clean Water Act. One commenter noted that the Supreme Court has been unable to agree on even a single governing principle for WOTUS. See *Solid Waste Agency of Northern Cook County* v. *U.S. Army Corps of Eng'rs*, 531 U.S. 159 (2001) (SWANCC); *Rapanos* v. *U.S.*, 547 U.S. 715 (2006). The commenter concluded that ''OSM should not anchor its regulatory program on such an unstable foundation,'' a sentiment shared by other commenters.

We received numerous comments to the effect that the proposed rule change would be unnecessary and possibly counterproductive because the definitions of perennial and intermittent streams in both our rules and state regulatory programs under SMCRA are clear and relatively straightforward to implement, while WOTUS is not. The Virginia regulatory authority commented that adding lakes, ponds, and wetlands to the scope of the buffer zone rule would probably not be much of a change to that agency's existing practice, apart from the matter of obtaining jurisdictional determinations, but that it would replace an established and effective regulatory term with no real benefit gained.

Several commenters opposed changing the scope of our stream buffer zone rules to WOTUS because the unsettled and subjective meaning of that term would spawn considerable uncertainty, which would be contrary to our stated objective of clarifying the existing stream buffer zone rules. The National Mining Association elaborated upon this argument as follows:

> When OSM revised the [stream buffer zone] rule in 1983, the principal reason for limiting the rule to perennial and intermittent streams was because the earlier version referencing streams with a biological community was confusing and difficult to apply. This, according to the agency, ''led to confusion on the part of operators'' attempting to apply the amorphous and ill-defined biological community standard. In response to challenges from several environmental groups, the federal district court upheld the agency's reasoning holding that ''it is precisely this type of justification, based on practical experience and expertise that justifies such a change.'' Moreover, the court noted that the stream buffer zone rule is not the only, or the most important, one in OSM's regulation[s] to implement §§ 515(b)(10) and (24). [Footnotes omitted.] * * * Here the practical experience discloses

that changing the scope of the rule to WOTUS will be even more confusing and difficult to apply than the 1979 rule due to the vague and confusing status of the meaning of waters of the United States.

The Association also expressed concern that the adoption of WOTUS, a Clean Water Act term that we have no authority to interpret or define, could have unintended impacts on SMCRA regulatory programs and the regulated community because we have no control over how that term may be defined in the future.

Several commenters expressed concern that the use of WOTUS would greatly delay the SMCRA permitting process because of the need to obtain jurisdictional determinations from the U.S. Army Corps of Engineers in accordance with a guidance document issued by EPA and the Corps on June 5, 2007, entitled ''Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos* v. *United States* & *Carabell* v. *United States*,'' *http://www.epa.gov/owow/wetlands/pdf/RapanosGuidance6507.pdf*. According to the commenters, that document appears to require that permit applicants seek jurisdictional determinations from the Corps in many more situations than was the case before issuance of the guidance document. The National Mining Association stated that the Corps already has a massive backlog of requests for jurisdictional determinations. Because we are not adopting the use of WOTUS for other reasons, we did not investigate the accuracy of these comments. However, for informational purposes, we note that the Corps also issued Regulatory Guidance Letter No. 08–02 on June 26, 2008. That letter provides further guidance on jurisdictional determinations and related procedures.

The National Mining Association stated that it supports coordination of and reduction of duplication between the SMCRA and Clean Water Act permitting processes, but that, based on its experience in promoting that goal during the past seven years, it did not see any realistic probability that changing the focus of the buffer zone rule from perennial and intermittent streams to WOTUS would achieve that goal. The Association also stated that it did not foresee any discernible environmental benefits from the proposed change in focus.

Comments submitted on behalf of 12 national environmental organizations also strongly opposed the proposed use of WOTUS to define the scope of the stream buffer zone rule:

One of the most perplexing aspects of the proposed rule is OSM's plan to change the bodies of water to which stream buffer zone provisions apply. If adopted, the rule would no longer apply to all perennial and intermittent streams, but instead would cover ''waters of the United States.'' Although this is touted as providing ''increased environmental protection and consistency with the Clean Water Act,'' less protection and more confusion seems inevitable if the proposal is adopted.

To begin with, this proposal appears to be a solution in search of a problem. OSM acknowledges: ''we do not anticipate that this change in terminology will result in a significant expansion in the applicability of our rules because the vast majority of waters that may be affected by surface coal mining and reclamation operations are perennial and intermittent streams.'' By itself, this fact is not a reason to reject the proposal; we agree with the idea that a wide range of water bodies ought to be protected from mining-related damage, as SMCRA contains provisions that seek to protect water bodies beyond streams. However, in view of the other problems discussed below with linking the Stream Buffer Zone rule to ''waters of the United States'' under the Clean Water Act, the likely incremental benefit of including other water bodies does not justify the change.

If there is one thing that conservation groups, the federal government, and the coal mining companies probably can agree on in this rulemaking, it is that it is not clear today what aquatic features qualify as ''waters of the United States,'' at least without further factual inquiry. As a result of two Supreme Court decisions and unhelpful ''guidance'' by EPA and the Army Corps of Engineers, some have come to the conclusion that even certain streams may not qualify as ''waters of the United States'' protected by the Clean Water Act's core programs.

* * * * *

Were the Stream Buffer Zone rule to be amended by the proposed rule to apply to ''waters of the United States,'' then, we have significant concern that it may be applied to only a subset of perennial and intermittent streams, whereas it historically has applied to all such streams. Effectively, implementing this change may lead to the proposed rule protecting fewer streams than the Stream Buffer Zone rule has in the past * * *.

Finally, we do not believe that it is feasible, as OSM suggests, to resolve these jurisdictional issues by having ''the SMCRA regulatory authority * * * consult and coordinate with the Corps of Engineers in situations in which there is a question as to whether waters within or adjacent to the proposed permit area are waters of the United States under the Clean Water Act.'' As the OSM may or not be aware, it is the EPA, not the Corps, that has the responsibility for determining which water bodies are ''waters of the United States'' for purposes of the 404 program and the entire Clean Water Act.

The EPA, working in conjunction with the Corps, is just beginning to make many jurisdictional and non-jurisdictional determinations using *Rapanos* as a guide, and the preliminary indications are that the process is very time-consuming and, more importantly, may be so arbitrary that it is leading to waters being declared unprotected when they in fact should remain jurisdictional.

Three commenters (the U.S. Fish and Wildlife Service, the Geologic Resources and Water Resources Divisions of the National Park Service, and the Pennsylvania Fish and Boat Commission) expressly supported the proposed use of WOTUS in defining the scope of the stream buffer zone rules. However, two of the three expressed concern that the change might reduce the protection afforded to perennial and intermittent streams. The U.S. Fish and Wildlife Service stated that it supported the use of WOTUS ''as a matter of regulatory consistency and sound public policy, but remains concerned about the unsettled nature of jurisdictional determinations in headwater streams'' in the wake of recent Supreme Court decisions. The Service requested that we work with them ''to develop a process to monitor the extent to which intermittent or perennial streams are determined not to be 'waters of the U.S.' '' The Pennsylvania Fish and Boat Commission strongly urged that we also retain the rule's applicability to perennial and intermittent streams because application of those terms in the SMCRA context is not dependent upon a jurisdictional determination by the U.S. Army Corps of Engineers. The Commission expressed the fear that adoption of WOTUS without also retaining the rule's applicability to perennial and intermittent streams ''would weaken or reduce the protection on most streams, especially headwater streams.''

The Geologic Resources and Water Resources Divisions of the National Park Service stated that they fully supported the proposed change because many high-value aquatic ecosystems are neither perennial nor intermittent streams. According to the commenter, the proposed rule change would not place an undue burden or impact on operators, especially when considering the environmental benefits that would be realized through protecting a more inclusive set of aquatic systems, including wetlands, lakes, and ponds. The commenter stated that the National Park Service routinely seeks permits through local Corps offices and has never found that this requirement imposed a burden or had a substantial impact on the completion of any project.

After evaluating the comments received, we find the arguments against adoption of WOTUS persuasive. The final rule that we are adopting today retains the status quo with respect to the scope of the stream buffer zone rule; i.e., that rule will continue to apply to

perennial and intermittent streams rather than to WOTUS. Rather than attempting to introduce Clean Water Act terminology and procedures into regulations implementing SMCRA, we believe that the more prudent and defensible course of action is to adopt terminology and requirements based on provisions of SMCRA. SMCRA does not use the term WOTUS in establishing regulatory requirements for surface coal mining operations, but it does refer to streams. At the same time, section 702(a) of SMCRA clearly specifies that nothing in SMCRA may be construed as superseding, amending, modifying, or repealing the Clean Water Act or its implementing regulations. Therefore, issuance of a SMCRA permit does not authorize the permittee to initiate activities for which a permit, certification, or other authorization is required under the Clean Water Act. The final rules at 30 CFR 780.28(f)(2), 784.28(f)(2), 816.57(a)(2), and 817.57(a)(2) that we are adopting today reiterate that fact.

One commenter strongly disagreed with our statement in the preamble to proposed 30 CFR 780.28 and 784.28 that we did not anticipate that switching from perennial and intermittent streams to WOTUS would result in a significant expansion in the applicability of our rules because the vast majority of waters that may be affected by surface coal mining and reclamation operations are perennial and intermittent streams. This comment is now moot in light of our decision not to adopt WOTUS.

We also wish to clarify that we use the terms perennial, intermittent, and ephemeral streams, as defined in 30 CFR 701.5, to implement the SMCRA regulatory program. Our definitions of those terms do not affect jurisdictional determinations under the Clean Water Act. The Corps and EPA are responsible for making those jurisdictional determinations.

Although we have decided not to adopt WOTUS as part of the stream buffer zone rule, our existing rules will continue to provide protection to lakes, ponds, wetlands, and, to some extent, ephemeral streams by other means. Those rules fully implement the statutory provisions that form the basis for the stream buffer zone rule, i.e., sections 515(b)(10)(B)(i) and (24) and 516(b)(9)(B) and (11) of SMCRA, which require that, to the extent possible using the best technology currently available, surface coal mining operations be conducted so as to prevent additional contributions of suspended solids to streamflow or runoff outside the permit area and that surface coal mining and reclamation operations be conducted so as to minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values.

Most significantly, 30 CFR 780.16(b) and 784.21(b) require that each permit application include a fish and wildlife protection and enhancement plan. The plan must describe how, to the extent possible, using the best technology currently available, the operator will minimize disturbances and adverse impacts on fish, wildlife, and related environmental values during surface coal mining and reclamation operations and how enhancement of those resources will be achieved where practicable. The plan must be consistent with the requirements of 30 CFR 816.97 or 817.97 and it must include protective measures to be taken during the active mining phase. The rule lists the establishment of buffer zones as one example of those protective measures.

Under 30 CFR 816.97(a) and 817.97(a), the operator must, to the extent possible, using the best technology currently available, minimize disturbances and adverse impacts on fish and wildlife and related environmental values and must achieve enhancement of those resources where practicable. Paragraph (f) of 30 CFR 816.97 and 817.97 provides that the operator must avoid disturbances to, enhance where practicable, restore, or replace wetlands and riparian vegetation along rivers and streams and bordering ponds and lakes. Paragraph (f) also requires that the operator avoid disturbances to, enhance where practicable, or restore habitats of unusually high value for fish and wildlife.

With respect to water quality, 30 CFR 780.21(h) and 784.14(g) require that each permit application include a hydrologic reclamation plan indicating how the relevant requirements of 30 CFR part 816 or 817, including sections 816.41 through 816.43 or 817.41 through 817.43, will be met. The plan must be specific to local hydrologic conditions and it must contain the steps to be taken to minimize disturbances to the hydrologic balance within the permit and adjacent areas. Under 30 CFR 816.41(a) and 817.41(a), all surface and underground mining and reclamation activities must be conducted to minimize disturbance of the hydrologic balance within the permit and adjacent areas.

VIII. Section-by-section analysis: How are we revising our rules?

A. Sections 780.14 and 784.23 Operation Plan: Maps and Plans

As proposed, we are revising 30 CFR 780.14(b)(11) and 784.23(b)(10) by replacing the terms ''coal processing waste bank'' and ''coal processing waste dam and embankment'' with ''refuse pile'' and ''coal mine waste impounding structure'' to employ terminology consistent with the definitions and performance standards that we adopted September 26, 1983. See the discussion under the heading ''Changes to conform to 1983 rule revisions'' in Part VIII.B. of this preamble for a more detailed explanation.

In addition, as proposed, we are replacing the references to sections 780.35(c) and 816.71(b) in the former version of section 780.14(c) with a reference to section 780.35 to be consistent with other changes that we are making to those rules. Those changes include moving the design certification requirement formerly located in section 816.71(b) to section 780.35(b) to consolidate permitting requirements. In similar fashion, as proposed, we are deleting the reference to section 817.71(b) formerly located in section 784.23(c) because we are moving the design certification provisions previously located in section 817.71(b) to section 784.19(b) to consolidate permitting requirements. There is no need for a replacement cross-reference because section 784.23(c) already cross-references section 784.19 in its entirety.

We received no comments concerning the proposed changes discussed above.

B. Sections 780.25 and 784.16 Reclamation Plan: Siltation Structures, Impoundments, Refuse Piles, and Coal Mine Waste Impounding Structures

1. Changes To Conform to 1983 Revisions to Definitions and Performance Standards

On September 26, 1983 (48 FR 44006), we revised the definitions and performance standards in our regulations relating to coal mine waste to be more consistent with the terminology used by the Mine Safety and Health Administration (MSHA). As we stated at 48 FR 44009, col. 1, ''[i]t is undesirable to have two regulatory programs for the same subject that contain conflicting standards or which use fundamentally different terminology.''

Among other things, we adopted definitions of three new terms in 30 CFR 701.5. ''*Coal mine waste*'' is defined as ''coal processing waste and

underground development waste.'' ''*Impounding structure*'' is defined as ''a dam, embankment, or other structure used to impound water, slurry, or other liquid or semi-liquid material.'' ''*Refuse pile*'' is defined as ''a surface deposit of coal mine waste that does not impound water, slurry, or other liquid or semi-liquid material.'' The latter two terms are consistent with the terminology of MSHA's rules. ''Refuse pile'' replaces the term ''coal processing waste bank'' previously used in our rules, while ''impounding structure'' incorporates (but is not limited to) all structures that our rules previously referred to as coal processing waste dams or embankments.

In concert with the new definition of coal mine waste, we revised our performance standards at 30 CFR 817.71–817.74 to eliminate the language that combined underground development waste with excess spoil for purposes of performances standards for underground mines. Because the definition of coal mine waste includes underground development waste, we revised our rules to specify that the disposal of underground development waste is subject to the performance standards for refuse piles (30 CFR 817.83) rather than the performance standards for the disposal of excess spoil that applied under the old rules.

However, we did not revise our permitting requirements in a similar fashion at that time. Therefore, in our August 24, 2007, proposed rule, we proposed to modify our regulations in 30 CFR parts 780 and 784 to harmonize those rules with our 1983 changes to the definitions and performance standards concerning coal mine waste. In essence, in the proposed rule, we replaced the term ''coal processing waste banks'' with ''refuse piles'' and the term ''coal processing waste dams and embankments'' with references to coal mine waste impounding structures.

As proposed, this final rule revises the heading and contents of sections 780.25 and 784.16 by replacing the terms ''coal processing waste bank'' and ''coal processing waste dam and embankment'' with ''refuse pile'' and ''coal mine waste impounding structure.'' With these changes, our permitting requirements concerning coal mine waste employ terminology consistent with the definitions and performance standards for coal mine waste that we adopted on September 26, 1983.

We received no comments on the revisions discussed above. However, some industry commenters opposed the September 26, 1983, rule changes that classified underground development waste as coal mine waste and required that coal mine waste (including underground development waste) disposed of outside the mine workings and excavations be placed in accordance with 30 CFR 817.83, which contains the performance standards for refuse piles. The commenters argued that underground development waste should be treated as excess spoil, not coal mine waste. The commenters' objections are untimely. The definition of coal mine waste in 30 CFR 701.5 is now a matter of settled law, as is the performance standard at 30 CFR 817.81(a), which requires that coal mine waste disposed of outside the mine workings and excavations be placed in designated coal mine waste disposal areas within the permit area. The existing regulations at 30 CFR 817.71(i) allow coal mine waste to be placed in excess spoil fills with the approval of the regulatory authority, but only if the waste is nontoxic and non-acid-forming and only if the waste is placed in accordance with 30 CFR 817.83 (the requirements for refuse piles).

Several commenters expressed concern that the 1983 rule's classification of underground development waste as coal mine waste could prohibit the use of underground development material for construction of face-up areas, support facilities, and other beneficial uses. We do not understand how underground development waste could be used for the construction of face-up areas because the face-up of the mine must be completed and construction of mine adits must begin before underground development waste would be produced. Perhaps the commenters are interpreting the 1983 rules as classifying material removed as part of the face-up of the underground mine as underground development waste. If so, the commenters are misreading those rules. Nothing in the definitions of coal mine waste or underground development waste classifies face-up materials as either coal mine waste or underground development waste. In addition, nothing in our existing rules or the rules that we are adopting today would prohibit the use of underground development waste for construction of support facilities or other mining-related uses, provided the use of the waste for those purposes complies with all regulatory program requirements applicable to those uses. The final rules that we are adopting today apply only to the permanent disposal of coal mine waste (including underground development waste), not to the temporary use of those materials for mining-related purposes.

2. Paragraph (a)(2)

This paragraph sets forth design requirements for all impoundments other than low hazard impoundments. As proposed, we are removing the last sentence of former paragraph (a)(2) of sections 780.25 and 784.16 and redesignating the remainder of that paragraph as paragraph (a)(2)(i) of those sections. We are redesignating the last sentence of former paragraph (a)(2) as paragraph (a)(2)(ii). In addition, we are redesignating former subparagraphs (a)(2)(i) through (iv) of sections 780.25 and 784.16 as subparagraphs (a)(2)(ii)(A) through (D) of those sections. We are making these redesignations because both the last sentence of former paragraph (a)(2) and former subparagraphs (i) through (iv) apply to all structures meeting the criteria of 30 CFR 77.216(a), while the remainder of former paragraph (a)(2) applies only to those impoundments that meet the Class B or C criteria (now the Significant Hazard Class or High Hazard Class criteria, respectively) for dams in the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) publication Technical Release No. 60, ''Earth Dams and Reservoirs.''

As proposed, we are revising redesignated paragraph (a)(2)(i) of sections 780.25 and 784.16 to update the incorporation by reference of the NRCS publication ''Earth Dams and Reservoirs,'' Technical Release No. 60 (210–VI–TR60, October 1985), by replacing the reference to the October 1985 edition with a reference to the superseding July 2005 edition. Consistent with the terminology in the newer edition, we are replacing references to Class B or C dam criteria with references to Significant Hazard Class or High Hazard Class dam criteria, respectively. Only the terminology has changed—the actual criteria remain the same as before. The newer publication is not available from the National Technical Information Service, but is available online from the Natural Resources Conservation Service (the successor to the Soil Conservation Service). Consequently, we are deleting the ordering information pertinent to the National Technical Information Service and replacing it with the URL (Web address) at which the publication may be reviewed and from which it may be downloaded without charge. We are also updating the address and location of our administrative record room and updating the URL information (Web address) for the National Archives and Records Administration.

We received no comments on the changes discussed above.

3. Paragraph (c)

Paragraph (c) contains design requirements that apply to all impoundments. To improve clarity and consistency with other regulations, we are revising paragraph (c)(2) of sections 780.25 and 784.16 as proposed by replacing the term ''Mine Safety and Health Administration'' with a citation to 30 CFR 77.216(a), which contains the MSHA impoundment criteria to which paragraph (c)(2) refers. Revised paragraph (c)(2) requires that plans for impoundments meeting MSHA criteria comply with MSHA's impoundment design requirements at 30 CFR 77.216–2. We are deleting the requirement that those plans also comply with 30 CFR 77.216–1. The deleted requirement is not germane to permit applications and plans because it contains signage requirements that apply only to impoundments that already exist or are under construction. We are also making two nonsubstantive changes: Replacing ''shall'' with ''must'' in keeping with plain language principles and, in the second sentence, deleting an obsolete reference to paragraph (a).

The final rule also includes a new paragraph (c)(4). We originally proposed to redesignate paragraph (f) of sections 780.25 and 784.16 as paragraph (e) of those sections. In a nonsubstantive editorial revision, we are instead redesignating paragraph (f) [paragraph (e) in our 2007 proposed rule] as paragraph (c)(4) of sections 780.25 and 784.16. The paragraph in question applies only to impoundments that meet certain criteria in NRCS Technical Release No. 60 or the criteria of 30 CFR 77.216(a). It has no relevance to other types of siltation structures or to refuse piles. Therefore, it is more appropriate as part of paragraph (c), which applies to all types of impoundments, including coal mine waste impoundments, rather than as a separate paragraph (e). Consistent with this redesignation, we are also deleting the references to paragraphs (b) [siltation structures] and (d) [coal mine waste impoundments and refuse piles] that appeared in proposed paragraph (e). Final paragraph (c)(4) is otherwise identical to proposed paragraph (e). As proposed, we also are revising this paragraph to be consistent with the terminology in the July 2005 edition of NRCS Technical Release No. 60 by replacing references to Class B or C dam criteria with references to Significant Hazard Class or High Hazard Class dam criteria, respectively. Only the terminology has changed; the actual criteria remain the same as before.

We received no comments on the changes discussed above.

4. Paragraph (d) Introductory Language

The final rule includes new introductory language specifying that an applicant for a permit must comply with all applicable requirements in paragraphs (d)(1) through (3) if the applicant proposes to place coal mine waste in a refuse pile or impoundment or use coal mine waste to construct an impounding structure. This requirement, which is not new, is a nonsubstantive editorial change that reflects the structure of the final rule.

5. Paragraph (d)(1)

We have extensively revised paragraph (d)(1) of sections 780.25 and 784.16 in response to comments. Final sections 780.25(d)(1) and 784.16(d)(1) are identical except that the reference to section 816.59 in section 780.25(d)(1) is replaced with a reference to 817.59 in section 784.16(d)(1).

This new paragraph contains requirements for minimizing adverse environmental impacts on perennial and intermittent streams and adjacent areas when a permit application proposes to construct a refuse pile or slurry impoundment or to use coal mine waste to construct an impounding structure. We are adopting these requirements under the authority of sections 515(b)(24) and 516(b)(11) of SMCRA. Those statutory provisions require that, to the extent possible using the best technology currently available, surface coal mining and reclamation operations be conducted to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values.

Discussion of General Comments Received on Paragraph (d)(1)

Several commenters argued that we have no authority to adopt these regulations because section 515(f) of SMCRA, which contains requirements for refuse piles and slurry impoundments, only mentions criteria related to safety, not environmental protection. We do not agree with the commenters. SMCRA contains numerous environmental protection requirements, including those set forth in sections 515(b)(24) and 516(b)(11), that apply to all surface coal mining and reclamation operations and all aspects of those operations, including the disposal of coal mine waste. The fact that section 515(f) does not mention environmental protection in no way suggests that coal mine waste disposal facilities need not comply with the environmental protection provisions of SMCRA or that we lack the authority to adopt regulations establishing environmental protection requirements for those facilities.

Industry commenters strongly opposed the requirement in proposed paragraph (d)(1) for an analysis of alternatives for placement of coal mine waste. The commenters cited a variety of reasons, including excessive costs, delays in permitting, the probable lack of environmental benefits, the potential for conflict between the SMCRA regulatory authority's application of the alternatives analysis requirement and the approach adopted by the Clean Water Act permitting authority, duplication of effort with the Clean Water Act, a lack of justification under SMCRA, exceeding the intent of SMCRA, and a fear that this requirement could result in a never-ending cycle of analysis and litigation concerning whether the correct alternative was selected by the permit applicant and approved by the state regulatory authority. Many commenters stated that the requirement for an alternatives analysis has no basis in SMCRA and instead appears to be a mixture of provisions borrowed from the National Environmental Policy Act and the Clean Water Act.

Nothing in the proposed alternatives analysis requirement in paragraph (d)(1) of sections 780.25 and 784.16 of the final rule is based upon the National Environmental Policy Act. We respectfully disagree with those commenters who argued that the requirement for an alternatives analysis is a Clean Water Act requirement that has no basis or justification under SMCRA and that exceeds the intent of SMCRA. We acknowledge that we derived this element of our proposed rules from the alternatives analysis requirements of the 404(b)(1) Guidelines in 40 CFR part 230, which include the substantive environmental criteria used in evaluating activities regulated under section 404 of the Clean Water Act. However, we concluded that a modified version of the alternatives analysis requirements in the 404(b)(1) Guidelines is an appropriate means of obtaining the background data and analyses that both the applicant and the regulatory authority need to make informed decisions concerning compliance with the requirements of sections 515(b)(24) and 516(b)(11) of SMCRA, which provide that surface coal mining and reclamation operations must be conducted to minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available.

Therefore, paragraphs (d)(1)(ii) and (d)(1)(iii) of sections 780.25 and 784.16

of this final rule apply the alternatives analysis requirement to all applications that propose to place coal mine waste in or within 100 feet of a perennial or intermittent stream. In addition, paragraph (d)(1)(iii)(A) of these sections of the final rule applies more detailed analytical requirements to applications that propose to place coal mine waste in perennial or intermittent streams as opposed to applications that propose to place coal mine waste only within 100 feet of those streams.

A few commenters criticized the analysis of alternatives provisions of the proposed rule because they did not completely parallel the requirements of the 404(b)(1) Guidelines in 40 CFR part 230. At least one commenter recommended that we incorporate the 404(b)(1) Guidelines by reference. We do not find this recommendation appropriate because the 404(b)(1) Guidelines are designed to implement the Clean Water Act, while our regulations implement SMCRA and must be based upon SMCRA requirements. Under section 702(a) of SMCRA, nothing in SMCRA may be construed as amending, modifying, repealing, or superseding any Clean Water Act requirement. However, there is also nothing in SMCRA that would compel or authorize us to adopt regulations that parallel or incorporate Clean Water Act requirements.

SMCRA and the Clean Water Act provide for separate regulatory programs with different purposes and very different permitting requirements and procedures. In addition, as other commenters noted, SMCRA and the Clean Water Act differ considerably with respect to jurisdiction. The Clean Water Act focuses on regulating discharges of pollutants into waters of the United States, whereas SMCRA regulates a broad universe of environmental and other impacts of surface coal mining and reclamation operations, including impacts on water quantity, water quality, and terrestrial and aquatic ecosystems. We encourage coordination and cooperation between SMCRA regulatory authorities and the agencies administering the Clean Water Act. See the memorandum of understanding entitled ''Memorandum of Understanding among the U.S. Army Corps of Engineers, the U.S. Office of Surface Mining, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service for the Purpose of Providing Concurrent and Coordinated Review and Processing of Surface Coal Mining Applications Proposing Placement of Dredged and/or Fill Material in Waters of the United States,'' which took effect February 8, 2005, and the provisions of this final rule that authorize the SMCRA regulatory authority to accept an analysis of alternatives completed for Clean Water Act purposes as meeting the requirements for an analysis of alternatives under this final rule, when and to the extent appropriate. However, we believe that maintaining the distinction between those programs is both administratively and legally appropriate. That conclusion is supported by the comments that we received from both industry and state regulatory authorities.

Many industry commenters, supported by some, but not all, state regulatory authority commenters, stated that the proposed alternatives analysis requirement would introduce a major new element of uncertainty, and result in costly and wasteful duplication of effort on the part of permit applicants and state regulatory authorities. The commenters stated that this element of our proposed rule was inconsistent with our statement in the preamble to that rule that a primary reason for the rulemaking was to provide improved clarity and reduction of uncertainty regarding the meaning of the regulations. One commenter stated that at best the alternatives analysis requirement ''adds yet another layer of redundant paperwork and analysis as it duplicates the federally-administered 404 process. At worst, OSM has set the stage for conflicts between the section 404 program and the largely state-implemented SMCRA programs.'' The commenter further stated that by imposing an alternatives analysis requirement on state regulatory authorities, we are ''flirting dangerously'' with creating conflicting alternatives analyses because ''the goals and objectives of SMCRA and corresponding state statutes may be different than those of the Corps and EPA under section 404.''

While we understand the commenters' apprehensions, these comments are speculative in nature. There may be some initial uncertainty as regulatory authorities establish procedures and criteria for implementation of the alternative analysis requirements and determining least overall adverse impact on fish, wildlife, and related environmental values under this rule, but that uncertainty should subside once those procedures and criteria are in place.

The Interstate Mining Compact Commission, writing on behalf of member state regulatory authorities, argued that the alternative analysis requirement is duplicative of requirements under the Clean Water Act that are already encompassed by the SMCRA permitting scheme. As discussed elsewhere in this preamble, we believe that the alternatives analysis requirement that we are adopting as part of this final rule differs from and serves a somewhat different purpose than the alternatives analysis requirement under the regulations and other documents implementing section 404 of the Clean Water Act. To the extent that duplication may exist, we encourage states to coordinate the processing of coal mining permit applications with the U.S. Army Corps of Engineers in accordance with a memorandum of understanding entitled ''Memorandum of Understanding among the U.S. Army Corps of Engineers, the U.S. Office of Surface Mining, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service for the Purpose of Providing Concurrent and Coordinated Review and Processing of Surface Coal Mining Applications Proposing Placement of Dredged and/or Fill Material in Waters of the United States,'' which took effect February 8, 2005. This final rule also authorizes the SMCRA regulatory authority to accept an analysis of alternatives completed for Clean Water Act purposes as meeting the requirements for an analysis of alternatives under this final rule, when and to the extent appropriate.

The Commission and some, but not all, commenters representing individual state regulatory authorities also opposed the alternatives analysis requirement in the proposed rule because of state fiscal constraints and fear of the ''potentially overwhelming'' time and effort that would be required for state permitting personnel to adequately review and analyze alternatives.

We anticipate that few, if any, state regulatory authorities will experience a significant increase in demands on their resources as a result of the alternatives analysis requirement in the final rule. West Virginia, one of the states most impacted by the rule, supported the proposed rule. Kentucky, another state that would be significantly impacted, estimated that, on average, the new requirement would add ten hours to the time required to process a permit application. We believe that the intangible environmental benefits of the rule (increased scrutiny of efforts to minimize adverse impacts on fish, wildlife, and related environmental values associated with perennial and intermittent streams) will outweigh what we anticipate will be a modest increase in demand on state regulatory authority resources.

The U.S. Fish and Wildlife Service requested that we work with the Service

to build a process into the alternative analysis requirements in the final rule to protect unique and high value fish and wildlife resources. In response, we note that our fish and wildlife protection rules at 30 CFR 816.97(f) and 817.97(f) already require that the operator ''avoid disturbances to, enhance where practicable, or restore habitats of unusually high value for fish and wildlife.'' In addition, our permitting rules at 30 CFR 780.16 and 784.21 provide a role for the Service in determining fish and wildlife data collection requirements and reviewing the fish and wildlife protection plan in the permit application. Therefore, addition of the provision requested by the Service is not necessary.

Discussion of Specific Provisions of Paragraph (d)(1)

In the final rule, the first sentence of paragraph (d)(1) of sections 780.25 and 784.16 provides that the permit applicant must design the operation to avoid placement of coal mine waste in or within 100 feet of perennial and intermittent streams to the extent possible. We added this provision in response to EPA concerns and numerous comments urging greater protection for headwater streams because of their ecological importance and contribution to the function of the stream as a whole. In effect, the new sentence identifies avoiding placement of coal mine waste in or within 100 feet of perennial or intermittent streams as the preferred method of complying with the SMCRA requirement to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values with respect to those streams. That is, whenever avoidance of disturbance is reasonably possible, the rule establishes avoidance as the best technology currently available to meet the requirements of sections 515(b)(24) and 516(b)(11) of SMCRA, which require minimization of disturbances and adverse impacts to fish, wildlife, and related environmental values to the extent possible using the best technology currently available. This provision of the final rule is consistent with our stream buffer zone rules at 30 CFR 816.57 and 817.57, which establish maintenance of an undisturbed buffer for perennial and intermittent streams as the best technology currently available to meet the requirements of sections 515(b)(24) and 516(b)(11) of SMCRA, provided maintenance of an undisturbed buffer is reasonably possible.

However, the final rule does not and cannot mandate avoidance in all cases for all stream segments. The provisions of SMCRA underlying this rule require minimization of disturbances and adverse impacts on fish, wildlife, and related environmental values only ''to the extent possible.'' Avoiding disturbance of the stream and maintenance of an undisturbed buffer zone for that stream is the ultimate means of minimizing adverse impacts on fish, wildlife, and related environmental values and hence is the default best technology currently available to comply with the statutory minimization requirement. However, there is sometimes no viable alternative to the construction of coal mine waste disposal facilities in perennial or intermittent streams and their buffer zones, in which case avoidance is not reasonably possible. Under those circumstances, SMCRA—and hence this final rule—do not require avoidance. Instead, the applicant must propose other methods of complying with the minimization requirement that are consistent with the proposed surface coal mining operations. We do not interpret SMCRA as authorizing us to prohibit surface coal mining operations in situations other than those specifically set forth in the Act. However, SMCRA does not override prohibitions that apply under other laws and regulations. Any such requirements and prohibitions will continue to apply according to the terms of those laws and regulations.

Paragraph (d)(1)(i) of the final rule requires that the permit applicant explain, to the satisfaction of the regulatory authority, why an alternative coal mine waste disposal method or an alternative location or configuration that does not involve placement of coal mine waste in or within 100 feet of a perennial or intermittent stream is not reasonably possible. We added this requirement to reinforce the provision in paragraph (d)(1) of the final rule establishing avoidance of placement of coal mine waste in or within 100 feet of a perennial or intermittent stream, whenever avoidance is reasonably possible, as the best technology currently available to comply with the statutory requirement for minimization of disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible using the best technology currently available.

Paragraph (d)(1)(ii) of the final rule provides that, if the permit applicant is unable to design the operation to avoid placement of coal mine waste in or within 100 feet of a perennial or intermittent stream, the application must identify a reasonable range of alternative locations or configurations for any proposed refuse piles or coal mine waste impoundments. A number of commenters on a similar provision in the proposed rule expressed concern that this provision was too vague and could be interpreted as requiring an unlimited number of alternatives, including those that have no possibility of being implemented. In response to this concern, we have added language clarifying that this provision does not require identification of all potential alternatives and that only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values need be identified and considered. The latter provision is consistent with the policies to which EPA and the Corps adhere in implementing section 404 of the Clean Water Act. See the EPA/COE memorandum entitled ''Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements.''

In response to the commenters' concerns, we also added language to paragraph (d)(1)(ii) of the final rule specifying that an alternative is reasonably possible if it conforms to the safety, engineering, design, and construction requirements of the regulatory program; is capable of being done after consideration of cost, logistics, and available technology; and is consistent with the coal recovery provisions of sections 816.59 and 817.59. In other words, nothing in the rule should be construed as elevating environmental concerns over safety considerations, as prohibiting the conduct of surface coal mining operations that are not otherwise prohibited under SMCRA or other laws or regulations, or as requiring consideration of unreasonably expensive or technologically infeasible alternatives.

The portion of this rule that refers to ''consideration of cost, logistics, and available technology'' is derived from the EPA regulations at 40 CFR 230.10(a)(2), which define a practicable alternative for purposes of section 404 of the Clean Water Act. In interpreting this provision, the EPA/COE memorandum entitled ''Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements'' states that ''[t]he determination of what constitutes an unreasonable expense should generally consider whether the projected cost is substantially greater than the costs normally associated with this particular type of project.'' We have included similar language in paragraph

(d)(1)(ii)(B) of the final rule because (1) the concept of a practicable alternative for purposes of section 404 of the Clean Water Act is in some ways analogous to the determination of reasonably possible alternatives under this rule, and (2) the principle is consistent with the phrase ''to the extent possible'' in sections 515(b)(24) and 516(b)(11) of SMCRA. See Part VI.D. of this preamble for a more extensive discussion of the rationale for our use of the term ''reasonably possible'' and its consistency with statutory provisions.

The final rule does not include the provision in paragraph (d)(1)(i)(C) of the proposed rule stating that the least costly alternative may not be selected at the expense of environmental protection solely on the basis of cost. One commenter objected to the proposed provision as being too extreme and subject to misinterpretation, noting that there may be situations in which cost could and should be the determining factor. We agree. Nothing in SMCRA compels adoption of this provision. In lieu of this provision, we have added language to paragraph (d)(1)(ii)(B) of the final rule clarifying that the fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. We believe that the revised language is more consistent with sections 515(b)(24) and 516(b)(11) of SMCRA, which require use of the best technology currently available, but only to the extent possible.

Paragraph (d)(1)(iii) of the final rule provides that any application proposing to place coal mine waste in or within 100 feet of a perennial or intermittent stream must include an analysis of the impacts of the alternatives identified in paragraph (d)(1)(ii) on fish, wildlife, and related environmental values. The analysis must consider impacts on both terrestrial and aquatic ecosystems. These provisions are substantively identical to the corresponding provisions in the proposed rule.

Paragraph (d)(1)(iii)(A) of the final rule provides that, for every alternative that proposes placement of coal mine waste in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed refuse pile or coal mine waste impoundment, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the coal mine waste may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream. As discussed below, this paragraph of the final rule includes a number of changes from the proposed rule as a result of the comments that we received on the proposed rule.

One commenter stated that—

> [T]he components of an alternatives analysis for a coal mine disposal activity, as set forth in proposed 30 CFR 784.16(d)(1)(ii), should be subdivided for clarity and certain of the components should be reconsidered in terms of their purpose or value. As written, 30 CFR 784.16(d)(1)(ii) requires ''* * * an evaluation of short-term and long-term impacts on the aquatic ecosystem, both individually and on a cumulative basis'' and goes on to specify that the evaluation ''must consider impacts on the physical, chemical, and biological characteristics of downstream flow, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the coal mine waste may introduce or increase contaminants, the effects on aquatic organisms and the extent to which wildlife is dependent upon those organisms.'' As strung together, these requirements create a number of ambiguities, which will lead to problems in interpretation. The list also includes terms that have no recognized meaning, such as ''biological characteristics of downstream flows.'' In addition to these ambiguities, this section also requires assessments that are new to the regulation of mining activities, including assessments of the effects of turbidity and of secondary impacts on wildlife that may be dependent on aquatic organisms in a potentially affected water body. In the absence of commonly recognized guidelines, the results of these assessments will be virtually impossible to validate.

We have revised the rule to replace the potentially confusing phrase ''biological characteristics of downstream flows'' with clearer language requiring information on the biological characteristics of the stream downstream of the proposed refuse pile or coal mine waste impoundment. See paragraph (d)(1)(iii)(A) of final sections 780.25 and 784.16. We also replaced the requirement for an evaluation of the extent to which wildlife is dependent upon aquatic organisms with a requirement for an evaluation of the effects of the proposed operation on wildlife that is dependent upon the stream. In addition, we decided not to adopt the portion of proposed paragraph (d)(1)(ii) requiring that the analysis include an evaluation of the short-term and long-term impacts of each alternative on the aquatic ecosystem, both individually and on a cumulative basis. This proposed requirement is subsumed within the other analytical requirements of the final rule and would not likely result in the submission of any meaningful additional information.

However, we did not make further changes in response to this comment because the commenter did not explain how the requirements should be subdivided for clarity or why or how they create ambiguity. With respect to the commenter's statement that the assessments required by this rule will be impossible to validate in the absence of commonly recognized guidelines, we believe that the commenter may have misunderstood the purpose of the evaluation required by this rule. The data and analyses required by this rule are intended only to facilitate comparisons of the relative impacts of various alternatives on fish, wildlife, and related environmental values, not to establish reclamation standards. To the extent that the commenter may have meant that there are no generally accepted protocols for evaluating some of the listed characteristics, we believe that regulatory authorities have the technical capability to develop any needed protocols specific to conditions within their states.

One state regulatory authority urged us to revise the rule to include consideration of impacts such as traffic, dust and noise on local residents who may be affected by a proposed operation. While we encourage permit applicants to consider these factors in designing their operations, we do not consider them to be disturbances or adverse impacts on fish, wildlife, and related environmental values within the context of sections 515(b)(24) and 516(b)(11) of SMCRA. Therefore, we are not including those factors as required components of the alternatives analysis under paragraph (d)(1)(iii) of the final rule.

Paragraph (d)(1)(iii)(B) of the final rule allows the applicant to submit an analysis of alternatives prepared under 40 CFR 230.10 for Clean Water Act purposes in lieu of the analysis of impacts on fish, wildlife, and related environmental values required under paragraph (d)(1)(iii)(A) of the final rule. The regulatory authority will determine the extent to which that analysis satisfies the requirements of paragraph (d)(1)(iii)(A) of the final rule. These provisions of the final rule are similar to their counterparts in the proposed rule.

One commenter expressed dismay that the rule did not require that the regulatory authority accept the Clean Water Act analysis of alternatives as fully meeting the requirements of this rule. We do not believe that addition of this requirement to our rules would be appropriate because the alternatives analysis required under the final rule must address all environmental impacts

(both aquatic and terrestrial) of surface coal mining operations, whereas the analysis of alternatives required under Clean Water Act regulations focuses on impacts to waters of the United States. However, under the final rule, the SMCRA regulatory authority has the discretion to determine that an analysis of alternatives conducted for Clean Water Act purposes satisfies the requirements for an analysis of alternatives under this final rule, in whole or in part, as appropriate.

Paragraph (d)(1)(iv) of the final rule requires selection of the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems, to the extent possible. The proposed rule included an additional sentence specifying that if the applicant proposes to select a different alternative, the applicant must demonstrate, to the satisfaction of the regulatory authority, why implementation of the more environmentally protective alternative is not possible. The final rule does not include this sentence because we have determined that it is neither needed nor appropriate in view of the other changes that we have made to the rule. Specifically, we have added language to paragraph (d)(1)(ii) of the final rule limiting the alternatives that the applicant must identify to only those alternatives that are reasonably possible. In addition, we have added paragraph (d)(1)(i), which requires that the permit applicant explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of coal mine waste in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

The combination of these two changes means that the sentence in the proposed rule is no longer logical or appropriate because the only alternatives considered under the final rule are those that are reasonably possible, which means that, within the universe of reasonably possible alternatives identified, the applicant must select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values. In other words, the sentence in the proposed rule no longer has any relevance or meaning because, under the final rule, the applicant does not have the option of proposing alternatives that are not reasonably possible. Given that change, the final rule provides that the applicant must select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values.

Some commenters requested that we define or explain the term ''least overall adverse environmental impact.'' We do not believe that a meaningful definition is possible, given the somewhat subjective nature of the term and the site-specific nature of determinations under this rule. We expect that persons preparing permit applications and regulatory authority personnel reviewing those applications will use their best professional judgment in applying this standard. Consistent with the commonly accepted meaning of the words ''overall'' and ''environmental,'' we have modified the rule to clarify that the scope of the term includes impacts to terrestrial ecosystems, not just impacts to water quality and aquatic ecosystems. The relative importance of these three components, as well as the constituents of each of those components, will vary from site to site. Therefore, they are not readily defined in a national rule. However, we have replaced the term ''least overall adverse environmental impact'' with the term ''least overall adverse impact on fish, wildlife, and related environmental values'' to be consistent with the terminology of sections 515(b)(24) and 516(b)(11) of SMCRA and to provide greater clarity.

EPA encouraged both permit applicants and SMCRA regulatory authorities to use a watershed approach in determining which alternative would have the least overall adverse impact on fish, wildlife, and related environmental values:

> A watershed approach expands the informational and analytic basis of site selection decisions to ensure impacts are considered on a watershed scale rather than only project by project. The idea being locational factors (e.g., hydrology, surrounding land use) are important to evaluating the indirect and cumulative impacts of the project. Watershed planning efforts can identify and prioritize where preservation of existing aquatic resources are important for maintaining or improving the quality (and functioning) of downstream resources. The objective of this evaluation is to maintain and improve the quantity and quality of the watershed's aquatic resources and to ensure water quality standards (numeric and narrative criteria, anti-degradation, and designated uses) are met in downstream waters.
>
> Permit applicants should work with federal and state regulatory authorities to identify appropriate and available information, such as existing watershed plans, or in the absence of such plans, existing information on current watershed conditions and needs, past and current mining (and other development) trends, cumulative impacts of past, present, and reasonable foreseeable future mining activities, and chronic environmental problems (e.g., poor water quality, CWA 303(d)-listed streams, etc.) in the watershed. The regulatory authorities can also provide information on the appropriate watershed scale to consider. The level of data and analysis for implementing a watershed approach should be commensurate with the scale of the project, to the extent appropriate and reasonable.

We agree that the analysis of potential alternatives required under paragraph (d)(1)(ii) should appropriately consider the overall condition of the aquatic resources in the watershed, including any impacts from previous mining activities.

6. Proposed Paragraph (d)(2)

In the proposed rule, paragraph (d)(2) of sections 780.25 and 784.16 provided that each application for an operation that will generate or dispose of coal mine waste must describe the steps to be taken to avoid or, if avoidance is not possible, to minimize the adverse environmental impacts that may result from the construction of refuse piles and coal mine waste impoundments and impounding structures. The preamble to the proposed rule explained that this requirement applied to construction, maintenance, and reclamation of the alternative selected under paragraph (d)(1)(i)(C).

EPA recommended that we revise the rule to incorporate the concepts of avoidance and minimization of adverse environmental impacts into the alternatives analysis required by paragraph (d)(1) of sections 780.25 and 784.16 rather than placing them in a separate paragraph. EPA stated that the intended purpose of the alternatives analysis is to determine the means by which coal mine waste could be disposed of with the least adverse environmental impact. EPA further recommended removal of the preamble language in the proposed rule that specifies that the avoidance and minimization requirements in proposed paragraph (d)(2) only apply to the alternatives selected under proposed paragraph (d)(1)(i)(C). According to EPA, these changes would reduce potential uncertainty regarding the appropriate factors to consider in the alternatives analysis and would reinforce the requirement to evaluate different project locations and design elements when assessing the viability and environmental impacts of each location.

After considering these comments and the changes that we made to paragraph (d)(1) in the final rule, we have decided not to adopt proposed paragraph (d)(2) because provisions of that paragraph are now redundant and unnecessary. Under 30 CFR 816.97(a) and 817.97(a), the

operator must, to the extent possible, using the best technology currently available, minimize disturbances and adverse impacts on fish and wildlife and related environmental values and must achieve enhancement of those resources where practicable. Paragraph (f) of 30 CFR 816.97 and 817.97 provides that the operator must avoid disturbances to, enhance where practicable, restore, or replace wetlands and riparian vegetation along rivers and streams and bordering ponds and lakes. That paragraph also requires that the operator avoid disturbances to, enhance where practicable, or restore habitats of unusually high value for fish and wildlife. Paragraph (b)(1) of 30 CFR 780.16 and 784.21 requires that the fish and wildlife protection and enhancement plan in the permit application be consistent with the requirements of 30 CFR 816.97 and 817.97, respectively. Therefore, proposed paragraph (d)(2) would not add any requirements that are not already found in 30 CFR 816.97 and 817.97.

In addition, as revised in the final rule, paragraph (d)(1) of sections 780.25 and 784.16 provides that permit applicants must design their operations to avoid placement of coal mine waste in or within 100 feet of a perennial or intermittent stream to the extent possible. This new provision establishes avoidance of disturbance of perennial and intermittent streams and their buffer zones as the best technology currently available to comply with the requirement under sections 515(b)(24) and 516(b)(11) to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values. However, the statutory minimization requirement applies only ''to the extent possible,'' and, given the realities of geology (which dictates where coal is located), topography, and mining mechanics and economics, it is not always possible to implement the ultimate form of minimization, which is avoidance of disturbances, and still conduct surface coal mining operations. Consequently, paragraph (d)(1) of the final rule requires that the applicant avoid disturbance only to the extent possible. Paragraph (d)(1)(i) of the revised final rule provides that, when a permit applicant proposes to construct a refuse pile or coal mine waste impounding structure in or within 100 feet of a perennial or intermittent stream, the applicant must explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of coal mine waste in or within 100 feet of a perennial or intermittent stream is not reasonably possible. Therefore, adoption of proposed paragraph (d)(2) is no longer appropriate because, as revised, paragraph (d)(1) of the final rule requires consideration of avoidance as part of the alternatives analysis and selection process.

7. Paragraphs (d)(2) and (3)

As proposed, we are combining former paragraphs (d) and (e) of sections 780.25 and 784.16, which contained design requirements for coal processing waste banks, and former paragraph (e), which contained design requirements for coal processing waste dams and embankments, into a substantially revised paragraph (d). Paragraph (d)(2), which contains design requirements specific to refuse piles, corresponds to former paragraph (d). Paragraph (d)(3), which contains design requirements specific to impoundments and impounding structures constructed of or intended to impound coal mine waste, corresponds to former paragraph (e). Because of changes in other provisions of paragraph (d), the nomenclature in the final rule differs slightly from the proposed rule in that proposed paragraph (d)(3) is codified as paragraph (d)(2) in the final rule and proposed paragraph (d)(4) is codified as paragraph (d)(3) in the final rule.

As proposed, final paragraph (d)(2) of sections 780.25 and 784.16 does not include the cross-reference to section 816.84 formerly found in section 780.25(d) and the cross-reference to section 817.84 formerly found in section 784.16(d). We are deleting those cross-references because final sections 780.25(d)(2) and 784.16(d)(2) pertain only to refuse piles, not to the coal mine waste impounding structures to which sections 816.84 and 817.84 apply. The deletion is not a substantive change because the former version of the rules did not pertain to coal mine waste impounding structures either.

Similarly, as proposed, final paragraph (d)(3) of sections 780.25 and 784.16 does not include the cross-reference to section 816.83 formerly found in section 780.25(e) and the cross-reference to section 817.83 formerly found in section 784.16(e). We are deleting those cross-references because final sections 780.25(d)(3) and 784.16(d)(3) pertain only to coal mine waste impoundments and impounding structures, not to the refuse piles to which sections 816.83 and 817.83 apply. The deletion is not a substantive change because the former version of the rules did not pertain to refuse piles either.

In addition, revised paragraph (d)(3) of sections 780.25 and 784.16 does not contain the requirement formerly found in sections 780.25(e) and 784.16(e) that each plan for an impounding structure comply with 30 CFR 77.216–1. As proposed, we are deleting this cross-reference because 30 CFR 77.216–1 does not include any design requirements. Instead, that rule consists solely of MSHA requirements for signage for existing impoundments and impoundments under construction. Consequently, there is no reason to retain this cross-reference because the referenced requirement is not relevant to preparation of plans or permit applications for proposed impoundments. Final paragraph (d)(3) retains the requirement that each plan for an impounding structure comply with 30 CFR 77.216–2, which contains design requirements for impoundments and impounding structures.

We received no comments on the changes discussed above.

C. Sections 780.28 and 784.28 Activities in or Adjacent to Perennial or Intermittent Streams

As explained in the preamble to the proposed rule, we are adding new sections 780.28 and 784.28 because the review and approval of proposals to disturb the surface of lands within 100 feet of perennial and intermittent streams is a permitting action, not a performance standard. Consequently, as proposed, we are moving the permitting aspects of the stream buffer zone rules, which were formerly codified at 30 CFR 816.57(a)(1) and 817.57(a)(1) as part of the performance standards in subchapter K, to new sections 780.28 and 784.28, which are part of the permitting requirements of subchapter G. We are also extensively revising the proposed rules in response to comments.

Sections 780.28 and 784.28 replace the rules formerly located at 30 CFR 816.57(a)(1) and 817.57(a)(1), which provided that the regulatory authority may authorize activities on the surface of lands within 100 feet of a perennial or intermittent stream only upon finding that the activities will not cause or contribute to the violation of applicable State or Federal water quality standards and will not adversely affect the water quantity and quality or other environmental resources of the stream. As discussed in Part VII of this preamble, we have decided to retain the scope of the original rules, which applied to perennial and intermittent streams, rather than change the scope to waters of the United States, as we proposed on August 24, 2007.

In the proposed rule, paragraph (a) of sections 780.28 and 784.28 defined their applicability, paragraph (b) established mapping requirements, paragraph (c) contained permit application requirements for obtaining a variance from the prohibition on disturbance of the buffer zone established under section 816.57 or section 817.57, paragraph (d) contained standards for regulatory authority approval of a requested variance, paragraph (e) established permit application and regulatory authority approval requirements for activities that are not subject to the prohibition on disturbance of the buffer zone, and paragraph (f) explained the relationship between our rules and Clean Water Act requirements.

One commenter suggested that we streamline and simplify both the structure of these sections and their contents. The commenter requested that we modify the rule to more clearly distinguish between activities that will be conducted in the buffer zone for a perennial or intermittent stream and those that are planned to be conducted in the stream itself. The commenter also requested that we avoid describing the stream buffer zone requirement as a ''prohibition'' and argued that the new mapping requirements in proposed paragraph (b) were unnecessary. We have accepted these comments and revised the rules accordingly. However, we did not adopt the actual rewrite of the rules that the commenter provided. In addition, while sections 780.28 and 784.28 of the final rule do not refer to the stream buffer zone requirements of sections 816.57 and 817.57 as a prohibition, we do not agree with the commenter that use of that term would be an incorrect characterization. We continue to use that term in the preamble when appropriate.

We also extensively restructured and revised these sections of the proposed rule in response to numerous comments (1) urging greater protection for headwater streams in view of their importance to the function and productivity of the stream as a whole, and (2) emphasizing that maintenance of undisturbed buffer zones of mature native vegetation is the best technology currently available to achieve the requirements of sections 515(b)(24) and 516(b)(11) of the Act concerning minimization of disturbances and adverse impacts on fish, wildlife, and related environmental values. Commenters objected to our preamble discussion of these sections in the proposed rule in which we stated that a rule establishing a buffer zone as the best technology currently available would be inconsistent with the definition of ''best technology currently available'' in 30 CFR 701.5 because it would not provide sufficient flexibility to accommodate advances in science and technology. In particular, commenters noted that we cited no technical or other support for the proposition that there are equally effective alternatives to buffer zones for purposes of meeting the requirements of sections 515(b)(24) and 516(b)(11) of SMCRA, which require that surface coal mining and reclamation operations be conducted so as to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible using the best technology currently available.

Our discussion of the meaning of best technology currently available in the preamble to the proposed rule focused on sediment control and meeting the requirements of sections 515(b)(10)(B)(i) and 516(b)(9)(B) of SMCRA, which provide that surface coal mining operations must be conducted in a manner that prevents, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or to runoff outside the permit area. We are not repeating that discussion in this preamble, although it remains valid with respect to sediment control. However, sediment control is the focus of only two of the four statutory provisions underlying the stream buffer zone rule and is the subject of only half of the definition of ''best technology currently available'' in 30 CFR 701.5.

We are revising sections 780.28 and 784.28 to clarify that maintenance of an undisturbed 100-foot buffer between the stream and mining and reclamation activities conducted on the surface of lands is the default best technology currently available to meet the underlying statutory requirements whenever the stream segment in question need not be disturbed and it is possible to leave an undisturbed 100-foot buffer. In other words, the final rule requires maintenance of an undisturbed l00-foot buffer unless the permit applicant can demonstrate to the satisfaction of the regulatory authority that maintaining a 100-foot buffer is either not reasonably possible or not necessary to meet the fish and wildlife and hydrologic balance protection provisions of the regulatory program. We anticipate that the latter demonstration will be difficult to make with respect to fish and wildlife protection requirements unless the stream is highly polluted or the land within the buffer has been and continues to be significantly disturbed or degraded by activities such as intensive agriculture.

In summary, we have added the following requirements in response to comments:

- The regulatory authority's decision must be made in the form of written findings.
- For activities to be conducted in a perennial or intermittent stream (including the activities listed in paragraphs (b)(2) through (b)(4) of sections 816.57 and 817.57), the permit application must demonstrate, and the regulatory authority must find, that avoiding disturbance of the stream is not reasonably possible. See Part VI.D. of this preamble for a more extensive discussion of our rationale for adopting the term ''reasonably possible'' and its consistency with statutory provisions. We also added a requirement that the permit include a condition requiring a demonstration of compliance with the Clean Water Act in the manner specified in paragraph (a)(2) of section 816.57 or section 817.57 before the permittee may conduct any activities in a perennial or intermittent stream that require authorization or certification under the Clean Water Act.
- For activities to be conducted within 100 feet of a perennial or intermittent stream, but not in the stream itself, the permit application must demonstrate, and the regulatory authority must find, that avoiding disturbance of the stream is either not reasonably possible or not necessary to meet the fish and wildlife and hydrologic balance protection provisions of the regulatory program. This requirement applies only to activities that will occur on land subject to the buffer requirement of paragraph (a)(1) of sections 816.57 and 817.57. It does not apply to activities conducted on lands included within the scope of paragraph (b) of sections 816.57 and 817.57; i.e., to what would have been the buffer zone for those segments of a perennial or intermittent stream for which the regulatory authority approves one or more of the activities listed in paragraphs (b)(1) through (b)(4) of section 816.57 or 817.57. See Part VIII.I. of this preamble.

For purposes of these sections, the requirement to demonstrate that avoidance of disturbance of the stream or buffer zone is not reasonably possible should not be construed as elevating environmental concerns over safety considerations, as prohibiting the conduct of surface coal mining operations that are not otherwise prohibited under SMCRA or other laws, as prohibiting maximization of coal

recovery to the extent provided in sections 816.59 and 817.59, or as requiring unreasonably excessive expenditures to avoid disturbance. However, by itself, the fact that designing and conducting the operation to avoid disturbance of the stream or buffer zone may be more expensive than designing and conducting it to include disturbance of the stream or buffer zone does not necessarily mean that avoidance of disturbance is not reasonably possible. Consistent with the statutory directive to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available, the permit applicant and the regulatory authority must weigh the environmental benefits of avoiding disturbance against the cost of doing so and determine the appropriate balance based on site-specific environmental, economic, operational, and engineering considerations, not the financial status of the permit applicant.

The U.S. Fish and Wildlife Service recommended that we revise these rules to include language similar to that used in our rules governing selection of alternatives under the alternatives analysis requirements for coal mine waste and excess spoil in sections 780.25 and 780.35. We are not adopting this recommendation because an alternatives analysis is not a part of our stream buffer zone rules. For those situations in which an alternatives analysis is required under section 780.25(d)(1) or 780.35(a)(3), there is no need to replicate that requirement here. Those rules and their preamble already provide guidance for the identification of reasonably possible alternatives and require selection of the alternative with the least overall adverse impact on fish, wildlife, and related environmental values.

The U.S. Fish and Wildlife Service also requested that we work with the Service to build a process into these sections of the final rule to protect unique and high value fish and wildlife resources and to develop design standards that would provide greater specificity as to how the decision criteria for granting variances from the stream buffer zone requirements will be applied. In response, we note that our fish and wildlife protection rules at 30 CFR 816.97(f) and 817.97(f) already require that the operator ''avoid disturbances to, enhance where practicable, or restore habitats of unusually high value for fish and wildlife.'' In addition, our permitting rules at 30 CFR 780.16 and 784.21 provide a role for the Service in determining fish and wildlife data collection requirements and reviewing the fish and wildlife protection and enhancement plan in the permit application. Therefore, we believe that our existing rules provide adequate opportunity for involvement by the Service and that addition of the provisions requested by the Service would be redundant. However, we are willing to work with the Service in developing suggested guidelines for application of paragraphs (c)(3)(ii) and (e)(2)(ii) of sections 780.28 and 784.28; *i.e.*, identifying measures and techniques that may constitute the best technology currently available under various situations to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by sections 780.16(b), 784.21(b), 816.97(a), and 817.97(a).

Several commenters requested that we clarify in the preamble that section 784.28 applies only to lands upon which surface activities will exist and lands immediately adjacent to those lands, not to areas that merely overlie underground operations associated with an underground mine. We agree with the position stated by the commenters and have inserted the word ''surface'' in the heading and other provisions of section 784.28 to provide added clarity. One commenter expressed concern that use of the terms ''adjacent'' or ''adjacent area'' could result in the requirements of this rule being applied to lands overlying the underground mine workings because the definition of ''adjacent area'' in 30 CFR 701.5 includes areas with ''probable impacts from underground workings.'' We find the commenter's concern to be unfounded. The definition of adjacent area clearly states that the term's meaning must be determined in the context in which the term is used. Nothing in the context of the final rule that we are adopting today suggests that section 784.28 should or could be applied to the area overlying underground workings, except in the narrow situation in which that area happens to be coincident with or within 100 feet of an area upon which there will be surface activities associated with the underground mine.

Final sections 780.28 and 784.28 are identical with the exception of appropriate modifications to reflect the differences between surface mining and underground mining. Most significantly, in section 784.28, the term ''surface mining activities'' is replaced by language that clarifies that the requirements of that section apply only to surface activities conducted on the surface of lands in connection with an underground coal mining operation. The following paragraphs discuss each element of final sections 780.28 and 784.28.

1. Final Paragraph (a)

Paragraph (a)(1) of final sections 780.28 and 784.28 provides that, except as otherwise specified in paragraph (a)(2), those sections apply to applications to conduct activities in perennial or intermittent streams or on the surface of lands within 100 feet, measured horizontally, of perennial or intermittent streams. This paragraph reflects the fact that, under sections 816.57(a) and 817.57(a), we prohibit surface activities that would disturb the surface of lands within 100 feet of perennial and intermittent streams unless the regulatory authority approves a variance from that prohibition or unless the exception in paragraph (b) of sections 816.57 and 817.57 applies. We have added a clause clarifying that the l00-foot buffer zone must be measured horizontally, consistent with generally accepted practice and convention with respect to distance requirements. We originally proposed to include this clause in the mapping requirements of paragraph (b), but we moved it to paragraph (a) as a result of our decision not to adopt proposed paragraph (b). As we stated in the preamble to proposed paragraph (b), the 100 feet must be measured from the ordinary high water mark of the stream, consistent with the Corps of Engineers' practices for establishing jurisdictional limits for waters of the United States.

We are adding paragraph (a)(2)(i) to specify that sections 780.28 and 784.28 do not apply to applications under section 785.21 for permits for coal preparation plants not located within the permit area of a mine. This provision reflects the fact that we did not propose any changes to the rules concerning those preparation plants in sections 785.21 and 827.12 of our regulations and the fact that we do not intend for this final rule to alter those rules with respect to the applicability of the stream buffer zone rules to coal preparation plants not located in the permit area of a mine. Section 827.12 of our rules does not apply the stream buffer zone rule in sections 816.57 and 817.57 to coal preparation plants not located within the permit area of a mine. See 48 FR 20399, May 5, 1983.

We are adding paragraph (a)(2)(i) because, as part of this final rule, we are moving the permitting aspects of the previous version of the stream buffer zone rule in sections 816.57 and 817.57 to new sections 780.28 and 784.28.

Existing section 785.21(c) provides that coal preparation plants not located within the permit area of a mine are subject not only to the special permitting requirements of section 785.21, but also to ''all other applicable requirements of this subchapter.'' ''This subchapter'' refers to subchapter G of chapter VII, which contains the permitting requirements for all surface coal mining and reclamation operations. Thus, to ensure that section 785.21(c) is not now interpreted as including the newly added permitting requirements related to the stream buffer zone rule, we are adding the exception in paragraph (a)(2)(i) of sections 780.28 and 784.28.

We are also adding paragraph (a)(2)(ii) to clarify that paragraphs (b) through (e) of sections 780.28 and 784.28 do not apply to diversions of perennial or intermittent streams, which are governed by sections 780.29, 784.29, 816.43, and 817.43. This change reflects the 1983 rules, in which the findings and substantive requirements applicable to the approval of stream-channel diversions were specified primarily in the stream-channel diversion rules rather than the stream buffer zone rules. Paragraph (b)(1) of sections 816.43 and 817.43 contains the finding that the regulatory authority must make before approving a proposed stream-channel diversion. See Part VIII.G. of this preamble for a discussion of the changes that we are making to the stream-channel diversion rules.

2. Proposed Paragraph (b)

Proposed paragraph (b) would have required that maps submitted as part of the permit application show all waters of the United States that are located either within the proposed permit area or within the adjacent area, as that term is defined at 30 CFR 701.5. However, with our decision not to change the scope of the stream buffer zone rule from perennial and intermittent streams to waters of the United States, there is no longer any need for the proposed mapping requirement. The existing requirements in sections 779.25(a)(7) and 783.25(a)(7), which require that permit application maps show streams, lakes, ponds, and springs located within the proposed permit and adjacent areas, are adequate in that they require mapping of all perennial and intermittent streams located in or within 100 feet of the permit area. Therefore, comments opposing the adoption of proposed paragraph (b) are now moot and will not be discussed further.

3. Final Paragraph (b)

Paragraph (b) of sections 780.28 and 784.28 establishes application requirements for persons seeking to conduct activities in a perennial or intermittent stream as part of one of the activities listed in paragraphs (b)(2) through (b)(4) of section 816.57 or 817.57. Those activities include construction of bridge abutments and other stream-crossing structures in streams, construction of sedimentation pond embankments in streams, and construction of excess spoil fills and coal mine waste disposal facilities in streams. The application must demonstrate that avoiding disturbance of the stream is not reasonably possible and that the proposed activities will comply with all applicable requirements in paragraphs (b) and (c) of section 816.57 or 817.57. These requirements, which we have adopted in response to comments urging greater protection for headwater streams, as discussed in Part VI.D. of this preamble, are more specific than paragraph (e) of the proposed rule, which would have required only a demonstration that to the extent possible, the applicant would use the best technology currently available as required by the hydrologic balance protection requirements of 30 CFR 816.41(d) or 817.41(d) and the fish and wildlife protection requirements of 30 CFR 816.97(a) or 817.97(a).

4. Final Paragraph (c)

Paragraph (c) of sections 780.28 and 784.28 contains application requirements for persons seeking to conduct surface activities that would disturb the surface of land within 100 feet of a perennial or intermittent stream, but that would not take place in the stream itself. This paragraph applies only to activities that will occur on lands subject to the buffer requirement of paragraph (a) of sections 816.57 and 817.57. It does not apply to activities conducted on lands included within the scope of paragraph (b) of sections 816.57 and 817.57; *i.e.*, to what would have been the buffer zone for stream segments for which the regulatory authority approves one or more of the activities listed in paragraphs (b)(1) through (b)(4) of section 816.57 or 817.57.

Under paragraph (c), the application must demonstrate that avoiding disturbance of land within 100 feet of the stream either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection provisions of the regulatory program. In addition, the application must identify any lesser buffer that is proposed instead of maintaining a 100-foot buffer between surface activities and the perennial or intermittent stream. Finally; the application must explain how the lesser buffer, together with any other proposed protective measures, constitute the best technology currently available to (1) prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible, as required by section 780.21(h) or 784.14(g) and section 816.41(d)(1) or 817.41(d)(1), and (2) minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by section 780.16(b) or 784.21(b) and section 816.97(a) or 817.97(a). Final paragraph (c) is similar to paragraph (c) of the proposed rule except for the first of these requirements [the one codified in paragraph (c)(1)], which we added in response to comments urging greater protection for headwater streams, as discussed in Part VI.D. of this preamble.

Paragraph (c)(3) of sections 780.28 and 784.28 refers to certain other OSM rules. Among those rules, sections 816.41(d) and 817.41(d) require, in relevant part, that mining operations prevent, to the extent possible using the best technology currently available, additional contribution of suspended solids to streamflow outside the permit area. They implement, in part, the sedimentation prevention requirements of sections 515(b)(10)(B)(i) and 516(b)(9)(B) of SMCRA, respectively. Sections 816.97(a) and 817.97(a) require, in relevant part, that, to the extent possible using the best technology currently available, the operator minimize disturbances and adverse impacts on fish, wildlife, and related environmental values. They implement, in part, the fish and wildlife protection requirements of sections 515(b)(24) and 516(b)(11) of SMCRA, respectively. Sections 780.21(h) and 784.14(g) require that each permit application include a hydrologic reclamation plan designed to implement, among other things, the requirements of sections 816.41(d) and 817.41(d), respectively. Sections 780.16(b) and 784.21(b) require that each permit application include a fish and wildlife protection and enhancement plan designed to implement the requirements of sections 816.97(a) and 817.97(a), respectively.

5. Final Paragraph (d)

Paragraph (d)(1) of sections 780.28 and 784.28 provides that before approving any surface activities in a perennial or intermittent stream, the regulatory authority must find in

writing that avoiding disturbance of the stream is not reasonably possible and the plans submitted with the application meet all applicable requirements in paragraphs (b) and (c) of section 816.57 or 817.57. The findings are the same as the demonstration that the applicant must make in the application under paragraph (b) of these sections. These findings, which we have adopted in response to comments urging greater protection for headwater streams, as discussed in Part VI.D. of this preamble, are more specific than the corresponding provisions of paragraph (e) of the proposed rule, which would have required only that the regulatory authority find that, to the extent possible, the applicant will use the best technology currently available as required by the hydrologic balance protection requirements of 30 CFR 816.41(d) or 817.41(d) and the fish and wildlife protection requirements of 30 CFR 816.97(a) or 817.97(a).

We are also adopting a new paragraph (d)(2) of sections 780.28 and 784.28 in response to comments that we received on proposed paragraph (f) of those sections. Paragraph (d)(2) provides that before approving a permit application in which the applicant proposes to conduct surface activities in a perennial or intermittent stream, the regulatory authority must include a permit condition requiring a demonstration of compliance with the Clean Water Act in the manner specified in paragraph (a)(2) of sections 816.57 and 817.57 before the permittee may conduct those activities. This requirement applies to the extent that the activities require authorization or certification under the Clean Water Act. Please refer to the preamble discussion of paragraph (f) for an explanation of the rationale for this provision.

6. Final Paragraph (e)

Paragraph (e) of sections 780.28 and 784.28 specifies that before approving any surface activities that would disturb the surface of land subject to the buffer requirement of section 816.57(a)(1) or 817.57(a)(1), the regulatory authority must find in writing that the applicant has made the demonstrations required under paragraph (c) of sections 780.28 and 784.28. The final rule is similar to paragraph (d) of the proposed rule except that we decided not to adopt the provision in paragraph (d)(1) of the proposed rule that would have established a determination by the regulatory authority that the measures proposed by the applicant would be no less effective in meeting the requirements of the regulatory program than maintenance of an undisturbed buffer under paragraph (a) of section 816.57 or 817.57 as a prerequisite for approval.

Some commenters objected to this proposed requirement, noting that the proposed rule did not include a corresponding requirement for a similar demonstration in the permit application. They also stated that the focus of any finding should be on whether the buffer and related measures were effective in meeting other regulatory program requirements, and that it would be very difficult to quantify the theoretical effectiveness of a 100-foot buffer compared to a lesser buffer on a site-specific basis, as the proposed rule would have required. We agree. Therefore, we are not including a requirement for the proposed finding in the final rule. The replacement finding in paragraph (e)(1) of sections 780.28 and 784.28 in the final rule has a counterpart in the permit application requirements of paragraph (c) and focuses on whether and how the statutory and regulatory requirements to use the best technology currently available to prevent additional contributions of suspended solids to streamflow or runoff outside the permit area to the extent possible and to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible will be met.

The findings required by paragraph (e) of sections 780.28 and 784.28 replace the finding that the regulatory authority had to make under paragraph (a)(1) of the 1983 version of sections 816.57 and 817.57 before authorizing activities that would disturb the surface of lands within 100 feet of a perennial or intermittent stream. The provision that we are deleting from sections 816.57 and 817.57 stated that, before authorizing an activity closer than 100 feet to a perennial or intermittent stream, the regulatory authority must find that the activity will not cause or contribute to the violation of applicable State or Federal water quality standards and will not adversely affect the water quantity and quality or other environmental resources of the stream. That requirement has no direct counterpart in sections 515(b)(10)(B)(i), 515(b)(24), 516(b)(9)(B), or 516(b)(11) of SMCRA, which, as previously discussed, are the provisions of SMCRA that form the basis for the stream buffer zone rule.

The introductory language of sections 515(b)(10) and 516(b)(9) of SMCRA does provide that performance standards for surface coal mining operations must include a requirement for the minimization of disturbances to the quality and quantity (or, in the case of section 516(b)(9), just the quantity) of water in surface and ground water systems. However, that language does not stand alone as an independent requirement. Instead, when read in its entirety, section 515(b)(10) provides that the requirement for minimization of disturbances to water quality and quantity must be achieved by implementation of the measures and techniques described in subparagraphs (A) through (F) of section 515(b)(10). Similarly, section 516(b)(9) provides that the requirement for minimization of disturbances to water quantity must be achieved by implementation of subparagraphs (A) and (B) of section 516(b)(9).

In addition, sections 515(b)(10)(B)(i) and 516(b)(9)(B) refer only to the prevention of additional contributions of suspended solids. Those paragraphs provide that contributions of suspended solids to streamflow must not be in excess of requirements set by applicable State or Federal law, but they do not mention any other water quality parameter. Therefore, that provision by itself does not authorize the required finding previously found in paragraph (a)(1) of sections 816.57 and 817.57. Furthermore, the SMCRA regulatory authority is not necessarily in the best position to determine whether a proposed activity will cause or contribute to a violation of applicable State or Federal water quality standards for any parameter. Those standards and parameters are established and implemented under the authority of the Clean Water Act (33 U.S.C. 1251 *et seq.*), not SMCRA, and are sometimes administered by an agency other than the SMCRA regulatory authority. Under 30 CFR 780.18(b)(9) and 784.13(b)(9), the SMCRA permit application must include a description of the steps to be taken to comply with the requirements of the Clean Air Act (42 U.S.C. 7401 *et seq.*), the Clean Water Act (33 U.S.C. 1251 *et seq.*), and other applicable air and water quality laws and regulations, but there is no requirement that the SMCRA regulatory authority pass judgment on the adequacy of that description or on the adequacy of the steps that the applicant proposes to take.

As discussed above, sections 515(b)(10)(B)(i) and 516(b)(9)(B) of SMCRA provide that ''in no event shall such contributions [of suspended solids] be in excess of requirements set by applicable State or Federal law.'' This language originated in H.R. 2, the House of Representatives' version of the legislation that became SMCRA. In

describing the intent of these provisions, the House Committee on Interior and Insular Affairs stated:

> In cases where there will be water discharge from the mine sites, the number of such discharges should be minimized by collectively controlling and channeling the watercourse into an acceptable receiving stream or area location. It also should be understood that prior to any discharge off the permit area, the discharge should be treated to remove pollutants that may be present. Such treatment must, at a minimum, meet the requirements of this Act and insure compliance with applicable local, State, or Federal water quality requirements.

H. Rep. No. 95–218 at 116 (1977).

Nothing in the language of the Act or the legislative history quoted above mandates retention of the provision that we are removing from paragraph (a)(1) of sections 816.57 and 817.57. The statutory provisions are clearly intended to ensure treatment of discharges from the minesite that leave the permit area. Those requirements are already addressed by the performance standards at 30 CFR 816.42 and 817.42, which require that discharges of water from areas disturbed by surface or underground mining activities ''be made in compliance with all applicable State and Federal water quality laws and regulations and with the effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434.'' Similarly, other existing rules already cover the permit application phase in that the determination of probable hydrologic consequences of the proposed operation must include findings on what impact the proposed operation will have on sediment yields from the disturbed area and certain water quality parameters, including suspended solids. See 30 CFR 780.21(f)(3)(iv) and 784.14(e)(3)(iii). Under 30 CFR 780.21(h) and 784.14(g), the hydrologic reclamation plan submitted with the permit application must include a description of how the relevant requirements of 30 CFR part 816 or 817, including the water quality requirements of section 816.42 or 817.42, will be met and the measures to be taken to ''prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow.''

In addition, the absolute nature of the ''will not adversely affect'' language formerly found in paragraph (a)(1) of sections 816.57 and 817.57 is inconsistent with paragraphs (b)(10)(B)(i) and (b)(24) of section 515 and paragraphs (b)(9)(B) and (b)(11) of section 516 of the Act, all of which provide that surface coal mining operations must be conducted to meet the requirements of those paragraphs ''to the extent possible'' using the ''best technology currently available.'' The appropriate standard under sections 515(b)(24) and 516(b)(11) is minimization of disturbances and adverse impacts on fish, wildlife, and related environmental values. While avoidance is the ultimate form of minimization, there is no statutory basis for a rule that requires absolute avoidance of all adverse effects. Such a rule would run afoul of the plain language of sections 515(b)(24) and 516(b)(11) the Act, which requires only minimization of disturbances and adverse impacts and then only to the extent possible using the best technology currently available.

As discussed more fully in Part III.D. of this preamble, the preamble to the 1983 version of the stream buffer zone rules (''the 1983 preamble'') recognizes that the protection afforded by those rules need not be absolute. It acknowledges that some adverse impacts on hydrology and fish, wildlife, and related environmental values are unavoidable because of the nature of surface coal mining operations. Furthermore, the 1983 preamble states that ''OSM recognizes that some surface mining activities can be conducted within 100 feet of a perennial or an intermittent stream without causing *significant* adverse impacts on the hydrologic balance and related environmental values,'' thus implying that some adverse impacts would occur. 48 FR 30313, col. 1, June 30, 1983, emphasis added. Similarly, ''final § 816.57 is intended to protect *significant* biological values in streams.'' *Id.,* col. 3, emphasis added. And, with respect to stream diversions, the 1983 preamble specifies that—

> Alteration of streams may have adverse aquatic and ecological impacts on both diverted stream reaches and other downstream areas with which they merge. However, final § 816.57(a) will *minimize* these impacts.

Id. at 30315, col. 1, emphasis added.

Our removal of the requirement formerly found in 30 CFR 816.57(a)(1) and 817.57(a)(1) for a finding concerning applicable State or Federal water quality standards does not authorize activities that would constitute or result in a violation of State or Federal water quality standards. Section 702(a) of SMCRA provides that nothing in SMCRA may be construed as superseding, amending, modifying, or repealing the Clean Water Act, its implementing regulations, State laws enacted pursuant to the Clean Water Act, or other Federal laws relating to preservation of water quality. In addition, our regulations at 30 CFR 816.42 and 817.42 require that discharges of water from disturbed areas ''be made in compliance with all applicable State and Federal water quality laws and regulations.''

In the preamble to the proposed rule, we sought comment on whether we should amend 30 CFR 816.42 and 817.42, which currently address only discharges of water, to include a paragraph specifying, for informational purposes, that discharges of dredged or fill materials into waters of the United States must comply with all applicable State and Federal requirements. Commenters were divided on the merits of this potential rule change. We have decided against adding this provision, both because of the possibility that the language might be erroneously interpreted as being enforceable under SMCRA rather than as just an informational provision and because adding the language is unlikely to be helpful to the regulated community, which is well aware of the need to comply with both SMCRA and the various elements of Clean Water Act regulatory programs.

7. Final Paragraph (f)

Paragraph (f) of sections 780.28 and 784.28 summarizes the relationship between SMCRA permitting actions and Clean Water Act requirements. Paragraph (f)(1) provides that every permit application must identify the authorizations that the applicant anticipates will be needed under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, and describe the steps that the permit applicant has taken or will take to procure those authorizations. This provision implements, in part, section 508(a)(9) of SMCRA, which requires that each permit application include ''the steps to be taken to comply with applicable air and water quality laws and regulations.''

Paragraph (f)(2) of sections 780.28 and 784.28 specifies that, if the permit application meets all applicable requirements of subchapter G (the permitting regulations), the regulatory authority will process the permit application and may issue the permit before the applicant obtains all necessary authorizations under the Clean Water Act, 33 U.S.C. 1251 *et seq.* This arrangement may facilitate review by the Corps of any preconstruction notification submitted by the permit applicant under Nationwide Permits 21, 49, and 50. The nationwide permits

apply only if the SMCRA permit has already been issued or if the application is being processed as part of an integrated permit processing procedure. See 72 FR 11092, 11184, and 11191, March 12, 2007.

As proposed, paragraph (f)(2) would have provided that the permittee may not initiate any activities for which Clean Water Act authorization or certification is required until that authorization or certification is obtained. The preamble to the proposed rule stated that we considered that provision informational. We requested comment on whether the provision should remain informational or whether we should revise our rules to require its inclusion as a SMCRA permit condition, which would mean that the prohibition on initiation of activities before obtaining all necessary Clean Water Act authorizations and certifications would be independently enforceable under SMCRA. See 72 FR 48901, August 24, 2007.

Commenters were divided on this issue. The U.S. Fish and Wildlife Service and the Geologic and Water Resources Divisions of the National Park Service supported adoption of a rule requiring a permit condition under SMCRA. The EPA also supported adoption of a requirement for a permit condition under SMCRA, stating that such a requirement would enhance compliance with Clean Water Act requirements. One state regulatory authority opposed adoption of a requirement for a permit condition; the commenter instead recommended that coordination of permitting and enforcement of Clean Water Act requirements be left to the states and the Corps. Comments from the mining industry strongly opposed adoption of a rule that would impose a permit condition under SMCRA, expressing the fear that it would only result in more duplication and confusion in regulation of the coal mining industry. One commenter stated that, if the permittee needs to comply with the Clean Water Act, then the requirements of that statute should be enforced according to the statutory scheme specified in the Clean Water Act.

In response to the comments supporting adoption of a rule requiring imposition of a permit condition, we are adding a new paragraph (d)(2) to sections 780.28 and 784.28. That paragraph provides that before approving a permit application in which the applicant proposes to conduct surface activities in a perennial or intermittent stream, the regulatory authority must include a permit condition requiring a demonstration of compliance with the Clean Water Act in the manner specified in paragraph (a)(2) of sections 816.57 and 817.57 before the permittee may conduct those activities. This requirement applies to the extent that the activities require authorization or certification under the Clean Water Act. New paragraph (a)(2) of sections 816.57 and 817.57 provides that surface activities, including those activities identified in paragraphs (b)(1) through (b)(4) of sections 816.57 and 817.57, may be authorized in perennial or intermittent streams only where those activities would not cause or contribute to the violation of applicable State or Federal water quality standards developed pursuant to the Clean Water Act, as determined through certification under section 401 of the Clean Water Act or a permit under section 402 or 404 of the Clean Water Act.

However, in adopting these rules, we reiterate that nothing in SMCRA provides the SMCRA regulatory authority with jurisdiction over the Clean Water Act or the authority to determine when a permit or authorization is required under the Clean Water Act. Under paragraphs (a) and (a)(2) of section 702 of SMCRA, nothing in SMCRA (and, by extension, regulations adopted under SMCRA) may be construed as superseding, amending, modifying, or repealing the Clean Water Act or any state laws or state or federal rules adopted under the Clean Water Act. In addition, nothing in the Clean Water Act vests SMCRA regulatory authorities with the authority to enforce compliance with the permitting and certification requirements of that law.

We have revised proposed paragraph (f)(2) to be consistent with these principles. As revised, final paragraph (f)(2) provides that issuance of a SMCRA permit does not authorize the permittee to initiate any activities for which Clean Water Act authorization or certification is required. The final rule further states that ''[i]nformation submitted and analyses conducted under subchapter G of this chapter may inform the agency responsible for authorizations and certifications under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, but they are not a substitute for the reviews, authorizations, and certifications required under those sections of the Clean Water Act.'' Paragraph (f)(2) does not impose any new requirements under SMCRA, nor does it authorize the regulatory authority to make any determinations required under the Clean Water Act.

D. Section 780.35 Disposal of Excess Spoil (Surface Mines)

1. General Discussion of the Rule and the Rationale for the Rule Changes

The environmental impacts of fills and other structures associated with the disposal of excess spoil from surface coal mining operations, and of coal mine waste, have been the subject of controversy, largely because they involve the filling of substantial portions of stream valleys, especially in central Appalachia. This controversy has highlighted the need to ensure that excess spoil creation is minimized to the extent possible, and that excess spoil and coal mine waste disposal facilities are located and designed to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available, as required by sections 515(b)(24) and 516(b)(11) of SMCRA.

Prior to the adoption of this final rule, our regulations pertaining to the disposal of excess spoil primarily focused on ensuring that fills are safe and stable. This final rule adds several requirements intended to promote environmental protection, including minimization of the adverse environmental impacts of fill construction in perennial and intermittent streams. Several commenters argued that we have no authority to adopt these regulations because section 515(b)(22) of SMCRA, which establishes standards for the disposal of excess spoil, does not include any requirements for protection of fish, wildlife, and related environmental values, but instead focuses on engineering standards intended to promote stability, prevent mass movement, and control infiltration of water. We do not agree with the commenters. The rule changes that we are adopting today implement, in part, the requirement in section 515(b)(24) of SMCRA that surface coal mining and reclamation operations be conducted in a manner that minimizes disturbances to, and adverse impacts on, fish, wildlife, and related environmental values to the extent possible, using the best technology currently available. Section 515(b)(24) applies to the disposal of excess spoil both by its own terms (disposal of excess spoil is a part of surface coal mining and reclamation operations) and through section 515(b)(22)(I), which requires that the placement of excess spoil meet ''all other provisions of this Act.'' SMCRA contains numerous environmental protection requirements that apply to all

surface coal mining and reclamation operations and all aspects of those operations, including the disposal of excess spoil. The fact that section 515(b)(22) does not mention environmental protection in no way suggests that excess spoil fills need not comply with the environmental protection provisions of SMCRA or that we lack the authority to adopt regulations establishing environmental protection requirements for those structures.

One commenter stated that we should limit the applicability of the new regulations governing excess spoil placement to operations in steep-slope areas where the spoil will be placed in stream channels. The commenter also stated that the generation and disposal of excess spoil as part of non-steep slope operations has never been identified as a significant issue and that we have not provided any significant justification in the rulemaking record to support a need for applying the excess spoil rule to non-steep-slope operations. We disagree. We believe that these changes to our rules have merit wherever the potential exists for operations to generate excess spoil and that they should apply nationwide. Streams in non-steep-slope areas are no less significant in terms of fish, wildlife, and related environmental values than are streams in steep-slope areas. Excess spoil fills outside central Appalachia are rare but they do occur.

Several commenters requested that the preamble clarify that the term ''excess spoil'' does not include initial box cut spoil from the first cut in an area mine, even though it will be placed outside the mined area. Nothing in this final rule alters the definition of ''excess spoil'' or how that term is applied or interpreted. As defined in section 701.5, the term ''excess spoil'' means—

> Spoil material disposed of in a location other than the mined out area; provided that spoil material used to achieve the approximate original contour or to blend the mined-out area with the surrounding terrain in accordance with §§ 816.102(d) and 817.102(d) of this chapter in non-steep slope areas shall not be considered excess spoil.

The preamble to the definition of ''excess spoil'' states that—

> In the final rule, spoil used to merely blend the mined-out area with the surrounding terrain need not be treated as excess spoil. Thus, spoil from box cuts or first cuts in non-steep slope areas would not be excess spoil when it is used to achieve approximate original contour; i.e., to blend the mined-out area into the surrounding terrain according to § 816.102(d) of the backfilling and grading rules. * * * If, however, the spoil from a box cut or a first cut is deposited on slopes with angles defined as steep slopes, the box cut or first cut spoil must be handled as excess spoil in accordance with §§ 816.71 and 817.71.

48 FR 32911 (July 19, 1983).

Paragraph (a)(1) of section 780.35 of the final rule requires that surface coal mining operations be designed to minimize the creation of excess spoil to the extent possible. Paragraph (a)(2) of section 780.35 of the final rule specifies that the maximum cumulative design volume of all proposed excess spoil fills within the permit area must be no larger than the capacity needed to accommodate the anticipated cumulative volume of excess spoil that the operation will generate. These requirements should reduce the adverse impacts of the operation on fish, wildlife, and related environmental values by minimizing the amount of land and water disturbed to construct excess spoil fills.

Paragraph (a)(3) of section 780.35 of the final rule requires that the permit application include an analysis of the impacts on fish, wildlife, and related environmental values of a reasonable range of alternatives for disposal of excess spoil, including variations in the number, size, location, and configuration of proposed fills. Only reasonably possible alternatives that differ significantly in their impacts on fish, wildlife, and related environmental values need be considered. The analysis must consider impacts on both terrestrial and aquatic ecosystems. In addition, when construction of the excess spoil fill would involve placement of excess spoil in perennial or intermittent streams, the rule specifies certain factors that must be considered as part of the evaluation of impacts on fish, wildlife, and related environmental values to ensure adequate assessment of impacts on water quality and aquatic ecosystems, which are among the ''related environmental values'' mentioned in sections 515(b)(24) and 516(b)(11) of SMCRA. The applicant must select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

We are adopting these rules to improve the analysis of permit applications and permitting decisions under SMCRA. SMCRA itself does not require an analysis of alternatives. However, we believe that the alternatives analysis requirement is a reasonable means of implementing sections 515(b)(24) and 516(b)(11) of SMCRA. Those provisions of the Act require that surface coal mining and reclamation operations be conducted in a manner that minimizes disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available.

The addition of these requirements to our rules is consistent with section 102(d) of SMCRA, which provides that one of the purposes of SMCRA is to assure that surface coal mining operations are conducted so as to protect the environment. In addition, the rules are consistent with section 102(f) of SMCRA, which provides that another purpose of SMCRA is to strike a balance between protection of the environment and the nation's need for coal as an essential energy source. The rule changes that we are adopting today discourage the disturbance of perennial and intermittent streams and their buffers, but they also recognize that it is not reasonably possible to do so in all cases for all types of surface coal mining operations. For example, if the creation of excess spoil as part of a surface coal mining operation is unavoidable, the final rule would not prevent construction of the fills needed to accommodate the excess spoil. Instead, our new and revised rules are intended to ensure that surface coal mining and reclamation operations are planned and conducted in a manner that minimizes adverse environmental impacts from the construction of fills for the disposal of excess spoil to the extent that it is possible to do so without restricting coal production in a manner inconsistent with SMCRA in general and sections 816.59 and 817.59 of our regulations in particular. Section 201(c)(2) of SMCRA, 30 U.S.C. 1211(c)(2), which directs the Secretary of the Interior to publish and promulgate such rules and regulations as may be necessary to carry out the purposes and provisions of SMCRA, provides additional authority for the adoption of these rules.

One state regulatory authority stated that trying to balance the fill minimization requirements of paragraphs (a)(1) and (2) with the alternatives analysis and alternative selection requirements of paragraph (a)(3) will be extremely difficult. According to the commenter, the best location to place excess spoil to minimize the footprint of the fill is not likely to be the best location environmentally. The commenter suggested that guidance may be needed to address this potential conflict.

We do not agree that the requirements of these paragraphs are in conflict. Paragraph (a)(1) requires that the volume of excess spoil created by the operation be minimized by returning as

much of the spoil as possible to the mined-out area, after taking into consideration applicable regulations concerning final contours, safety, stability, environmental protection, and the postmining land use. Paragraph (a)(2) requires that the operation be designed so that the maximum cumulative volume of all planned excess spoil fills does not exceed the capacity needed to accommodate the anticipate cumulative volume of excess spoil that the proposed operation will generate. Nothing in these two paragraphs in any way contradicts the provision in paragraph (a)(3) requiring selection of the alternative with least overall adverse impact on fish, wildlife, and related environmental values.

As proposed, this final rule consolidates most fill design and permitting requirements in the permit application regulations in sections 780.35 and 784.19, rather than splitting them between those regulations and the performance standards in sections 816.71 and 817.71, as they were before the adoption of this rule. Also, as proposed, the final rule revises the rule language to remove inconsistencies between the performance standards and the permitting requirements, to eliminate redundancies, and to be more consistent with plain language principles.

The final rule adds paragraphs (a)(1) through (a)(4) to section 780.35 to establish environmentally-oriented requirements for permit applications for operations that propose to generate excess spoil. In the remainder of this part of the preamble, we discuss those and other provisions of the final rule and the comments received on their counterparts in the proposed rule.

2. Final Paragraphs (a)(1) and (a)(2)

Paragraph (a)(1) of section 780.35 provides that each application for an operation that would generate excess spoil must include a demonstration, prepared to the satisfaction of the regulatory authority, that the operation has been designed to minimize the volume of excess spoil to the extent possible, thus ensuring that as much spoil as possible is returned to the mined-out area. The demonstration must take into consideration applicable regulations concerning restoration of the approximate original contour, safety, stability, and environmental protection and the needs of the proposed postmining land use. Some or all of those factors may limit the amount of spoil that can be returned to the mined-out area, especially the requirements related to safety, stability, and postmining land use. Also, if the regulatory authority does not approve the proposed postmining land use, the applicant and the regulatory authority will need to revisit the demonstration to determine whether it must be revised to reflect the needs and attributes of the postmining land use that is finally approved.

Paragraph (a)(2) of section 780.35 requires that the application include a demonstration that the designed maximum cumulative volume of all proposed excess spoil fills within the permit area is no larger than the capacity needed to accommodate the anticipated cumulative volume of excess spoil that the operation will generate.

The goal of both paragraphs (a)(1) and (a)(2) is to minimize fill footprints and thus minimize disturbances of forests, perennial and intermittent streams, and riparian vegetation, consistent with the requirement in sections 515(b)(24) and 516(b)(11) of SMCRA to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible using the best technology currently available.

Since the mid-1990's, the extent of excess spoil fill construction in central Appalachia has been controversial, especially when fills bury stream segments. As part of our oversight activities, we conducted studies in 1999 in Kentucky, Virginia, and West Virginia to determine how state regulatory authorities were administering SMCRA regulatory programs regarding restoration of approximate original contour. From our review of permit files and reclaimed mines, we determined that, typically, some of the spoil placed in excess spoil fills could have been retained on or returned to mined-out areas. See ''An Evaluation of Approximate Original Contour and Postmining Land Use in Kentucky'' (OSM, September 1999); ''An Evaluation of Approximate Original Contour Variances and Postmining Land Uses in Virginia'' (OSM, September 1999); and ''Final Report: An Evaluation of Approximate Original Contour and Postmining Land Use in West Virginia'' (OSM, May 1999).

In many instances, we found that the permit application overestimated the anticipated volume of excess spoil that the operation would produce. In addition, fills were designed and constructed larger than necessary to accommodate the anticipated excess spoil, which resulted in the unnecessary disturbance of additional land. Kentucky, Virginia, and West Virginia worked with us to develop enhanced guidance on material balance determinations, spoil management, and approximate original contour determinations to correct these problems to the extent feasible under the existing regulations. We also developed guidance for use under the Tennessee Federal regulatory program. In most cases, the regulatory authorities in those states have adopted policies based on that guidance for use in reviewing permit applications.

Some industry commenters opposed the new excess spoil minimization requirements, citing the preceding discussion as evidence that the policies appear to be satisfactorily addressing any past issues and that there is no longer any problem that would justify rulemaking. Other industry commenters supported these provisions to the extent that they codify policies that are working in the central Appalachian states.

We believe that adoption of proposed paragraphs (a)(1) and (a)(2) as final rules is appropriate because policies are subject to change. The final rules that we are adopting today reinforce the basis for the policies in place in Kentucky, Tennessee, Virginia, and West Virginia. They also strengthen the enforceability of decisions based on those policies and provide national consistency by ensuring that certain basic requirements will be applied nationwide, including in those states that have not adopted policies. We also believe that the environment, the public, and the regulated community are best served by the adoption of national regulations to clarify environmental considerations concerning the generation and disposal of excess spoil.

3. Final Paragraph (a)(3)

As proposed, paragraph (a)(3) of section 780.35 would have required that each application include a description of all excess spoil disposal alternatives considered and an analysis of the environmental impacts of those alternatives. In the final rule, we extensively revised and reorganized paragraph (a)(3) in response to the many comments that we received on this portion of the proposed rule.

Discussion of General Comments Received on Proposed Paragraph (a)(3)

Industry commenters strongly opposed the requirement in proposed paragraph (a)(3) for an analysis of alternatives for excess spoil fills. The commenters cited a variety of reasons, including excessive costs, delays in permitting, duplication of effort with the Clean Water Act, the probable lack of environmental benefits, the potential for conflict between the SMCRA

regulatory authority's application of the alternatives analysis requirement and the approach adopted by the Clean Water Act permitting authority, a lack of justification under SMCRA, exceeding the intent of SMCRA, and a fear that this requirement could result in a never-ending cycle of analysis and litigation concerning whether the correct alternative was selected by the permit applicant and approved by the state regulatory authority. Many commenters stated that the requirement for an alternatives analysis has no basis in SMCRA and instead appears to be a mixture of provisions borrowed from the National Environmental Policy Act and the Clean Water Act.

Nothing in the proposed alternatives analysis requirement in paragraph (a)(3) of sections 780.35 and 784.19 of the final rule is based upon the National Environmental Policy Act. We respectfully disagree with those commenters who argued that the requirement for an alternatives analysis is a Clean Water Act requirement that has no basis or justification under SMCRA and that exceeds the intent of SMCRA. We acknowledge that we derived this element of our proposed rules from the alternatives analysis requirements of the 404(b)(1) Guidelines in 40 CFR part 230, which include the substantive environmental criteria used in evaluating activities regulated under section 404 of the Clean Water Act. However, we concluded that a modified version of the alternatives analysis requirements in the 404(b)(1) Guidelines is an appropriate means of obtaining the background data and analyses that both the applicant and the regulatory authority need to make informed decisions concerning compliance with the requirements of sections 515(b)(24) and 516(b)(11) of SMCRA, which provide that surface coal mining and reclamation operations must be conducted to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available. Therefore, paragraphs (a)(3)(ii) and (a)(3)(iii) of sections 780.35 and 784.19 of this final rule apply the alternatives analysis requirement to all applications that propose to place excess spoil in or within 100 feet of a perennial or intermittent stream. In addition, paragraph (a)(3)(iii)(A) of these sections of the final rule applies more detailed analytical requirements to applications that propose to place excess spoil in perennial or intermittent streams as opposed to applications that propose to place excess spoil only within 100 feet of those streams.

One commenter stated that the rule should not require an alternatives analysis when the permit applicant proposes to use excess spoil to reclaim benches and highwalls on abandoned mine lands. Alternatively, the commenter suggested that any reasonably possible alternative that consisted solely of placement on abandoned mine benches should be deemed the alternative with the least overall adverse environmental impact. We interpret these comments as referring to excess spoil fills constructed on preexisting benches under 30 CFR 816.74 and 817.74. We encourage the use of excess spoil to reclaim abandoned mine lands, but we do not agree that applications proposing to use excess spoil for that purpose should be exempt from compliance with the alternatives analysis requirements of paragraph (a)(3). Perennial and intermittent streams merit special consideration regardless of whether those streams flow through undisturbed land or abandoned mine lands. Also, abandoned mine lands vary widely in quality, so we do not agree that an alternative proposing to place excess spoil only on abandoned mine lands should be deemed the alternative with the least overall adverse impact on fish, wildlife, and related environmental values. However, the alternatives analysis requirement applies only if the applicant proposes to place excess spoil in or within 100 feet of a perennial or intermittent stream. When constructing fills on preexisting benches, there is a distinct possibility that the requirement will not apply at all because there may be no perennial or intermittent streams within 100 feet of the benches.

A few commenters criticized the analysis of alternatives provisions of the proposed rule because they did not completely parallel the requirements of the 404(b)(1) Guidelines in 40 CFR part 230. At least one commenter recommended that we incorporate the 404(b)(1) Guidelines by reference. We do not find this recommendation appropriate because the 404(b)(1) Guidelines are designed to implement the Clean Water Act, while our regulations implement SMCRA and must be based upon SMCRA requirements. Under section 702(a) of SMCRA, nothing in SMCRA may be construed as amending, modifying, repealing, or superseding any Clean Water Act requirement. However, there is also nothing in SMCRA that would compel or authorize us to adopt regulations that parallel or incorporate Clean Water Act requirements.

SMCRA and the Clean Water Act provide for separate regulatory programs with different purposes and very different permitting requirements and procedures. In addition, as other commenters noted, SMCRA and the Clean Water Act differ considerably with respect to jurisdiction. The Clean Water Act focuses on regulating discharges of pollutants into waters of the United States, whereas SMCRA regulates a broad universe of environmental and other impacts of surface coal mining and reclamation operations, including impacts on water quantity, water quality, and terrestrial and aquatic ecosystems. We encourage coordination and cooperation between the SMCRA regulatory authority and the agencies administering the Clean Water Act. See the memorandum of understanding entitled ''Memorandum of Understanding among the U.S. Army Corps of Engineers, the U.S. Office of Surface Mining, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service for the Purpose of Providing Concurrent and Coordinated Review and Processing of Surface Coal Mining Applications Proposing Placement of Dredged and/or Fill Material in Waters of the United States,'' which took effect February 8, 2005, and the provisions of this final rule that authorize the SMCRA regulatory authority to accept an analysis of alternatives completed for Clean Water Act purposes as meeting the requirements for an analysis of alternatives under this final rule, when and to the extent appropriate. However, we believe that maintaining the distinction between the SMCRA regulatory program and Clean Water Act programs is both administratively and legally appropriate. That conclusion is supported by the comments that we received from both industry and state regulatory authorities.

Many industry commenters, supported by some, but not all, state regulatory authority commenters, stated that the proposed alternatives analysis requirement would introduce a major new element of uncertainty, and result in costly and wasteful duplication of effort on the part of permit applicants and state regulatory authorities. The commenters stated that this element of our proposed rule was inconsistent with our statement in the preamble to that rule that a primary reason for the rulemaking was to provide improved clarity and reduction of uncertainty regarding the meaning of the regulations. One commenter stated that at best the alternatives analysis requirement ''adds yet another layer of

redundant paperwork and analysis as it duplicates the federally-administered 404 process. At worst, OSM has set the stage for conflicts between the section 404 program and the largely state-implemented SMCRA programs.'' The commenter further stated that by imposing an alternatives analysis requirement on state regulatory authorities, we are ''flirting dangerously'' with creating conflicting alternatives analyses because ''the goals and objectives of SMCRA and corresponding state statutes may be different than those of the Corps and EPA under section 404.''

While we understand the commenters' apprehensions, these comments are speculative in nature. There may be some initial uncertainty as regulatory authorities establish procedures and criteria for implementing the alternative analysis requirements and determining least overall adverse impact on fish, wildlife, and related environmental values under this rule, but that uncertainty should subside once those procedures and criteria are in place.

The Interstate Mining Compact Commission, writing on behalf of member state regulatory authorities, argued that the alternatives analysis requirement is duplicative of requirements under the Clean Water Act that are already encompassed by the SMCRA permitting scheme. As discussed elsewhere in this preamble, we believe that the alternatives analysis requirement that we are adopting as part of this final rule differs from and serves a somewhat different purpose than the alternatives analysis requirement under the regulations and other documents implementing section 404 of the Clean Water Act. To the extent that duplication may exist, we encourage states to coordinate the processing of coal mining permit applications with the U.S. Army Corps of Engineers in accordance with a memorandum of understanding entitled ''Memorandum of Understanding among the U.S. Army Corps of Engineers, the U.S. Office of Surface Mining, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service for the Purpose of Providing Concurrent and Coordinated Review and Processing of Surface Coal Mining Applications Proposing Placement of Dredged and/or Fill Material in Waters of the United States,'' which took effect February 8, 2005. In addition, this final rule authorizes the SMCRA regulatory authority to accept an analysis of alternatives completed for Clean Water Act purposes as meeting the requirements for an analysis of alternatives under this final rule, when and to the extent appropriate.

The Commission and some, but not all, commenters representing individual state regulatory authorities also opposed the alternatives analysis requirement in the proposed rule because of state fiscal constraints and fear of the ''potentially overwhelming'' time and effort that would be required for state permitting personnel to adequately review and analyze alternatives.

We anticipate that few, if any, state regulatory authorities will experience a significant increase in demands on their resources as a result of the alternatives analysis requirement in the final rule. West Virginia, one of the states most impacted by the rule, supported the proposed rule. Kentucky, another state that would be significantly impacted, estimated that, on average, the new requirement would add ten hours to the time required to process a permit application. We believe that the intangible environmental benefits of the rule (increased scrutiny of efforts to minimize adverse impacts on fish, wildlife, and related environmental values associated with perennial and intermittent streams) will outweigh what we anticipate will be a modest increase in demand on state regulatory authority resources.

The U.S. Fish and Wildlife Service requested that we work with the Service to build a process into the alternative analysis requirements in the final rule to protect unique and high value fish and wildlife resources. In response, we note that our fish and wildlife protection rules at 30 CFR 816.97(f) and 817.97(f) already require that the operator ''avoid disturbances to, enhance where practicable, or restore habitats of unusually high value for fish and wildlife.'' In addition, our permitting rules at 30 CFR 780.16 and 784.21 provide a role for the Service in determining fish and wildlife data collection requirements and reviewing the fish and wildlife protection plan in the permit application. Therefore, addition of the provision requested by the Service is not necessary.

Discussion of Specific Provisions of Final Paragraph (a)(3)

In the final rule, the first sentence of paragraph (a)(3) provides that the permit applicant must design the operation to avoid placement of excess spoil in or within 100 feet of perennial and intermittent streams to the extent possible. We added this provision in response to EPA concerns and numerous comments urging greater protection for headwater streams because of their ecological importance and contribution to the function of the stream as a whole. In effect, the new sentence identifies avoiding placement of excess spoil in or within 100 feet of perennial or intermittent streams as the preferred method of complying with the SMCRA requirement to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values with respect to those streams. That is, whenever avoidance of disturbance is reasonably possible, the final rule establishes avoidance as the best technology currently available to comply with the provisions of sections 515(b)(24) and 516(b)(11) of SMCRA, which require minimization of disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible using the best technology currently available. This provision of the final rule is consistent with our stream buffer zone rules at 30 CFR 816.57 and 817.57, which establish maintenance of an undisturbed buffer for perennial and intermittent streams as the best technology currently available to meet the requirements of sections 515(b)(24) and 516(b)(11) of SMCRA, provided maintenance of an undisturbed buffer is reasonably possible.

However, the final rule does not and cannot mandate avoidance in all cases for all stream segments. The provisions of SMCRA underlying this rule require minimization of disturbances and adverse impacts on fish, wildlife, and related environmental values only ''to the extent possible.'' Avoiding disturbance of the stream and maintenance of an undisturbed buffer zone for that stream is the ultimate means of minimizing adverse impacts on fish, wildlife, and related environmental values and hence is the default best technology currently available to comply with the statutory minimization requirement. However, there is sometimes no alternative to the construction of excess spoil fills in perennial or intermittent streams and their buffer zones if the proposed surface coal mining operation is to be viable. Prohibiting the construction of excess spoil fills would in effect preclude coal recovery in those situations. Under those circumstances, SMCRA—and hence this final rule—do not require avoidance of disturbance because avoidance is not reasonably possible. Instead, the applicant must propose other methods of complying with the minimization requirement that are consistent with the proposed surface coal mining operations. We do not interpret SMCRA as authorizing us to prohibit surface coal mining operations

in situations other than those specifically set forth in the Act. However, SMCRA does not override prohibitions that apply under other laws and regulations, so we will also recognize those prohibitions in reaching a decision on a permit application.

As proposed, paragraph (a)(3) would have required an alternatives analysis for all operations that propose to generate excess spoil. In response to comments citing the probable lack of environmental benefits of the proposed alternatives analysis requirement and the burden that it would impose, we have reconsidered this requirement and paragraph (a)(3) of the final rule restricts the alternatives analysis requirement to those situations in which the applicant proposes to place excess spoil in or within 100 feet of a perennial or intermittent stream. We believe that this restriction is appropriate because those lands are likely to be the most significant in terms of fish, wildlife, and related environmental values. In addition, this limitation may facilitate coordination with permitting requirements under section 404 of the Clean Water Act, which apply whenever a permit applicant proposes to place fill material in waters of the United States.

Paragraph (a)(3)(i) of the final rule requires that the permit applicant explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of excess spoil in or within 100 feet of a perennial or intermittent stream is not reasonably possible. We added this requirement to reinforce the provision in paragraph (a)(3) of the final rule establishing avoidance of placement of excess spoil in or within 100 feet of a perennial or intermittent stream, whenever avoidance is reasonably possible, as the best technology currently available to comply with the statutory requirement for minimization of disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible using the best technology currently available.

Paragraph (a)(3)(ii) of the final rule provides that, if the permit applicant is unable to design the operation to avoid placement of excess spoil in or within 100 feet of a perennial or intermittent stream, the application must identify a reasonable range of alternatives that vary with respect to the number, size, location, and configuration of proposed excess spoil fills. A number of commenters on the proposed rule expressed concern that the requirement to identify a reasonable range of alternatives was too vague and could be interpreted as requiring an unlimited number of alternatives, including those that have no possibility of being implemented. In response to this concern, we have added language clarifying that paragraph (a)(3)(ii) does not require identification of all potential alternatives and that only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values (either in degree or in watersheds affected) need be identified and considered. The latter provision is consistent with the policies to which EPA and the Corps adhere in implementing section 404 of the Clean Water Act. See the EPA/COE memorandum entitled ''Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements.''

In response to commenters' concerns, we also added language to paragraph (a)(3)(ii) of the final rule specifying that an alternative is reasonably possible if it conforms to the safety, engineering, design, and construction requirements of the regulatory program; is capable of being done after consideration of cost, logistics, and available technology; and is consistent with the coal recovery provisions of sections 816.59 and 817.59. In other words, nothing in the rule should be construed as elevating environmental concerns over safety considerations, as prohibiting the conduct of surface coal mining operations that are not otherwise prohibited under SMCRA or other laws or regulations, or as requiring consideration of unreasonably expensive or technologically infeasible alternatives.

The portion of this rule that refers to ''consideration of cost, logistics, and available technology'' is derived from the EPA regulations at 40 CFR 230.10(a)(2), which define a practicable alternative for purposes of section 404 of the Clean Water Act. In interpreting this provision, the EPA/COE memorandum entitled ''Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements'' states that ''[t]he determination of what constitutes an unreasonable expense should generally consider whether the projected cost is substantially greater than the costs normally associated with this particular type of project.'' We have included similar language in paragraph (a)(3)(ii)(B) of the final rule because (1) the concept of a practicable alternative for purposes of section 404 of the Clean Water Act is in some ways analogous to the determination of reasonably possible alternatives under this rule, and (2) the principle is consistent with the phrase ''to the extent possible'' in sections 515(b)(24) and 516(b)(11) of SMCRA. See Part VI.D. of this preamble for a more extensive discussion of the rationale for our use of the term ''reasonably possible'' and its consistency with statutory provisions.

The final rule does not include the provision in paragraph (a)(3)(iii) of the proposed rule stating that the least costly alternative may not be selected at the expense of environmental protection solely on the basis of cost. One commenter objected to the proposed provision as being too extreme and subject to misinterpretation, noting that there may be situations in which cost could and should be the determining factor. We agree. Nothing in SMCRA would compel adoption of this provision. In lieu of this provision, we have added language to paragraph (a)(3)(ii)(B) of the final rule clarifying that the fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. We believe that the revised language is more consistent with sections 515(b)(24) and 516(b)(11) of SMCRA, which require use of the best technology currently available, but only to the extent possible.

Paragraph (a)(3)(iii) of the final rule provides that any application proposing to place excess spoil in or within 100 feet of a perennial or intermittent stream must include an analysis of the impacts of the alternatives identified in paragraph (a)(3)(ii) on fish, wildlife, and related environmental values. The analysis must consider impacts on both terrestrial and aquatic ecosystems. For example, depending on the topography and geology of the area, the analysis could compare the impacts of constructing a few large excess spoil fills versus a greater number of small fills, as well as the relative impacts of concentrating fills in one or a few watersheds as opposed to placing them in multiple watersheds. In addition, the quality of the receiving waters must be taken into consideration in that it may be environmentally preferable to concentrate fills and their impacts in watersheds with the lowest water quality, to the extent that it is possible to do so.

Paragraph (a)(3)(iii)(A) of the final rule provides that, for every alternative that proposes placement of excess spoil in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed fill, including seasonal variations in

temperature and volume, changes in stream turbidity or sedimentation, the degree to which the excess spoil may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream. As discussed below, this paragraph of the final rule includes a number of changes from the proposed rule as a result of the comments that we received on the proposed rule.

One commenter on a virtually identical provision in the proposed coal mine waste disposal rules stated that—

> [T]he components of an alternatives analysis for a coal mine disposal activity, as set forth in proposed 30 CFR 784.16(d)(1)(ii), should be subdivided for clarity and certain of the components should be reconsidered in terms of their purpose or value. As written, 30 CFR 784.16(d)(1)(ii) requires ''* * * an evaluation of short-term and long-term impacts on the aquatic ecosystem, both individually and on a cumulative basis'' and goes on to specify that the evaluation ''must consider impacts on the physical, chemical, and biological characteristics of downstream flow, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the coal mine waste may introduce or increase contaminants, the effects on aquatic organisms and the extent to which wildlife is dependent upon those organisms.'' As strung together, these requirements create a number of ambiguities, which will lead to problems in interpretation. The list also includes terms that have no recognized meaning, such as ''biological characteristics of downstream flows.'' In addition to these ambiguities, this section also requires assessments that are new to the regulation of mining activities, including assessments of the effects of turbidity and of secondary impacts on wildlife that may be dependent on aquatic organisms in a potentially affected water body. In the absence of commonly recognized guidelines, the results of these assessments will be virtually impossible to validate.

We have revised the rule to replace the potentially confusing phrase ''biological characteristics of downstream flows'' with clearer language requiring information on the biological characteristics of the stream downstream of the proposed excess spoil fill. See paragraph (a)(3)(iii)(A) of final sections 780.35 and 784.19. We also replaced the requirement for an evaluation of the extent to which wildlife is dependent upon aquatic organisms with a requirement for an evaluation of the effects of the proposed operation on wildlife that is dependent upon the stream.

In addition, we decided not to adopt the portion of proposed paragraph (a)(3)(ii) requiring that the analysis include an evaluation of the short-term and long-term impacts of each alternative on the aquatic ecosystem, both individually and on a cumulative basis. This proposed requirement is subsumed within the other analytical requirements of the final rule and would not likely result in the submission of any meaningful additional information.

However, we did not make further changes in response to this comment because the commenter did not explain how the requirements should be subdivided for clarity or why or how they create ambiguity. With respect to the commenter's statement that the assessments required by this rule will be impossible to validate in the absence of commonly recognized guidelines, we believe that the commenter may have misunderstood the purpose of the evaluation required by this rule. The data and analyses required by this rule are intended only to facilitate comparisons of the relative impacts of various alternatives on fish, wildlife, and related environmental values, not to establish reclamation standards. To the extent that the commenter may have meant that there are no generally accepted protocols for evaluating some of the listed characteristics, we believe that regulatory authorities have the technical capability to develop any needed protocols specific to conditions within their states.

One state regulatory authority urged us to revise the rule to include consideration of impacts such as traffic, dust and noise on local residents who may be affected by a proposed operation. While we encourage permit applicants to consider these factors in designing their operations, we do not consider them to be disturbances or adverse impacts on fish, wildlife, and related environmental values within the context of sections 515(b)(24) and 516(b)(11) of SMCRA. Therefore, we are not including those factors as required components of the alternatives analysis under paragraph (a)(3)(iii) of the final rule.

Paragraph (a)(3)(iii)(B) of the final rule allows the applicant to submit an analysis of alternatives prepared under 40 CFR 230.10 for Clean Water Act purposes in lieu of the analysis of impacts on fish, wildlife, and related environmental values required under paragraph (a)(3)(iii)(A) of the final rule. The regulatory authority will determine the extent to which that analysis satisfies the requirements of paragraph (a)(3)(iii)(A) of the final rule. These provisions of the final rule are similar to their counterparts in the proposed rule.

One commenter expressed dismay that the rule did not require that the regulatory authority accept the Clean Water Act analysis of alternatives as fully meeting the requirements of this rule. We do not believe that addition of this requirement to our rules would be appropriate because the alternatives analysis required under the final rule must address all environmental impacts (both aquatic and terrestrial) of surface coal mining and reclamation operations, whereas the analysis of alternatives required under Clean Water Act regulations focuses on impacts to waters of the United States. However, under the final rule, the SMCRA regulatory authority has the discretion to determine that an analysis of alternatives conducted for Clean Water Act purposes satisfies the requirements for an analysis of alternatives under this final rule, in whole or in part, as appropriate.

Paragraph (a)(3)(iv) of the final rule requires selection of the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems, to the extent possible. The proposed rule included an additional sentence specifying that if the applicant proposes to select a different alternative, the applicant must demonstrate, to the satisfaction of the regulatory authority, why implementation of the more environmentally protective alternative is not possible. The final rule does not include this sentence because we have determined that it is neither needed nor appropriate in view of the other changes that we have made to the rule. Specifically, we have added language to paragraph (a)(3)(ii) of the final rule limiting the alternatives that the applicant must identify to only those alternatives that are reasonably possible. In addition, we have added paragraph (a)(3)(i), which requires that the permit applicant explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of excess spoil in or within 100 feet of a perennial or intermittent stream is not reasonably possible. The combination of these two changes means that the sentence in the proposed rule is no longer logical or appropriate because the only alternatives considered under the final rule are those that are reasonably possible, which means that, within the universe of reasonably possible alternatives identified, the applicant must select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values. In other words, the sentence in the proposed rule no longer has any relevance or meaning because, under the final rule, the applicant does not

have the option of proposing alternatives that are not reasonably possible. Given that change, the final rule provides that the applicant must select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values.

Some commenters requested that we define or explain the term ''least overall adverse environmental impact.'' We do not believe that a meaningful definition is possible, given the somewhat subjective nature of the term and the site-specific nature of determinations under this rule. We expect that persons preparing permit applications and regulatory authority personnel reviewing those applications will use their best professional judgment in applying the requirements of this paragraph of the rule. Consistent with the commonly accepted meaning of the words ''overall'' and ''environmental,'' we have modified the rule to clarify that the scope of the term includes impacts to terrestrial ecosystems, not just impacts to water quality and aquatic ecosystems. The relative importance of these three components, as well as the constituents of each of those components, will vary from site to site. Therefore, they are not readily defined in a national rule. However, we have replaced the term ''least overall adverse environmental impact'' in the proposed rule with the term ''least overall impact on fish, wildlife, and related environmental values'' to be consistent with the terminology that appears in the underlying statutory provisions at sections 515(b)(24) and 516(b)(11) of SMCRA and to provide greater clarity.

EPA encouraged both permit applicants and SMCRA regulatory authorities to use a watershed approach in determining which alternative would have the least overall adverse impact on fish, wildlife, and related environmental values:

> A watershed approach expands the informational and analytic basis of site selection decisions to ensure impacts are considered on a watershed scale rather than only project by project. The idea being locational factors (e.g., hydrology, surrounding land use) are important to evaluating the indirect and cumulative impacts of the project. Watershed planning efforts can identify and prioritize where preservation of existing aquatic resources are important for maintaining or improving the quality (and functioning) of downstream resources. The objective of this evaluation is to maintain and improve the quantity and quality of the watershed's aquatic resources and to ensure water quality standards (numeric and narrative criteria, anti-degradation, and designated uses) are met in downstream waters.
>
> Permit applicants should work with federal and state regulatory authorities to identify appropriate and available information, such as existing watershed plans, or in the absence of such plans, existing information on current watershed conditions and needs, past and current mining (and other development) trends, cumulative impacts of past, present, and reasonable foreseeable future mining activities, and chronic environmental problems (e.g., poor water quality, CWA 303(d)—listed streams, etc.) in the watershed. The regulatory authorities can also provide information on the appropriate watershed scale to consider. The level of data and analysis for implementing a watershed approach should be commensurate with the scale of the project, to the extent appropriate and reasonable.

We agree that the analysis of potential alternatives required under paragraph (d)(1)(ii) should appropriately consider the overall condition of the aquatic resources in the watershed, including any impacts from previous mining activities.

4. Proposed Paragraph (a)(4)

Proposed paragraph (a)(4) of section 780.35 provided that each application for an operation that will generate and dispose of excess spoil must describe the steps to be taken to avoid the adverse environmental impacts that may result from the construction of excess spoil fills or, if avoidance is not possible, to minimize those impacts. The preamble to the proposed rule explained that this requirement applied to construction, maintenance, and reclamation of the alternative selected under proposed paragraph (a)(3)(iii).

EPA recommended that we revise the rule to incorporate the concepts of avoidance and minimization of adverse environmental impacts into the alternatives analysis required by proposed paragraphs (a)(3)(i) and (ii) rather than placing them in a separate paragraph. EPA stated that the intended purpose of the alternatives analysis is to determine the means by which excess spoil could be disposed of with the least adverse environmental impact. EPA further recommended removal of the preamble language in the proposed rule that specified that the avoidance and minimization requirements in proposed paragraph (a)(4) only applied to the alternative selected under proposed paragraph (a)(3)(iii). According to EPA, these changes would reduce potential uncertainty regarding the appropriate factors to consider in the alternatives analysis and would reinforce the requirement to evaluate different project locations and design elements when assessing the viability and environmental impacts of each location.

After considering these comments and the changes that we made to paragraph (a)(3) in the final rule, we have decided not to adopt proposed paragraph (a)(4) because provisions of that paragraph are now redundant and unnecessary. Under 30 CFR 816.97(a) and 817.97(a), the operator must, to the extent possible, using the best technology currently available, minimize disturbances and adverse impacts on fish and wildlife and related environmental values and must achieve enhancement of those resources where practicable. Paragraph (f) of 30 CFR 816.97 and 817.97 provides that the operator must avoid disturbances to, enhance where practicable, restore, or replace wetlands and riparian vegetation along rivers and streams and bordering ponds and lakes. That paragraph also requires that the operator avoid disturbances to, enhance where practicable, or restore habitats of unusually high value for fish and wildlife. Paragraph (b)(1) of 30 CFR 780.16 and 784.21 requires that the fish and wildlife protection and enhancement plan in the permit application be consistent with the requirements of 30 CFR 816.97 and 817.97, respectively. Therefore, proposed paragraph (a)(4) would not add any requirements that are not already found in 30 CFR 816.97 and 817.97.

In addition, as revised in the final rule, paragraph (a)(3) of section 780.35 provides that permit applicants should design their operations to avoid placement of excess spoil in or within 100 feet of a perennial or intermittent stream to the extent possible. This new provision establishes avoidance of disturbance of perennial and intermittent streams and their buffer zones as the best technology currently available to comply with the requirement under sections 515(b)(24) and 516(b)(11) of SMCRA to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values. However, the statutory minimization requirement applies only ''to the extent possible,'' and, given the realities of geology (which dictates where coal is located), topography, and mining mechanics and economics, it is not always possible to implement the ultimate form of minimization, which is avoidance of disturbances, and still conduct surface coal mining operations. Consequently, paragraph (a)(3) of the final rule requires that the applicant avoid disturbance only to the extent possible. Paragraph (a)(3)(i) of the revised final rule provides that, when a permit applicant proposes to place excess spoil in or within 100 feet of a perennial or intermittent stream, the applicant must explain, to the satisfaction of the regulatory authority,

why an alternative that does not involve placement of excess spoil in or within 100 feet of a perennial or intermittent stream is not reasonably possible. Therefore, adoption of proposed paragraph (a)(4) is no longer appropriate because, as revised, paragraph (a)(3) of the final rule requires consideration of avoidance as part of the alternatives analysis and selection process.

In the preamble to the proposed rule, we stated that we anticipated that the steps mentioned in proposed paragraph (a)(4) would include provisions in the operation plan to require that, when consistent with prudent engineering practice and applicable regulatory requirements, excess spoil placement begin at the highest elevation of the planned fill and proceed down the valley to the toe of the fill, thus minimizing both impacts to waters of the United States and the area affected in the event that the full design capacity of the fill is not needed because of changes in mining plans or other reasons. We requested comment on whether this approach should be incorporated into the rule language.

We received very few comments and those that we did receive were split on this question. In this final rule, we have decided against endorsing or adopting a ''top-down'' construction requirement because the technique raises serious stability issues. In addition, it would be inconsistent with provisions in the West Virginia Code of State Regulations (CSR) adopted to address fill stability problems that the state encountered. West Virginia requires that all durable rock fills either be constructed from the toe up as provided by CSR 38–2–14.14.g.3 or that an erosion protection zone be established below the toe of the single-lift fill in accordance with CSR 38–2–14.14.g.2. That zone is a flat area of durable rock equal in length to half the height of the fill. The height of the erosion protection zone must be sufficient to accommodate designed flow from the underdrain of the fill. Because section 515(b)(22) of the Act focuses on stability considerations in the disposal of excess spoil, we do not believe that it would be appropriate to adopt a regulation that could be in conflict with existing state program requirements intended to ensure fill stability and protect downstream residents and structures. Furthermore, top-down construction is feasible only for durable rock fills under 30 CFR 816.73 and 817.73 and not all excess spoil qualifies for placement under those sections of our rules. Other regulations that we are adopting today as part of sections 780.35(a)(1) and (a)(2) and 784.19(a)(1) and (a)(2) require that operations be designed both to minimize the creation of excess spoil and in a manner that ensures that the cumulative volume of all proposed excess spoil fills does not exceed the capacity needed to accommodate the anticipated amount of excess spoil that the operation will produce. We believe that those provisions should be adequate to minimize the areas affected by excess spoil disposal.

5. Final Paragraph (a)(4)

Final paragraph (a)(4), which appeared as paragraph (a)(5) in the proposed rule, requires that each application for an operation that proposes to generate excess spoil include maps and cross-section drawings showing the location of all proposed disposal sites and structures. It also requires that fills be located on the most moderately sloping and naturally stable areas available, unless the regulatory authority approves a different location based upon the alternatives analysis under paragraph (a)(3) or on other requirements of the Act and regulations. Whenever possible, fills must be placed upon or above a natural terrace, bench, or berm if that location would provide additional stability and prevent mass movement. The final rule differs slightly from the proposed rule in that we have revised the wording to clarify that if the regulatory authority approves a different location, that decision must be based upon the alternatives analysis under paragraph (a)(3) or on other requirements of the Act and regulations The wording of the proposed rule was subject to misinterpretation because it allowed approval of a different location based upon the alternatives analysis ''or other factors, taking into account other requirements of the Act and regulations.''

The requirement for maps and cross-section drawings formerly appeared as part of the first sentence of paragraph (a) of section 780.35, while the fill location requirements formerly appeared in 30 CFR 816.71(c). Those location requirements are more logically included as part of the planning and design requirements in the permitting regulations rather than as part of the performance standards. As formerly codified in 30 CFR 816.71(c), the rule required that fills be located on the most moderately sloping and naturally stable areas available. However, as proposed, the final rule allows the regulatory authority to approve different locations, based upon the analysis of alternatives required under proposed paragraph (a)(3) of section 780.35 or on other requirements of the Act and regulations. This change is needed to ensure that the analysis of alternatives and consideration of impacts on fish, wildlife, and related environmental values are a meaningful part of the site selection process. The change is consistent with section 515(b)(22)(E) of SMCRA, which requires that excess spoil be placed ''upon the most moderate slope among those upon which, in the judgment of the regulatory authority, the spoil could be placed in compliance with all the requirements of the Act.'' One of the requirements of the Act is the provision in section 515(b)(24) specifying that surface coal mining and reclamation operations must be conducted so as to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available. Implementation of that requirement may entail placement of spoil on slopes other than the most moderate ones available.

6. Final Paragraph (a)(5)

Final paragraph (a)(5), which appeared as paragraph (a)(6) in the proposed rule, requires that an application for an operation that would generate excess spoil include detailed design plans for each excess spoil disposal structure, prepared in accordance with the requirements of sections 780.35 and 816.71 through 816.74. These requirements correspond to a portion of the first sentence of the former version of section 780.35(a). As proposed, we have added language requiring compliance with the requirements of section 780.35 in recognition of the other revisions to that section. Paragraph (a)(5) also includes a requirement to design the fill and appurtenant structures using current prudent engineering practices and any additional design criteria established by the regulatory authority. This requirement is not new. It formerly appeared in the first sentence of 30 CFR 816.71(b)(1). As proposed, we are moving it to 30 CFR 780.35(a)(5) because it is a design requirement, not a performance standard.

7. Final Paragraph (a)(6)

Final paragraph (a)(6), which appeared as paragraph (a)(7) in the proposed rule, requires that the application include the results of a geotechnical investigation of each proposed excess spoil disposal site, with the exception of those sites at which spoil will be placed only on a preexisting bench under 30 CFR 816.74. This requirement formerly appeared in section 780.35(b). As proposed, final paragraph (a)(6) also includes the

requirement to conduct sufficient foundation investigations that formerly appeared in 30 CFR 816.71(d)(1). This shift is consistent with our effort to consolidate design requirements in the permitting rules rather than splitting them between the permitting rules and the performance standards. The foundation investigation is an element of the geotechnical investigation that is required for approval of a proposed excess spoil fill in a permit application.

8. Final Paragraph (a)(7)

Final paragraph (a)(7), which appeared as paragraph (a)(8) in the proposed rule, requires that each application include plans for the construction, operation, maintenance, and reclamation of all excess spoil disposal structures (fills) in accordance with the requirements of 30 CFR 816.71 through 816.74. This requirement corresponds to a similar provision formerly located in section 780.35(a). However, that provision included a requirement for plans for the ''removal, if appropriate, of the site and structures.'' Because excess spoil fills are permanent, it is not appropriate to include plans for their removal in the application. Consequently, as proposed, we have replaced the requirement for plans for removal of the fills with a requirement for plans for their reclamation, which would consist of final site preparation and revegetation consistent with the approved postmining land use.

9. Final Paragraph (a)(8)

Final paragraph (a)(8), which appeared as paragraph (a)(9) in the proposed rule, combines overlapping requirements formerly found in 30 CFR 780.35(c) and 816.71(d)(2) concerning application and design requirements for keyway cuts or rock-toe buttresses. We made no substantive changes in those requirements.

10. Final Paragraph (b)

As proposed, final paragraph (b) requires that the application include a certification by a qualified registered professional engineer experienced in the design of earth and rock fills that the design of all fills and appurtenant structures meets the requirements of section 780.35. This requirement formerly appeared in the second sentence of 30 CFR 816.71(b)(1). We have moved it to section 780.35 consistent with our effort to consolidate design requirements in the permitting rules rather than splitting them between the permitting rules and the performance standards. We made no substantive changes to this provision.

E. Section 784.19: Disposal of Excess Spoil (Underground Mines)

As proposed, we are revising section 784.19 to be consistent with the definition of coal mine waste in 30 CFR 701.5, which we adopted on September 26, 1983 (48 FR 44006). Among other things, that definition reclassified underground development waste as coal mine waste, which means that fills constructed of underground development waste must adhere to the requirements for refuse piles instead of the requirements applicable to excess spoil fills. At the same time that we adopted the definition of coal mine waste in 1983, we revised our performance standards at 30 CFR 817.71 through 817.74 to eliminate the language that combined underground development waste with excess spoil for purposes of performance standards for underground mines. Because the definition of coal mine waste includes underground development waste, the disposal of underground development waste is subject to the performance standards for refuse piles at 30 CFR 817.83 rather than the performance standards for the disposal of excess spoil that applied under the pre-1983 rules.

Prior to the adoption of today's final rule, the design requirements for fills in section 784.19 applied to both underground development waste and excess spoil, which means that the permitting requirements were inconsistent with the 1983 changes to the corresponding performance standards. We have revised section 784.19 to apply only to the disposal of excess spoil, consistent with the 1983 changes to our definitions and performance standards regarding coal mine waste. For the same reason, we removed all references to underground development waste and revised the section heading to read ''Disposal of excess spoil'' instead of ''Underground development waste.'' Under the final rule that we are adopting today, the disposal of underground development waste is now governed by the permitting requirements for refuse piles in 30 CFR 784.16.

As proposed, final section 784.19 parallels the language of section 780.35, which contains the permit application requirements for the disposal of excess spoil generated by surface mining activities. The previous rule incorporated those requirements by reference. Adding specific language in place of the cross-reference to section 780.35 makes this rule consistent with the pattern established in most of our other rules for surface and underground mines, in which the provisions for surface and underground mines are in separate parts, but are nearly identical except for cross-references and the type of operation to which they apply. In addition, adding specific language in place of the cross-reference to section 780.35 allows the incorporation of cross-references to the appropriate underground mining performance standards in part 817 rather than having to use the cross-references in section 780.35 to the surface mining performance standards in part 816.

A few commenters stated that, because of the limited amount of excess spoil generated by underground mines, we should use our authority under section 516(d) of SMCRA to develop less stringent permitting requirements for the disposal of that spoil. We decline to accept that recommendation. We find nothing unique about the type of excess spoil fills constructed as part of underground mining operations. The number of fills constructed as part of underground mining operations may be fewer than the number constructed as part of surface mines and the size of those fills may be smaller than those associated with surface mines, but that is not always true. In addition, we find no reason that fills associated with underground mines should be subject to lesser safety, stability, or environmental protection requirements than fills associated with surface mines.

Some industry commenters on the proposed rule also opposed the September 26, 1983, rule changes that classified underground development waste as coal mine waste and required that coal mine waste (including underground development waste) disposed of outside the mine workings and excavations be placed in accordance with 30 CFR 817.83, which contains the performance standards for refuse piles. The commenters argued that underground development waste should be treated as excess spoil, not coal mine waste. The commenters' objections are untimely. The definition of coal mine waste in 30 CFR 701.5 is now a matter of settled law, as is the removal of the applicability of the excess spoil performance standards at 30 CFR 817.71 through 817.73 to underground development waste. The performance standard at 30 CFR 817.81(a), which requires that coal mine waste disposed of outside the mine workings and excavations be placed in designated coal mine waste disposal areas within the permit area, also is settled law. The existing regulations at 30 CFR 817.71(i) allow coal mine waste to be placed in excess spoil fills with the approval of the regulatory authority,

but only if the waste is nontoxic and non-acid-forming and only if the waste is placed in accordance with 30 CFR 817.83 (the requirements for refuse piles).

Several commenters expressed concern that the 1983 rule's classification of underground development waste as coal mine waste could prohibit the use of underground development material for construction of face-up areas, support facilities, and other beneficial uses. Underground development waste is unlikely to be used for the construction of face-up areas because the face-up of the mine must be completed and construction of mine adits must begin before underground development waste would be produced. Perhaps the commenters are interpreting the 1983 rules as classifying material removed as part of the face-up of the underground mine as underground development waste. If so, the commenters are misreading those rules. Nothing in the definitions of coal mine waste or underground development waste classifies face-up materials as either coal mine waste or underground development waste. In addition, nothing in our existing rules or the rules that we are adopting today would prohibit the use of underground development waste for construction of support facilities or other mining-related uses, provided the use of the waste for those purposes complies with all regulatory program requirements applicable to those uses. The final rules that we are adopting today apply only to the permanent disposal of coal mine waste (including underground development waste), not to the temporary use of those materials for mining-related purposes. In other words, our excess spoil rules do not apply to the temporary storage of material removed during face-up of an underground mine if that material must be returned or regraded upon the completion of mining to restore the approximate original contour. The excess spoil rules apply only to permanent placement.

The rationale for the specific provisions concerning excess spoil that we are adopting as part of section 784.19 today is the same as the rationale for the changes to section 780.35 that we are also adopting as part of this final rule. See Part VIII.D. of this preamble for a discussion of those rules and the rationale for them, substituting section 516(b)(11) for references to section 515(b)(24) and replacing references to the surface mining performance standards in part 816 with references to the corresponding underground mining performance standards in part 817.

F. Sections 816.11 and 817.11: Signs and Markers

Prior to adoption of this final rule, the requirement that the operator mark buffer zones for perennial and intermittent streams appeared in both the stream buffer zone rules in sections 816.57(b) and 817.57(b) and the rules concerning signs and markers in sections 816.11(e) and 817.11(e). As proposed, we are consolidating our buffer zone marking requirements in sections 816.11(e) and 817.11(e). As revised, section 816.11(e), which applies to surface mines, provides that the boundaries of any buffer to be maintained between surface mining activities and perennial or intermittent streams in accordance with sections 780.28 and 816.57(a) must be clearly marked to avoid disturbance by surface mining activities. Similarly, section 817.11(e), which applies to underground mines, provides that the boundaries of any buffer to be maintained between surface activities and perennial or intermittent streams in accordance with sections 784.28 and 817.57(a) must be clearly marked to avoid disturbance by surface operations and facilities resulting from or in connection with an underground mine.

We received no comments on these changes.

G. Sections 816.43 and 817.43: Diversions

Before adoption of this final rule, sections 816.43(b)(1) and 817.43(b)(1) provided that the regulatory authority may approve diversion of perennial and intermittent streams within the permit area after making the finding relating to stream buffer zones that the diversion will not adversely affect the water quantity and quality and related environmental resources of the stream. The referenced finding was the second part of the finding formerly located in sections 816.57(a)(1) and 817.57(a)(1).

As proposed, in this final rule we are replacing that finding with a provision that is more consistent with the underlying provisions of SMCRA. Sections 515(b)(10), 515(b)(24), 516(b)(9), and 516(b)(11) of SMCRA do not establish or authorize a ''will not adversely affect'' standard like the one formerly found in our stream buffer zone rules at 30 CFR 816.57(a)(1) and 817.57(a)(1). Section 515(b)(10) requires that surface coal mining and reclamation operations be conducted to ''minimize the disturbances to the prevailing hydrologic balance at the mine site and in associated offsite areas and to the quality and quantity of water in surface and ground water systems both during and after surface coal mining operations and during reclamation.''

Section 516(b)(9), which pertains to underground coal mining operations, contains similar language with the exception that it does not mention water quality. Sections 515(b)(24) and 516(b)(11) require that surface coal mining and reclamation operations be conducted to ''minimize disturbances and adverse impacts of the operation on fish, wildlife, and related environmental values'' ''to the extent possible using the best technology currently available.'' As demonstrated by these quotes, SMCRA establishes a minimization standard rather than an absolute ''will not adversely affect'' standard with respect to disturbance of the hydrologic balance and disturbances and adverse impacts on fish, wildlife, and related environmental values.

Consequently, we proposed to revise paragraph (b) of sections 816.43(b)(1) and 817.43(b)(1) to provide that the regulatory authority may approve the diversion of perennial and intermittent streams within the permit area if the diversion is located, designed, constructed, and maintained using the best technology currently available to minimize adverse impacts to fish, wildlife, and related environmental values to the extent possible. This provision is consistent with sections 515(b)(24) and 516(b)(11) of SMCRA. Nothing in this rule should be construed as superseding the performance standards for the protection of fish, wildlife, and related environmental values in 30 CFR 816.97 and 817.97 or the related permitting requirements at 30 CFR 780.16 and 784.21.

No counterpart to sections 515(b)(10) or 516(b)(9) is necessary because paragraph (a)(1) of sections 816.43 and 817.43, which applies to diversions of all types, including stream-channel diversions, already provides that ''[a]ll diversions shall be designed to minimize adverse impacts to the hydrologic balance within the permit and adjacent areas.'' Furthermore, paragraph (a)(2)(iii) of sections 816.43 and 817.43 requires that all diversions be designed, located, constructed, maintained, and used to prevent, to the extent possible, using the best technology currently available, additional contributions of suspended solids to streamflow outside the permit area.'' The language of that paragraph closely resembles the language of sections 515(b)(10)(B)(i) and 516(b)(9)(B) of the Act, which are two of the statutory provisions underlying the existing stream buffer zone rules. Furthermore, our permitting regulations

at 30 CFR 780.29 and 784.29 require that each permit application include a description of how stream-channel diversions and other diversions are to be constructed in compliance with 30 CFR 816.43 and 817.43, respectively.

In this final rule, we are adopting the proposed revisions to sections 816.43(b)(1) and 817.43(b)(1) with one editorial change. Instead of stating that the regulatory authority may approve the diversion of perennial and intermittent streams within the permit area if the diversion is located, designed, constructed, and maintained using the best technology currently available to minimize adverse impacts to fish, wildlife, and related environmental values to the extent possible, the final rule applies that provision only to the location and design of the diversion. This limitation is appropriate because those are the elements that would be included in the permit application. Construction and maintenance are more appropriately included in a separate performance standard, which we have accomplished by adding a sentence to the end of paragraph (b)(1) stating that the permittee must construct and maintain the diversion in accordance with the approved design.

The U.S. Fish and Wildlife Service stated that we were adopting a less protective standard by revising the standard from one that required a finding that ''the diversion will not adversely affect the water quantity and quality and related environmental resources of the stream'' to a requirement that the diversion use the best technology currently available to minimize adverse impacts to fish, wildlife, and related environmental values to the extent possible. We do not dispute this characterization. However, the new standard is one that reflects the provisions of SMCRA whereas the previous standard has no direct connection to SMCRA and is neither appropriate nor practicable. The Service recommended that we work with them to develop state or regional design standards that are practicable and effective. We accept this recommendation. We also intend to invite EPA to participate because that agency also expressed an interest in this process.

The last sentence of paragraph (a)(3) of sections 816.43 and 817.43 as published on September 26, 1983 (48 FR 43993), provides that ''[a] permanent diversion or a stream channel reclaimed after the removal of a temporary diversion shall be designed and constructed so as to restore or approximate the premining characteristics of the original stream channel including the natural riparian vegetation to promote the recovery and enhancement of the aquatic habitat.'' In the preamble to the proposed rule, we stated that the sentence pertained only to stream-channel diversions. Therefore, we proposed to move that sentence to paragraph (b) of sections 816.43 and 817.43 because those sections contain all other performance standards that pertain only to stream-channel diversions. As proposed, the final rule that we are adopting today inserts that sentence in revised form as paragraph (b)(4) of sections 816.43 and 817.43 and redesignates former paragraph (b)(4) as paragraph (b)(5).

However, EPA noted that the effect of the proposed changes would be to limit the requirements of that sentence to diversions of perennial and intermittent streams, thus excluding diversions of ephemeral streams. EPA stated that nothing in the existing rules limited the scope of the last sentence of paragraph (a)(3) to perennial and intermittent streams. While supporting new paragraph (b)(4), EPA urged us to also retain the last sentence of paragraph (a)(3) in paragraph (a) to ensure that its requirements continue to apply to permanent diversions of miscellaneous flows (including ephemeral streams) under paragraph (c).

After considering this comment, we have decided not to implement our proposal to remove the last sentence of paragraph (a)(3). We recognize that there will be situations in which permanent diversions of ephemeral streams are constructed and that some ephemeral streams may have riparian vegetation or aquatic habitats that must be replaced or restored to the extent required under paragraphs (a) and (f) of 30 CFR 816.97 and 817.97. However, because all other elements of paragraph (a)(3) pertain only to temporary diversions, we are redesignating that sentence as new paragraph (a)(4) and are redesignating existing paragraph (a)(4) as paragraph (a)(5). In addition, for clarity and consistency with new paragraph (b)(4), we have slightly revised new paragraph (a)(4) by replacing the phrase ''stream channel reclaimed after the removal of a temporary diversion'' with ''stream channel restored after the completion of mining'' to avoid creating the impression that the temporary diversion must be removed before constructing a restored stream channel. We also inserted the modifier ''any'' in front of ''riparian vegetation'' because not all ephemeral streams have riparian vegetation.

We have decided not to adopt our proposed editorial revisions to paragraph (a)(3) of sections 816.43 and 817.43 because we have determined that they would not improve the clarity of that paragraph.

Revised paragraph (b)(4) provides that a permanent stream-channel diversion or a stream channel restored after the completion of mining must be designed and constructed using natural channel design techniques so as to restore or approximate the premining characteristics of the original stream channel, including the natural riparian vegetation and the natural hydrological characteristics of the original stream, to promote the recovery and enhancement of the aquatic habitat and to minimize adverse alteration of stream channels on and off the site, including channel deepening or enlargement, to the extent possible. The final rule is similar to the proposed rule, although, to improve clarity, we replaced the phrase ''stream channel reclaimed after the removal of a temporary diversion'' in the proposed rule with the more accurate phrase ''stream channel restored after the completion of mining.'' The revised language reflects the facts that, in the context of this rule, a stream channel is restored, not reclaimed (in 30 CFR 701.5, we define reclamation in terms of the postmining land use), and that the restored stream channel must be in place before the temporary stream-channel diversion is removed.

As proposed, paragraph (b)(4) includes new language concerning natural channel design and adverse alteration of stream channels. This language reinforces and clarifies the meaning of the requirement to restore or approximate the premining characteristics of the original stream. The goals of natural channel design include creating a stream channel that will maintain the equilibrium of a natural stream, neither downcutting (degrading) nor filling in (aggrading). A natural channel is not stable in the sense that a concrete, trapezoidal channel is stable. Depending on the stream type, a natural channel may meander, eroding and depositing sediment at natural rates as part of its dynamic equilibrium. The channel must pass the water and sediment that it receives downstream, and the channel must maintain a connection to the stream's floodplain. The new provisions are consistent with sections 515(b)(24) and 516(b)(11) of SMCRA, which require use of the best technology currently available to minimize disturbances and adverse impacts to fish, wildlife, and related environmental values to the extent possible.

In a final rule on compensatory mitigation for losses of aquatic

resources, published on April 10, 2008 (73 FR 19594), EPA and the Corps promulgated standards for compensatory mitigation for adverse impacts on streams under section 404 of the Clean Water Act. The provisions of the EPA/Corps mitigation rule related to mitigation work plans for streams are contained in 33 CFR 332(c)(7) and include concepts of natural stream channel design. In certain situations, mine operators may find it advantageous to design, construct, and maintain stream-channel diversions in a manner that satisfies both the requirements of sections 816.43 and 817.43 of this rule and the requirements of the EPA/Corps compensatory mitigation rule.

In the preamble to the proposed rule, we sought comment on whether the revisions to sections 816.43(b) and 817.43(b) were sufficient to meet the requirements of SMCRA, or whether we should also revise our permitting rules to include a requirement for submission of alternatives and an analysis of the environmental impacts of each alternative whenever the applicant proposes to mine through waters of the United States or divert perennial or intermittent streams. The requirements would be similar to the corresponding requirements for excess spoil fills and coal mine waste disposal facilities in sections 780.25(d)(1) and 780.35(a)(3) for surface mines or sections 784.16(d)(1) and 784.19(a)(3) for underground mines. Potential alternatives could involve the number and length of stream segments diverted, diversion design, construction technique, location of the diversion, and whether the diversion is temporary or permanent.

EPA supported requiring an alternatives analysis for both stream-channel diversions and mining through streams, stating that the potential for significant stream degradation as a result of these activities would be minimized by doing so. The agency stated that stream diversions and mining through streams often have adverse impacts including direct losses of stream function and resulting alteration of downstream hydrology, water chemistry, and biotic communities. The agency noted the preamble listed no examples of alternatives to mining through streams and suggested that those alternatives could consist of variations in the number and length of stream segments impacted, construction techniques, reclamation design, and location.

One state regulatory authority opposed requiring an alternatives analysis for mining through streams and stream-channel diversions. The commenter stated that doing so would exceed the requirements of both SMCRA and the Clean Water Act and that the Corps does not require an analysis of alternatives in these situations. The commenter supported the natural-channel design requirement.

After evaluating these comments, we have decided not to require an alternatives analysis either for stream diversions or mining through streams. First, when coal reserves exist beneath a stream and those reserves could be extracted by surface mining methods, they are either mined or they are not. Under SMCRA, an operator's decision on whether to mine through a stream will be determined by geology, topography, and economics. We have no authority under SMCRA to prevent diversion of a stream or mining through a stream unless SMCRA prohibits surface coal mining operations on the land where the stream is located. (However, SMCRA does not override prohibitions that apply under other laws and regulations. Any such prohibitions will continue to apply according to the terms of those laws and regulations.) Therefore, an alternatives analysis for mining through a stream is not appropriate under SMCRA. With respect to stream diversions, this final rule strengthens the requirement that diversions approximate natural stream characteristics by adding a requirement for the use of natural-channel design techniques. Construction of stream-channel diversions in accordance with these rules should minimize damage to undisturbed areas of the stream and should result in only temporary adverse impacts to the diverted segment. Because the rule already requires the use of natural-channel design techniques, an alternatives analysis for stream diversions would add no value to the decision-making process.

Finally, as proposed, we are redesignating former paragraph (b)(4) of sections 816.43 and 817.43 as paragraph (b)(5). In accordance with the proposed rule, we are revising that paragraph to require that a qualified registered professional engineer certify both the design and construction of all stream-channel restorations. The former rule applied that requirement only to diversions of perennial and intermittent streams. We are adding the additional requirement because stream-channel restorations are even more significant in terms of stability and environmental concerns than temporary diversions that exist only for the duration of mining; i.e., reconstructed stream channels should be safe and stable and should approximate premining conditions regardless of whether the channel is a temporary or permanent diversion or a restoration of the original channel. In addition, we are making editorial revisions to this paragraph to clarify that separate certifications are required for the design and construction of stream-channel diversions and stream restorations and to specify which requirements apply to the design certification and which apply to the construction certification.

H. Sections 816.46 and 817.46: Siltation Structures

Paragraph (b)(2) of 30 CFR 816.46 and 817.46 (1983) required that all surface drainage from the disturbed area be passed through a siltation structure before leaving the permit area. In essence, that paragraph prescribed siltation structures (sedimentation ponds and other treatment facilities with point-source discharges) as the best technology currently available for sediment control. However, paragraph (b)(2) was struck down upon judicial review because the court found that the preamble to the rulemaking in which it was adopted did not articulate a sufficient basis for the rule under the Administrative Procedure Act. The court stated that the preamble did not adequately discuss the benefits and drawbacks of siltation structures and alternative sediment control methods and did not enable the court ''to discern the path taken by [the Secretary] in responding to commenters'' concerns'' that siltation structures in the West are not the best technology currently available. See *In re: Permanent Surface Mining Regulation Litigation II, Round III,* 620 F. Supp. 1519, 1566–1568 (D.D.C. July 15, 1985).

On November 20, 1986 (51 FR 41961), we suspended the rules struck down by the court. To avoid any confusion that may result from the continuing publication of those rules in the Code of Federal Regulations, we proposed to remove paragraph (b)(2) of sections 816.46 and 817.46 and redesignate the remaining paragraphs of those sections accordingly. The continued presence of the suspended paragraphs in the published version of the rules has been a source of ongoing confusion.

We received no comments opposing this proposal. Therefore, we are removing paragraph (b)(2) of sections 816.46 and 817.46 as proposed. This action supersedes the 1986 suspension of the paragraph being removed. Sections 816.45 and 817.45, which remain unchanged by this rule, set forth various measures and techniques that may constitute the best technology currently available for sediment control,

although applicants and regulatory authorities are not limited to those measures and techniques.

I. Sections 816.57 and 817.57: Activities in or Adjacent to Perennial or Intermittent Streams

1. Background

Perennial and intermittent streams overlie coal deposits in all regions of the nation. To the extent economically feasible and allowed by law, surface mining operations often relocate those streams as part of the process of recovering the underlying coal. Streams also may be relocated to facilitate the construction of mine-related facilities such as coal preparation plants. In other cases, steep slopes, narrow valleys and other topographical limitations may result in the construction of excess spoil fills, refuse piles, sedimentation ponds, and coal mine waste impoundments in streams because the stream valley is the only logical and technologically and economically feasible location for those structures. All types of surface coal mining and reclamation operations may experience the need to construct bridge abutments, culverts, or other structures in or near perennial or intermittent streams to facilitate crossing of those streams by roads, railroads, conveyors, pipelines, utilities, or similar facilities. Neither SMCRA nor the Clean Water Act precludes any of these activities, provided the activities comply with all applicable requirements of those laws and their implementing regulations. Parts II and III.A. of this preamble explain the extent to which either SMCRA or its legislative history contemplates the activities listed above. For example, section 515(b)(22)(D) mentions the construction of excess spoil fills in areas containing natural watercourses, springs, and wet-weather seeps. In addition, the legislative history of SMCRA indicates that Congress anticipated the continued construction of coal mine waste impoundments in streams.

As discussed in Part III.A. of this preamble, Congress, in developing the legislation that ultimately became SMCRA, specifically considered and rejected inclusion of an absolute prohibition on disturbance of land within 100 feet of certain streams. While we subsequently adopted stream buffer zone rules as part of our initial and permanent program regulations implementing SMCRA, we and the state regulatory authorities have historically interpreted those rules as allowing placement of fill material, including coal mine waste, in waters of the United States, subject to approval of that placement under the Clean Water Act. As discussed at length in Part III.E. of this preamble, our historical interpretation and application of the stream buffer zone rule is in harmony with statements in the decision of the U.S. Court of Appeals for the Fourth Circuit in *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh,* 317 F.3d 425, 442 (4th Cir. 2003). The rules that we are adopting today are intended to clarify any lingering ambiguity regarding the appropriate interpretation of the stream buffer zone rules.

The stream buffer zone rule effectively prescribes maintenance of a 100-foot undisturbed zone between perennial or intermittent streams and surface mining activities (or, for underground mines, surface activities on the surface of lands) as the best technology currently available to fulfill the sediment control and fish and wildlife protection requirements of sections 515(b)(10)(B)(i), 515(b)(24), 516(b)(9)(B), and 516(b)(11) of SMCRA. However, the concept of maintenance of an undisturbed buffer zone as the best technology currently available for purposes of those sections of the Act applies only to activities that do not involve disturbance of the streambed and do not inherently occur within the buffer zone. When the regulatory authority and other pertinent government agencies approve the conduct of activities within the stream and/or its buffer zone, an undisturbed buffer between those activities and the stream inherently cannot be maintained. Construction of fills and impoundments in streams inherently involves disturbance of all or part of what would have been the buffer zone for the affected stream segment, as does construction of most stream-crossing structures. In addition, when a stream is diverted, the original streambed and what would have been its buffer zone typically are mined through or used for construction of mining-related facilities. Nothing in this discussion should be construed as meaning that all sedimentation ponds, excess spoil fills, refuse piles, coal mine waste slurry impoundments, and stream crossing structures are automatically exempt from the requirement to maintain an undisturbed buffer zone. Only those structures and activities (or portions thereof) for which there is no reasonable alternative location qualify for this exception.

Section 827.12 of our rules does not apply the stream buffer zone rule in sections 816.57 and 817.57 to coal preparation plants not located within the permit area of a mine. See 48 FR 20399, May 5, 1983. We proposed no changes to section 827.12 and nothing in the final rule that we are adopting today alters that situation. As part of this final rule, we are moving the permitting aspects of the previous version of the stream buffer zone rule in sections 816.57 and 817.57 to new sections 780.28 and 784.28. Existing section 785.21(c) provides that coal preparation plants not located within the permit area of a mine are subject not only to the special permitting requirements of section 785.21, but also to ''all other applicable requirements of this subchapter.'' ''This subchapter'' refers to subchapter G of chapter VII, which contains the permitting requirements for all surface coal mining and reclamation operations. Thus, to ensure that section 785.21(c) is not now interpreted as including the newly added permitting requirements related to the stream buffer zone rule, we are adding paragraph (a)(2)(i) of sections 780.28 and 784.28 to specify that the requirements of those sections do not apply to applications under section 785.21 for coal preparation plants not located within the permit area for a mine. See Part VIII.C. of this preamble. However, the other permitting rules that we are adopting today, including the new informational and analytical requirements for proposed excess spoil fills and coal mine waste disposal facilities, typically will apply to those applications, either through operation of section 785.21(c) or through cross-references in the performance standards listed in section 827.12. In addition, section 827.12(b) specifically requires that any stream-channel diversion comply with section 816.43.

2. General Description of Changes

The revised version of sections 816.57 and 817.57 that we are adopting today attempts to minimize disputes and misunderstandings associated with application of the 1983 version of the stream buffer zone rules in sections 816.57 and 817.57. The language of the rules that we are adopting today better conforms to the underlying provisions of SMCRA. The revised rules distinguish between those situations in which maintenance of an undisturbed buffer between surface activities and perennial and intermittent streams constitutes the best technology currently available to implement the underlying statutory provisions (sections 515(b)(10)(B)(i) and (b)(24) and 516(b)(9)(B) and (b)(11) of SMCRA) and those situations in which maintenance of a buffer is neither feasible nor appropriate because the stream segment will be diverted, altered by a culvert or other stream-crossing structure,

impounded, or filled. In the case of stream crossings involving bridges, pipelines, utilities, or conveyors, the stream itself may sometimes remain undisturbed, but the crossing will then most likely require installation of abutments within the buffer zone. Construction of fills and impoundments in streams inherently involves disturbance of all or part of what would have been the buffer zone for the affected stream segment, as does construction of most stream-crossing structures. In addition, when a stream is diverted, the original streambed and what would have been its buffer zone typically are mined through or used for construction of mining-related facilities.

As proposed, we are reorganizing our rules to separate permitting requirements from performance standards. The previous version of paragraph (a) of sections 816.57 and 817.57 contained both permitting requirements and performance standards. The rules that we are adopting today separate the two for clarity and consistency. Revised sections 816.57 and 817.57 include only performance standards. As proposed, we are moving the permitting aspects of the stream buffer zone rules, which were formerly codified in paragraph (a)(1) of sections 816.57 and 817.57 as part of the performance standards in subchapter K, to new sections 780.28 and 784.28, which are part of the permitting requirements of subchapter G.

As proposed, we are deleting former paragraph (a)(2) of sections 816.57 and 817.57, which required the regulatory authority to make a finding that any proposed temporary or permanent stream-channel diversion will comply with section 816.43 or 817.43. This provision is unnecessary because the obligation to comply with the stream-channel diversion requirements of sections 816.43 and 817.43 is independent of any cross-reference in section 816.57 or 817.57. We are consolidating the permitting requirements for stream-channel diversions in sections 816.43 and 817.43, which we are revising as proposed. See Part VIII.G. of this preamble.

We also are deleting former paragraph (b) of sections 816.57 and 817.57, which provided that the area not to be disturbed must be designated as a buffer zone and marked as specified in section 816.11 or 817.11. This deletion is not a substantive change because the requirement to mark the area to be left undisturbed as a buffer zone also appears in sections 816.11(e) and 817.11(e), which we have revised for clarity and consistency as discussed in Part VIII.F. of this preamble. We received no response to our request in the preamble to the proposed rule for comment on whether a formal regulatory definition of ''buffer'' or ''buffer zone'' would be useful. We did not include a definition in the proposed rule and we are not adopting a definition as part of this final rule because we find the meaning of those terms to be clear without a regulatory definition.

Commenters representing industry and state regulatory authorities generally supported the proposed revisions to sections 816.57 and 817.57 as much-needed and appropriate clarifications of those rules. However, one commenter stated that the proposed rule did not go far enough:

> We agree with how the clarification more explicitly reflects the historic interpretation by distinguishing between activities that are not planned to occur in streams where a buffer zone does apply and those activities that inherently involve placement of fill or the disturbance of the stream channel. However, the text of the rule uses new terminology such as ''prohibition'' and ''exceptions'' which incorrectly implies that the rule (and therefore the statute) prohibits disturbances in stream channels. As the agency correctly notes in the preamble, coal mining involves activities that inherently involve disturbances or placement of fill in the stream so a buffer zone is neither feasible nor appropriate. Accordingly, for those activities, there is no buffer zone at all. As OSM explains, ''those activities are governed by other regulations.'' The conduct of those types of activities is approved in the permit in accordance with the ''other regulations'' which specifically govern those activities.
>
> The rule as presently structured by setting forth the buffer zone requirement and then listing exceptions will inevitably prove to be inflexible or quickly obsolete since there are many types of activities where a buffer zone is infeasible or inappropriate. Of course this can be remedied by simply adding a catch-all provision to the exceptions that recognizes any other activity planned and approved to occur in the stream. However, we believe it far better to restructure the rule so that it more straightforwardly reflects the underlying functional and operational distinction that has guided the rule's application historically: (1) activities that occur in the streams and, (2) activities that are not designed to occur in the streams.

The commenter provided a suggested rewrite of sections 816.57 and 817.57, which we are not adopting, for the most part. We appreciate the commenter's support of the basic principle underlying our revisions to the stream buffer zone rule, but we disagree with the commenter's arguments against use of the terms ''prohibitions'' and ''exceptions.'' We find that those terms accurately describe the pertinent portions of the stream buffer zone rule. We have revised the rule to eliminate the term ''prohibitions'' from the rule text, but we continue to characterize paragraph (a) of sections 816.57 and 817.57 as a prohibition in the preamble.

We also continue to use the term ''exception'' as the heading for paragraph (b) of sections 816.57 and 817.57, but, in response to this comment and a desire to improve the clarity of the proposed rule, we have revised the introductory text of that paragraph to clarify that the term ''exception'' means that the buffer requirement of paragraph (a) of sections 816.57 and 817.57 does not apply to those segments of a perennial or intermittent stream for which the regulatory authority, in accordance with sections 780.28(d), 784.28(d), 816.43(b)(1), or 817.43(b)(1), approves one or more of the activities listed in paragraphs (b)(1) through (b)(4) of sections 816.57 and 817.57. Thus, as used in the final rule and this preamble, the term ''exception'' does not apply to the activity itself.

The term ''exception'' in the proposed rule and its preamble sometimes refers to the activities listed in paragraphs (b)(1) through (b)(4) of sections 816.57 and 817.57 (most of which refer only to activities in the stream itself, not to activities in the buffer zone). At other times, it refers to land within 100 feet of the stream segment directly impacted by those activities. However, in this final rule, the term exception refers only to what would otherwise be the buffer zone for stream segments for which the regulatory authority approves one or more of the activities listed in paragraphs (b)(1) through (b)(4). This usage is consistent with the preamble to the proposed rule, which describes paragraph (b) of sections 816.57 and 817.57 as ''providing an exception from the prohibition on conducting activities that would disturb the surface of lands within 100 feet of waters of the United States.'' 72 FR 48908–48909, August 24, 2007. In addition, it is consistent with the intent of the proposed rule, which as stated in the introductory clause of proposed paragraph (b), was to specify the circumstances in which the requirement to avoid disturbance of land within 100 feet of waters of the United States did not apply.

Under the final rule, with the exception of stream-channel diversions, for which all requirements appear in sections 816.43(b) and 817.43(b), application requirements for activities that take place in perennial or intermittent streams appear in sections 780.28(b) and 784.28(b), regulatory authority approval standards for those activities appear in sections 780.28(d)

and 784.28(d), and performance standards for those activities appear in paragraphs (b)(1) through (b)(4) and (c) of sections 816.57 and 817.57. With respect to activities that will take place within 100 feet of a perennial or intermittent stream segment, but will not disturb the stream segment itself, the final rule establishes application requirements in sections 780.28(c) and 784.28(c), regulatory authority approval standards in sections 780.28(e) and 784.28(e), and performance standards in paragraph (c) of sections 816.57 and 817.57.

We are not adopting the commenter's recommendation that we revise paragraph (b) of sections 816.57 and 817.57 to exclude buffer zones for stream segments affected by any activity planned and approved to occur in the stream. We find this exception to be too broad. We believe that the activities that we list in paragraphs (b)(1) through (b)(4) include all situations in which it may be inherently necessary to conduct activities in a stream segment to facilitate surface coal mining and reclamation operations. We also have reviewed our rules to ensure that, for those activities, the obligation to minimize disturbances and adverse impacts to fish, wildlife, and related environmental values to the extent possible using the best technology currently available has been applied through other requirements. To the extent that a SMCRA permit applicant may receive authorization under the Clean Water Act to place fill material in the stream as part of an activity other than those listed in paragraphs (b)(1) through (b)(4), we will take that approval into consideration during the SMCRA permitting process. However, any activities conducted in the buffer zone for the stream segment affected by the Clean Water Act authorization will remain subject to the pertinent provisions of sections 780.28 and 816.57 or sections 784.28 and 817.57.

Many commenters strongly opposed our proposed revisions to sections 816.57 and 817.57, characterizing paragraph (b) in particular as creating new and unwarranted exceptions. We disagree with this characterization. The 1983 version of the stream buffer zone rule has historically been applied—and continues to be applied—to allow each of the activities listed in paragraphs (b)(1) through (b)(4) to occur. As other commenters emphasize, the requirement to maintain an undisturbed buffer between the stream and surface activities related to surface coal mining and reclamation operations has not been applied and does not apply to activities planned and approved to occur in intermittent or perennial streams—and in those situations the rationale for maintaining an undisturbed buffer ceases to exist. As discussed at length in Part III.E. of this preamble, our historical approach to application of the stream buffer zone rule is in harmony with statements of the U.S. Court of Appeals for the Fourth Circuit in its decision in *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh,* 317 F.3d 425, 442–443 (4th Cir. 2003) (''it is beyond dispute that SMCRA recognized the possibility of placing excess spoil material in waters of the United States'').

The final rule that we are adopting today clarifies, but in this regard does not alter, the basic historical and current application of the 1983 stream buffer zone rule. Consistent with the application of the 1983 stream buffer zone rule, paragraph (b) of final sections 816.57 and 817.57 recognizes that the conduct of surface coal mining and reclamation operations sometimes requires the diversion of perennial and intermittent streams, the construction of fills in streams, and other disturbances of stream segments for sediment control and construction of stream crossings. Therefore, the final rule provides that the requirement to maintain an undisturbed buffer zone for perennial and intermittent streams does not apply to those stream segments for which the regulatory authority approves one or more of the activities listed in paragraphs (b)(1) through (b))(4) of sections 816.57 and 817.57.

3. Paragraph (a)

Final paragraph (a)(1) of sections 816.57 and 817.57 specifies that, except as provided in paragraph (b) and consistent with paragraph (a)(2), the permittee or operator may not conduct surface activities that would disturb the surface of land within 100 feet, measured horizontally, of a perennial or intermittent stream unless the regulatory authority authorizes the disturbance under paragraph (e) of section 780.28 or 784.28. With the exception of the addition of a new paragraph (a)(2), paragraph (a) of final sections 816.57 and 817.57 is substantively identical to the proposed rule, although we have made minor editorial revisions for clarity and brevity.

The final rule adds a new paragraph (a)(2) to sections 816.57 and 817.57 to address Clean Water Act requirements. We are also adding a citation to the new paragraph in paragraph (a)(1). New paragraph (a)(2) provides that surface mining activities in perennial or intermittent streams may be authorized only where those activities would not cause or contribute to the violation of applicable State or Federal water quality standards developed pursuant to the Clean Water Act, as determined through certification under section 401 of the Clean Water Act (33 U.S.C. 1341) or a permit under section 402 or 404 of the Clean Water Act (33 U.S.C. 1342 and 1344, respectively). This language does not establish a general prohibition against mining activities in intermittent or perennial streams, including the placement of excess spoil or other fill materials in those streams. Instead, it reiterates that mining-related discharges are subject to the permitting requirements of sections 402 and 404 of the Clean Water Act and the water quality certification requirement under section 401 of the Clean Water Act. These requirements are independently applicable under the Clean Water Act.

Paragraph (a)(2) does not require the SMCRA regulatory authority to make a determination that a particular mining activity is consistent with applicable water quality standards. The determination that a particular mining activity is consistent with applicable water quality standards will be made only by the appropriate Federal or State entity responsible for the issuance of permits under sections 402 and 404 of the Clean Water Act and certification under section 401 of that law. The rule anticipates that a SMCRA permit will typically be issued prior to issuance of any permits or certifications required under the Clean Water Act. However, in those circumstances, new paragraph (d)(2) of sections 780.28 and 784.28 provides that a SMCRA permit authorizing mining activities in perennial or intermittent streams must include a condition requiring that the permittee obtain all required approvals under the Clean Water Act before initiating those activities. As the rule itself makes clear, this provision of the stream buffer zone rule is not applicable to any water not subject to jurisdiction under the Clean Water Act. Further, any discharges to waters not covered by the stream buffer zone rule that are jurisdictional ''waters of the United States'' under the Clean Water Act must still comply with all applicable permitting requirements under that law. As discussed in more detail in Part IV of this preamble, none of the revisions to the stream buffer zone rule or other elements of this final rule affect a mine operator's responsibility to comply with water quality standards, effluent limitations, or other requirements of the Clean Water Act.

A few commenters argued that a 100-foot buffer zone [see paragraph (a)(1) of

the final rule] was insufficient to ensure protection of fish, wildlife, and related environmental values associated with the streams. Those comments are not germane to this rulemaking because we did not propose any changes to the 100-foot distance, which has long been a matter of settled law, nor did we seek comments on the adequacy of that distance. To the extent that commenters provided scientific data to support their suggestions, they did so primarily in the context of the value of buffers for terrestrial species. However, the width of the buffer that we established in our rules is based upon sediment control and protection of aquatic ecosystems.

In developing the stream buffer zone rule for the initial regulatory program, we selected the 100-foot width based primarily on sediment control considerations. See the preamble to 30 CFR 715.17(d)(3) at 42 FR 62652, December 13, 1977, which states that ''[t]he 100-foot limit is based on typical distances that should be maintained to protect stream channels from abnormal erosion.'' Preambles to subsequent versions of the stream buffer zone rule mention the benefits that buffer zones provide to wildlife, but those benefits are ancillary to the primary purpose of the buffer zone, which is to protect the integrity of the stream. In the preamble to the 1983 version of the stream buffer zone rule at 30 CFR 816.57 and 817.57, we rejected comments suggesting buffer widths other than 100 feet, stating that—

> The 100-foot width is used to protect streams from sedimentation and help preserve riparian vegetation and aquatic habitats. Since the 100-foot zone provides a simple and valuable standard for enforcement purposes, OSM has chosen not to change the general rule.

48 FR 30314, June 30, 1983.

Expanding the stream buffer zone based on the needs of terrestrial species has no sound scientific basis for the purpose of the stream buffer zone rule, which focuses on protection of water quality and aquatic habitats. Furthermore, establishing a buffer zone width based on the needs of terrestrial species is not practical because the optimal width of the buffer zone for each species varies considerably. In addition, as discussed in section III.I.1.a) of the final environmental impact statement (FEIS) for this rulemaking, a 100-foot buffer zone has considerable value as a connecting corridor for terrestrial species. Also, as discussed in section III.I.1 of the FEIS, scientific studies generally support the current 100-foot width for purposes of sediment control and protection of aquatic ecosystems. Other existing rules, including those at 30 CFR 780.16, 784.21, 816.97, and 817.97, provide sufficient protection for terrestrial wildlife.

One commenter stated that section 817.57(a) should apply to subsidence resulting from underground mining activities beneath the stream. We disagree. In response to litigation concerning the 1983 version of 30 CFR 817.57, we stipulated that the stream buffer zone requirement for underground mines ''is directed only to disturbance of surface lands by surface activities associated with underground mining.'' *In re: Permanent Surface Mining Regulation Litigation II-Round II*, 21 ERC 1725, 1741, footnote 21 (D.D.C. 1984). In addition, only one provision of SMCRA prohibits the conduct of underground mining operations that could result in the subsidence of streams. That provision [section 516(c)] requires the regulatory authority to suspend underground coal mining adjacent to ''permanent streams'' if the mining activities present an ''imminent danger to inhabitants of the urbanized areas, cities, towns, and communities.'' Our regulations at 30 CFR 817.121(f) clarify that the term ''permanent streams'' means perennial streams. Neither section 516(c) of the Act nor 30 CFR 817.121(f) mention environmental impacts as a threshold for the prohibition of mining.

Subsidence impacts are regulated under section 516(b)(1) of SMCRA, which provides, in relevant part, that the permit must require the operator to—

> Adopt measures consistent with known technology in order to prevent subsidence causing material damage to the extent technologically and economically feasible, maximize mine stability, and maintain the value and reasonably foreseeable use of such surface lands, except in those instances where the mining technology used requires planned subsidence in a predictable and controlled manner: Provided, That nothing in this subsection shall be construed to prohibit the standard method of room and pillar mining.

Our definition of ''material damage'' in this context in 30 CFR 701.5 includes a functional impairment of surface lands or features. Perennial and intermittent streams are considered surface features. As stated in the preamble to that definition, ''[t]he definition of 'material damage' covers damage to the surface and to surface features, such as wetlands, streams, and bodies of water, and to structures or facilities.'' 60 FR 16724, March 31, 1995. Therefore, the subsidence control plan for the underground mine prepared under section 784.20(b) and implemented under section 817.121(a) and (b) must address impacts on perennial and intermittent streams and the extent to which the operation can be and has been designed to prevent subsidence causing material damage to the extent technologically and economically feasible (or, for planned subsidence operations, the extent to which the operation has been designed to minimize material damage to the extent technologically and economically feasible).

4. Paragraph (b)

Paragraph (b) of the proposed rule provided that the prohibition in paragraph (a) on disturbance of the buffer zone did not apply to certain activities in waters of the United States. Those activities were listed in paragraphs (b)(1) through (b)(4). We have extensively revised paragraph (b) in response to comments. First, as discussed in Part VII of this preamble, we did not adopt the proposed change in scope from perennial and intermittent streams to waters of the United States. Second, as discussed above in Part VIII.I.2. of this preamble, we have revised the introductory language of paragraph (b) to clarify that the buffer requirement of paragraph (a) does not apply to those segments of a perennial or intermittent stream for which the regulatory authority, in accordance with sections 780.28(d), 784.28(d), 816.43(b)(1), or 817.43(b)(1), approves one or more of the activities listed in paragraphs (b)(1) through (b)(4) of sections 816.57 and 817.57. There is no need or reason to apply the buffer requirements of paragraph (a)(1) to a stream segment that will cease to exist because of construction of a stream-channel diversion, excess spoil fill, refuse pile, slurry impoundment, or sedimentation pond.[2] In those situations, there is no longer any stream segment to protect. Furthermore, construction of those diversions, fills, and impoundments inherently requires disturbance of the buffer for the stream segment as well as the stream segment itself. With respect to stream crossings

[2] In *Ohio Valley Environmental Council* v. *U.S. Army Corps of Engineers*, Civ. Action No. 3:05–0784 (S.D. W. Va., June 13, 2007), the district court held that discharges of sediment-laden water from the toe of a fill into stream segments leading to a sedimentation pond embankment require a permit under section 402 of the Clean Water Act. That decision is on appeal to the U.S. Court of Appeals for the Fourth Circuit as of the date of writing of this preamble. However, we believe this rule, as finalized here, is sufficient to accommodate the ultimate outcome of this litigation because the issuance of a SMCRA permit does not relieve the permittee of the obligation to comply with all requirements of the Clean Water Act. See section 702(a) of SMCRA.

under paragraph (b)(2), culverts, low-water crossings, and excavations for buried pipelines and utilities necessarily disturb the streambed. The road, pipeline, conveyor, or other utility will necessarily disturb portions of the buffer zone adjacent to the crossing, even when a bridge is constructed to avoid directly disturbing the stream itself. Third, in addition to removing references to waters of the United States, we have modified paragraphs (b)(1) through (b)(4) as explained in the following discussion of those paragraphs.

As proposed, for informational purposes, paragraphs (b)(1) through (b)(4) specify that persons conducting the activities listed in those paragraphs must comply with all other applicable requirements of the regulatory program. Each of those paragraphs also cross-references some of the most directly relevant regulatory program requirements.

Paragraph (b)(1)

Proposed paragraph (b)(1) applied to mining through waters of the United States. It specified that such activities must comply with the requirements of section 816.43(b) or 817.43(b) if the mining involves the temporary or permanent diversion of a perennial or intermittent stream. One commenter suggested that, to avoid creating the misapprehension that the stream buffer zone rule could operate to prohibit underground mining beneath streams, paragraph (b)(1) of section 817.57 should either be eliminated or be revised to refer only to the diversion of perennial or intermittent streams rather than to mining through streams. In response to this comment, we have revised paragraph (b)(1) of both sections 816.57 and 817.57 by deleting the reference to mining through waters of the United States and replacing it with a reference to diverting perennial or intermittent streams.

We find the commenter's suggestion compelling with respect to underground mining operations, which may require diversion of some perennial or intermittent stream segments to facilitate the construction of mining-related facilities, but which are unlikely to involve mining through those streams. We also find the change in terminology appropriate for surface mining operations because, in view of our decision not to revise the scope of this rule to include waters of the United States, there is no longer any need to refer to mining through waters other than perennial or intermittent streams. Sections 816.43(b) and 817.43(b) effectively require that the permittee divert perennial or intermittent streams before mining through them.

Therefore, we have revised paragraph (b)(1) of sections 816.57 and 817.57 to refer to diversions of perennial or intermittent streams rather than to mining through waters of the United States. As in the proposed rule, the final rule contains a reminder that all stream-channel diversions must comply with sections 816.43(b) and 817.43(b), which contain approval, design, and construction requirements specific to stream-channel diversions and stream-channel restorations.

Paragraph (b)(2)

Proposed paragraph (b)(2) applied to the placement of bridge abutments, culverts, or other structures in or near waters of the United States to facilitate crossing those waters. One commenter requested that the rule also apply to stream crossings for utilities, pipelines, and conveyors. We intended for this rule to apply to all stream crossings, not just those for roads. Therefore, we have revised paragraph (b)(2) to apply to the placement of bridge abutments, culverts, or other structures in or within 100 feet of a perennial or intermittent stream to facilitate the crossing of the stream by roads, railroads, conveyors, pipelines, utilities, or similar facilities. As applicable, activities under this paragraph must comply with the road design, construction, and maintenance requirements of sections 816.150 and 816.151 or, for railroad spurs, pipelines, utilities, and conveyors, with the support facility requirements of section 816.181. For underground mining operations, the appropriate cross-references are sections 817.150, 817.151, and 817.181, respectively.

Sections 816.151(d)(6) and 817.151(d)(6) contain standards governing the types of structures that primary mine roads may use to cross perennial and intermittent streams. Any low-water crossings must be designed, constructed, and maintained to prevent erosion of the structure or the streambed and additional contributions of suspended solids to streamflow. Sections 816.151(c)(2) and 817.151(c)(2) prohibit the use of stream fords for primary roads unless they are approved by the regulatory authority as temporary routes during road construction. All mine access and haul roads, whether primary or not, must comply with section 816.150(b) or 817.150(b). Those regulations include language similar to the sedimentation control and fish and wildlife protection requirements of sections 515(b)(10)(B)(i), 515(b)(24), 516(b)(9)(B), and 516(b)(11) of SMCRA.

Also, under our existing regulations, support facilities, which may include railroads, pipelines, utilities, and conveyor systems, must comply with sections 816.181 and 817.181. Paragraph (b) of sections 816.181 and 817.181 includes language similar to the sedimentation control and fish and wildlife protection requirements of sections 515(b)(10)(B)(i), 516(b)(9)(B), 515(b)(24), and 516(b)(11) of SMCRA.

Paragraph (b)(3)

Proposed paragraph (b)(3) applied to the construction of sedimentation pond embankments in waters of the United States. One commenter requested that this provision be expanded to include the pool or storage area for the sedimentation pond. We believe that the proposed rule implied the inclusion of those areas because they are an unavoidable result of the construction of sedimentation pond embankments in perennial or intermittent streams. However, in response to this comment, we have revised paragraph (b)(3) to clarify that it applies to the construction of sedimentation pond embankments in a perennial or intermittent stream and, by extension, to the pool or storage area created by the embankment. As proposed, final paragraph (b)(3) provides that activities under this paragraph must comply with the sediment control requirements of section 816.45(a) or 817.45(a). In response to a different comment, we have added a reminder that, under sections 816.56 and 817.56, all sedimentation pond embankments must be removed and reclaimed before abandoning the permit area or seeking final bond release unless the regulatory authority approves retention of the pond as a permanent impoundment under section 816.49(b) or 817.49(b) and provisions have been made for sound future maintenance by the permittee or the landowner in accordance with 30 CFR 800.40(c)(2).

Both the 1979 and 1983 versions of our permanent regulatory program regulations prohibit the placement of sedimentation ponds in perennial streams unless approved by the regulatory authority. See 30 CFR 816.46(a)(2) (1979) and 816.46(c)(1)(ii) (1983). However, the preamble to the 1979 rules explains that construction of sedimentation ponds in streams typically is a necessity in steep-slope mining conditions:

> Sedimentation ponds must be constructed prior to any disturbance of the area to be drained into the pond and as near as possible to the area to be disturbed. [Citation omitted.] Generally, such structures should be located out of perennial streams to facilitate the

clearing, removal and abandonment of the pond. Further, locating ponds out of perennial streams avoids the potential that flooding will wash away the pond. However, under design conditions, ponds may be constructed in perennial streams without harm to public safety or the environment. Therefore, the final regulations authorize the regulatory authority to approve construction of ponds in perennial streams on a site-specific basis to take into account topographic factors. [Citation omitted.]

* * * * *

Commenters suggested allowing construction of sedimentation ponds in intermittent and perennial streams. Because of the physical, topographic, or geographical constraints in steep slope mining areas, the valley floor is often the only possible location for a sediment pond. Since the valleys are steep and quite narrow, dams must be high and must be continuous across the entire valley in order to secure the necessary storage.

* * * * *

The Office recognizes that mining and other forms of construction are presently undertaken in very small perennial streams. Many Soil Conservation Service (SCS) [now the Natural Resources Conservation Service] structures are also located in perennial streams. Accordingly, OSM believes these cases require thorough examination. Therefore, the regulations have been modified to permit construction of sedimentation ponds in perennial streams only with approval by the regulatory authority.

44 FR 15159–60, March 13, 1979.

In short, sedimentation ponds must be constructed where there is sufficient storage capacity, which, in narrow valleys lacking natural terraces, typically means in the stream.

In the preamble to the proposed rule, we stated our belief that our existing rules at 30 CFR 816.46(c)(1)(ii) and 817.46(c)(1)(ii) can be applied in a manner consistent with a March 1, 2006, letter from Benjamin Grumbles, Assistant Administrator of the Environmental Protection Agency, to John Paul Woodley, Assistant Secretary of the Army (Civil Works).[3] Among other things, that letter states that the sedimentation pond must be constructed as close to the toe of the fill as practicable to minimize temporary adverse environmental impacts associated with construction and operation of the waste treatment system. In particular, 30 CFR 816.46(c)(1)(ii) and 817.46(c)(1)(ii) require that all sedimentation ponds be placed as near as possible to the disturbed area that they serve. We interpret this provision as meaning that sedimentation ponds collecting runoff from excess spoil fills must be constructed as close to the toe of the fill as possible. We also stated our belief that application of the existing rules in this manner will properly implement the intent of Congress in enacting SMCRA, as expressed in section 102(f) of the Act, which provides that one of the purposes of the Act is to strike a balance between energy production and environmental protection. However, we sought comment on whether it would be appropriate or helpful to revise those rules by replacing the term ''perennial streams'' with ''waters of the United States'' or whether we should more clearly specify the conditions under which the regulatory authority may approve placement of sedimentation ponds in perennial streams or other waters of the United States.

We received one comment recommending that we take both actions. The comment advocating replacement of ''perennial streams'' with ''waters of the United States'' is moot in light of our decision, as explained in Part VII of this preamble, not to adopt the term ''waters of the United States'' as a replacement for perennial and intermittent streams. With respect to the second part of the comment, the commenter provided no suggestions on what specifications we should adopt. Therefore, we are not making any changes in response to this comment.

Paragraph (b)(4)

Proposed paragraph (b)(4) applied to the construction of excess spoil fills and coal mine waste disposal facilities in waters of the United States. The final rule is identical to the proposed rule with the exception that we have replaced ''waters of the United States'' with ''a perennial or intermittent stream'' for reasons discussed in Part VII of this preamble. As proposed and adopted, paragraph (b)(4) also provides a reminder that excess spoil fills must comply with the requirements of paragraphs (a) and (f) of section 816.71or 817.71. It also provides a reminder that coal mine waste disposal facilities must comply with the pertinent requirements of sections 816.81(a), 816.83(a), and 816.84, or, for underground mining operations, sections 817.81(a), 817.83(a), and 817.84, respectively.

As discussed in Parts VIII.B., VIII.D., and VIII.E. of this preamble, we are extensively revising our rules governing the disposal of excess spoil and coal mine waste. In both cases, we are adding provisions designed to ensure use of the best technology currently available, to the extent possible, to minimize the adverse impacts on fish, wildlife, and related environmental values that may result from construction of excess spoil and coal mine waste disposal facilities. See sections 780.25(d)(1), 780.35(a)(3), 784.16(d)(1), and 784.19(a)(3). In addition, we are adding paragraphs (a)(1) and (a)(2) of sections 780.35 and 784.19 to require that operations be designed to minimize the creation of excess spoil and to ensure that fills are no larger than necessary to accommodate the anticipated volume of excess spoil.

Other Comments Received on Proposed Paragraph (b)

The preamble to the proposed rule stated that we intended that the list of activities in paragraph (b) would include the universe of activities that inherently involve placement of fill material into waters of the United States as part of surface coal mining and reclamation operations. We invited comment on whether the list met that goal and, if not, how any other activities that involve placement of fill material into waters of the United States as part of surface coal mining and reclamation operations should be regulated under SMCRA with respect to this rule.

The few commenters who responded to this request expressed concern that the list was not all-inclusive. They recommended that it be revised to universally include all activities that are planned and approved to occur in the stream. We have not adopted this recommendation. We believe that the activities that we list in paragraphs (b)(1) through (b)(4) include all situations in which it may be inherently necessary to conduct activities in a stream segment to facilitate surface coal mining and reclamation operations. To the extent that a SMCRA permittee or permit applicant may receive authorization under the Clean Water Act to place fill material in a stream as part of an activity other than those listed in paragraphs (b)(1) through (b)(4), we will consider that approval and its implications when reviewing a SMCRA permit application. However, surface activities conducted in the buffer zone of a stream segment are subject to the stream buffer zone rule regardless of

[3] In *Ohio Valley Environmental Council* v. *U.S. Army Corps of Engineers*, Civ. Action No. 3:05–0784 (S.D. W. Va., June 13, 2007), the district court held that discharges of sediment-laden water from the toe of a fill into a stream segments leading to a sedimentation pond embankment requires a permit under section 402 of the Clean Water Act. That decision is on appeal to the U.S. Court of Appeals for the Fourth Circuit as of the date of writing of this preamble. However, we believe this rule, as finalized here, is sufficient to accommodate the ultimate outcome of this litigation because the issuance of a SMCRA permit does not relieve the permittee of the obligation to comply with all requirements of the Clean Water Act. See section 702(a) of SMCRA.

whether that segment is also subject to a Clean Water Act authorization.

One commenter recommended that we add a list of other activities to paragraph (b). Our responses to the suggested additions are set forth below:

• Pool or storage area for sedimentation ponds and impoundments

As discussed above, we have added a sentence to paragraph (b)(3) to clarify that the provisions of that paragraph extend to the pool or storage area created by the construction of a sedimentation pond embankment in a perennial or intermittent stream.

• Stream reaches between the toe of an excess spoil fill, refuse pile, or slurry impoundment and the sediment or drainage control structure for that fill, refuse pile, or impoundment

Historically, we and the state regulatory authorities have considered stream reaches of this nature to be part of the mining operation and included them within the permit area because they no longer function as a stream, but as a channel directing runoff from the face of the fill, refuse pile, or slurry pond embankment to the sediment pond for that structure. Our approach is consistent with the historical practice of Clean Water Act permitting authorities, which have issued NPDES permits for discharges from sediment ponds located in a perennial or intermittent stream. Inherent in that practice is the assumption that flows in the stream segment between the toe of the fill and the sediment pond embankment are not considered to be waters of the United States. EPA and the Corps have adopted policies classifying the stream segment between the toe of the fill or impounding structure and the sediment pond to be to be a channel conveying industrial waste water from the mining operation to a treatment facility before discharge into waters of the United States.[4] These waste treatment systems are designed to assure that the water flowing from the sediment pond into waters of the United States will meet effluent limitations.

However, in 2007, the U.S. District Court for the Southern District of West Virginia held that these stream segments are in fact waters of the United States, that sediment washing off the face of the fill does not qualify as fill material, and that the discharge of pollutants such as sediment into the stream segments between the toe of the fill and the sedimentation pond embankment is impermissible unless the discharge is authorized in a permit issued under section 402 of the Clean Water Act. See *Ohio Valley Environmental Council* v. *U.S. Army Corps of Engineers*, Civ. Action No. 3:05–0784 (S.D. W. Va., June 13, 2007). That decision is on appeal to the U.S. Court of Appeals for the Fourth Circuit as of the date of writing of this preamble. Regardless of the outcome of that litigation, we see no need to revise our rules in response to the commenter's concern. We recognize that the litigation has the potential to affect the implementation of sediment control for excess spoil fills, the extent to which sediment ponds continue to be constructed in intermittent or perennial streams below fills and impounding structures, and the classification of stream segments between the toe of the fill and the sediment pond embankment. However, we believe this rule, as finalized here, is sufficiently flexible to accommodate any shift in implementation of the Clean Water Act. As stated in paragraph (f)(2) of sections 780.28 and 784.28 and paragraph (d) of sections 816.57 and 817.57, issuance of a SMCRA permit does not relieve the permittee of the obligation to comply with all requirements of the Clean Water Act.

• Erosion protection zones

These features, which are primarily the result of recent changes in West Virginia regulations (see West Virginia Code of State Regulations 38–2–14.14.g.2.) and are intended to promote fill stability, are considered part of the fill. No rule change is needed.

• Diversions

With the exception of stream-channel diversions, which are already included in paragraph (b)(1), the construction of diversions generally does not involve placement of fill material in a perennial or intermittent stream or other direct disturbance of the stream. Therefore; we see no reason to add them to the list of activities in paragraph (b).

• Stream crossings involving roads, conveyors, pipelines, or power lines

We have revised paragraph (b)(2) to clarify that it applies to the placement of bridge abutments, culverts, or other structures in or within 100 feet of a perennial or intermittent stream to facilitate the crossing of the stream by roads, railroads, conveyors, pipelines, utilities, or similar facilities.

• Ephemeral streams and isolated waters of the United States

These features are not subject to the stream buffer zone rule, which applies only to perennial and intermittent streams. However, their exclusion from the stream buffer zone rule does not mean that they need not be considered during the SMCRA permitting process. In some cases, the provisions of sections 816.97(f) and 817.97(f) concerning wetlands and habitats of unusually high value for fish and wildlife may apply.

• Activities listed in 33 CFR 323.4 for which no permit is required under section 404 of the Clean Water Act

The fact that certain activities do not require a permit for purposes of section 404 of the Clean Water Act is not sufficient justification for excluding those activities from the requirement to maintain an undisturbed buffer between surface activities and perennial and intermittent streams for purposes of regulation under SMCRA.

5. Paragraph (c)

As proposed, paragraph (c) of sections 816.57 and 817.57 would have provided that activities exempt from the prohibition on disturbance of the surface of lands within 100 feet of waters of the United States must comply with paragraphs (b)(10)(B)(i) and (b)(24) of section 515 of the Act (or, for underground mining operations, paragraphs (b)(9)(B) and (b)(11) of section 516 of the Act) and the regulations implementing those provisions of the Act. However, the referenced statutory provisions and regulations apply to all surface coal mining and reclamation operations, not just to those described in the proposed rule. Therefore, as adopted in the final rule, paragraph (c) applies to all activities conducted either in perennial or intermittent streams or within 100 feet of those streams.

Paragraphs (c)(1) through (c)(4) of the final rule reference and describe the OSM regulations, other than the stream buffer zone rules, that most directly relate to implementation of sections 515(b)(10)(B)(i) and (b)(24) and 516(b)(9)(B) and (b)(11) of SMCRA. Those regulations include the requirement in 30 CFR 816.41(d)(1) and 817.41(d)(1) that activities be conducted

[4] See, e.g., a letter dated March 1, 2006, from Benjamin Grumbles, Assistant Administrator of the Environmental Protection Agency, to John Paul Woodley, Assistant Secretary of the Army (Civil Works), which states that, for surface coal mining operations in the Appalachian Mountain states, the stream segment between the toe of the fill and the sedimentation pond will be considered part of the waste treatment system, not waters of the United States, for purposes of the Clean Water Act. The sedimentation pond must be constructed as close to the toe of the fill as practicable to minimize temporary adverse environmental impacts associated with construction and operation of the waste treatment system. The letter notes that, as a condition of approval, the Corps also requires that the stream segment be restored as soon as the mining operation is completed and the pond is no longer needed for treatment purposes. At that time, the stream segment will once again be classified as waters of the United States. Therefore, based on this provision of the letter, it may be prudent for the permittee to maintain an undisturbed buffer for the affected stream segment to the extent possible.

according to the plan approved under 30 CFR 780.21(h) or 784.14(g) and that earth materials, groundwater discharges, and runoff be handled in a manner that prevents, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow outside the permit area; and otherwise prevents water pollution. They also include the requirement in 30 CFR 816.45(a) and 817.45(a) that appropriate sediment control measures be designed, constructed, and maintained using the best technology currently available to prevent, to the extent possible, additional contributions of sediment to streamflow or to runoff outside the permit area. And they include the requirement in 30 CFR 816.97(a) and 817.97(a) that the operator must, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts on fish and wildlife and related environmental values and achieve enhancement of those resources where practicable. In the final rule, we are adding paragraph (c)(4) to incorporate a reference to 30 CFR 816.97(f) and 817.97(f). Those rules require that the operator avoid disturbances to, enhance where practicable, restore, or replace wetlands, habitats of unusually high value for fish and wildlife, and riparian vegetation bordering rivers, streams, lakes, and ponds.

Paragraph (c) does not impose any new requirements. Instead, it reiterates that the referenced rules apply to all surface coal mining and reclamation operations, including those activities that occur in or within 100 feet of a perennial or intermittent stream under paragraph (b) of sections 816.57 and 817.57.

6. Proposed Paragraph (d)

Proposed paragraph (d) of sections 816.57 and 817.57 provided that the permittee may not initiate any activities under paragraph (b) until the permittee obtains all necessary certifications and authorizations under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344. The preamble to the proposed rule stated that we considered that provision informational. We requested comment on whether the provision should remain informational or whether we should revise our rules to require its inclusion as a SMCRA permit condition, which would mean that the prohibition on initiation of activities before obtaining all necessary Clean Water Act authorizations and certifications would be independently enforceable under SMCRA. See 72 FR 48910, August 24, 2007.

Commenters were divided on this issue. The U.S. Fish and Wildlife Service and the Geologic and Water Resources Divisions of the National Park Service supported adoption of a rule requiring a permit condition under SMCRA. The EPA also supported adoption of a requirement for a permit condition under SMCRA, stating that such a requirement would enhance compliance with Clean Water Act requirements. One state regulatory authority opposed adoption of a requirement for a permit condition; the commenter instead recommended that coordination of permitting and enforcement of Clean Water Act requirements be left to the states and the Corps. Comments from the mining industry strongly opposed adoption of a rule that would impose a permit condition under SMCRA, expressing the fear that it would only result in more duplication and confusion in regulation of the coal mining industry. One commenter stated that, if the permittee needs to comply with the Clean Water Act, then the requirements of that statute should be enforced according to the statutory scheme specified in the Clean Water Act.

After reviewing the comments, we have decided not to adopt proposed paragraph (d). Instead, we are adopting new paragraph (a)(2), which provides that surface activities, including those activities identified in paragraphs (b)(1) through (b)(4) of sections 816.57 and 817.57, may be authorized in perennial or intermittent streams only where those activities would not cause or contribute to the violation of applicable State or Federal water quality standards developed pursuant to the Clean Water Act, as determined through certification under section 401 of the Clean Water Act or a permit under section 402 or 404 of the Clean Water Act. We are also adopting a new paragraph (d)(2) of sections 780.28 and 784.28. That paragraph provides that before approving a permit application in which the applicant proposes to conduct surface activities in a perennial or intermittent stream, the regulatory authority must include a permit condition requiring a demonstration of compliance with the Clean Water Act in the manner specified in paragraph (a)(2) of sections 816.57 and 817.57 before the permittee may conduct those activities. This requirement applies to the extent that the activities require authorization or certification under the Clean Water Act.

However, in adopting these rules, we reiterate that nothing in SMCRA provides the SMCRA regulatory authority with jurisdiction over the Clean Water Act or the authority to determine when a permit or authorization is required under the Clean Water Act. Under paragraphs (a) and (a)(2) of section 702 of SMCRA, nothing in SMCRA (and, by extension, regulations adopted under SMCRA) may be construed as superseding, amending, modifying, or repealing the Clean Water Act or any state laws or state or federal rules adopted under the Clean Water Act. In addition, nothing in the Clean Water Act vests SMCRA regulatory authorities with the authority to enforce compliance with the permitting and certification requirements of that law.

J. Sections 816.71 and 817.71 General Requirements for Disposal of Excess Spoil

As proposed, we have added a new paragraph (a)(4) to sections 816.71 and 817.71 to implement, in part, the requirements of sections 515(b)(24) and 516(b)(11) of the Act. Sections 515(b)(24) and 516(b)(11) require that surface coal mining and reclamation operations be conducted to ''minimize disturbances and adverse impacts of the operation on fish, wildlife, and related environmental values'' ''to the extent possible using the best technology currently available.''

The new paragraph requires that excess spoil be placed in designated disposal areas within the permit area in a controlled manner to minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values to the extent possible using the best technology currently available.

As previously discussed in Parts VIII.D. and VIII.E. of this preamble, we have moved paragraphs (b)(1) (design certification), (c) (location), and (d)(1) (foundation investigations) of the former version of sections 816.71 and 817.71 to sections 780.35 and 784.19 as part of our effort to place provisions that are solely design considerations and requirements in our permitting regulations rather than in the performance standards.

As proposed, in this final rule we are deleting the last sentence of paragraph (d)(2) of the former version of sections 816.71 and 817.71. That sentence required a stability analysis for rock toe buttresses and keyway cuts. We have deleted it because it duplicates requirements included in sections 780.35 and 784.19. Final paragraph (d) of sections 816.71 and 817.71 retains the requirement that keyway cuts or rock-toe buttresses be constructed to ensure fill stability when the slope in the disposal area exceeds either 2.8h:1v (36

percent) or any lesser slope designated by the regulatory authority based on local conditions.

As proposed, this final rule redesignates former paragraph (b)(2) of sections 816.71 and 817.71 as paragraph (b) of those sections. It revises that paragraph to require that the fill not only be designed to attain a minimum static safety factor of 1.5 as required by the former version of these rules, but that the fill actually be constructed to attain that safety factor. This change is consistent with section 515(b)(22)(A) of the Act, which requires that all excess spoil be placed in a way that ensures mass stability and prevents mass movement.

Consistent with the proposed rule, we are adding a new paragraph (c) to sections 816.71 and 817.71 to require that the permittee construct the fill in accordance with the design and plans submitted under section 780.35 or 784.19 and approved as part of the permit. This provision emphasizes that fills must be built on the sites selected under section 780.35 or 784.19 in a manner consistent with the designs submitted under those sections and approved as part of the permit. It is a companion to the new provisions concerning environmental protection and excess spoil minimization that we have added to sections 780.35 and 784.19.

Finally, as proposed, we are removing former section 817.71(k), which provided that spoil resulting from face-up operations for underground coal mine development may be placed at drift entries as part of a cut-and-fill structure if that structure is less than 400 feet in length and is designed in accordance with section 817.71. We removed this paragraph because spoil excavated as part of face-up operations and used to construct a mine bench is not excess spoil. As defined in 30 CFR 701.5, excess spoil consists of spoil material disposed of in a location outside the mined-out area, but it does not include spoil needed to achieve restoration of the approximate original contour. In most cases, spoil used to construct the bench for an underground mine will later be used to reclaim the face-up area when the underground mine is finished. That is, the bench will be regraded to cover the mine entry and eliminate any highwall once mining is completed and the bench is no longer needed for mine offices, parking lots, equipment storage, conveyor belts, and other mining-related purposes. Consequently, this paragraph of the regulations does not belong in a section devoted to disposal of excess spoil.

We are not moving the requirements of section 817.71(k) to another part of our rules because we do not find it necessary to impose the design requirements for excess spoil fills (which are permanent structures) on temporary spoil storage structures and support facilities, such as the benches to which section 817.71(k) applies. Nor do we find it necessary or appropriate to limit those benches to 400 feet in length. Bench length and configuration are more appropriately determined by operational, topographic, geologic, and other site-specific considerations. However, the regulatory authority has the right to impose design and construction requirements on a case-by-case basis when it determines that those requirements are a necessary prerequisite to making the permit application approval findings specified in 30 CFR 773.15.

In the preamble to the proposed rule, we sought comment on (1) whether this approach is adequate to accomplish the purposes and requirements of SMCRA, (2) whether we should codify the sentence concerning the right of the regulatory authority to impose requirements, or (3) whether more specific rules are needed or appropriate. We received no comments in response to this request.

We also received no comments on any of the proposed changes to sections 816.71 and 817.71.

K. What does the phrase ''to the extent possible'' mean in these rules?

Sections 515(b)(10)(B)(i), 515(b)(24), 516(b)(9)(B), and 516(b)(11) of SMCRA include the proviso that the requirements of those sections apply ''to the extent possible.'' Some of the rules that we are adopting today include similar language because they are based upon those provisions of the Act. Given the wide array of circumstances to which these requirements apply and the paucity of legislative history, we did not propose and are not adopting a definition of the phrase ''to the extent possible'' as part of this rulemaking. Instead, we and the State regulatory authorities will continue to determine the meaning of that phrase on a case-by-case basis in a manner consistent with section 102(f) of SMCRA. That section of the Act provides that one of the purposes of SMCRA is to ''assure that the coal supply essential to the Nation's energy requirements and to its economic and social well-being is provided and strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy.'' One comment from a State regulatory authority supported this approach.

In addition, section 515(b)(1) of SMCRA requires that surface coal mining operations be conducted ''so as to maximize the utilization and conservation of the solid fuel resource being recovered so that reaffecting the land in the future through surface coal mining can be minimized.'' We believe that the ''to the extent possible'' clause in paragraphs (b)(10)(B)(i) and (b)(24) of section 515 of SMCRA is properly interpreted in part by applying the environmental protection requirements of those paragraphs so as to give full force and effect to the coal recovery performance standard in section 515(b)(1), as reflected in the regulations at 30 CFR 816.59 and 817.59.

As adopted in this final rule, sections 780.25(d)(1), 780.35(a)(3), 780.16(d)(1), and 784.19(a)(3) require that permit applicants conduct an analysis of alternatives for excess spoil fills and coal mine waste disposal structures if those fills and structures involve the placement of excess spoil or coal mine waste in or within 100 feet of a perennial or intermittent stream. Those rules provide that, when evaluating all reasonably possible alternatives, permit applicants must select the alternative that would have the least overall adverse environmental impact. The final rules specify that an alternative is reasonably possible if it conforms to the safety, engineering, design, and construction requirements of the regulatory program; is capable of being done after consideration of cost, logistics, and available technology; and is consistent with the coal recovery provisions of section 816.59 or 817.59. In other words, nothing in the rule should be construed as elevating environmental concerns over safety considerations, as prohibiting the conduct of surface coal mining operations that are not otherwise prohibited under SMCRA or other laws or regulations, or as requiring consideration of unreasonably expensive or technologically infeasible alternatives.

The portion of our rules that refers to ''consideration of cost, logistics, and available technology'' is derived from the EPA regulations at 40 CFR 230.10(a)(2), which define a practicable alternative for purposes of section 404 of the Clean Water Act. In interpreting this provision, the EPA/COE memorandum entitled ''Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements'' states that ''[t]he determination of what constitutes an

unreasonable expense should generally consider whether the projected cost is substantially greater than the costs normally associated with this particular type of project.'' We have included similar language in paragraph (d)(1)(ii)(B) of sections 780.25 and 784.16 and paragraph (a)(3)(ii)(B) of sections 780.35 and 784.19 because (1) the concept of a practicable alternative for purposes of section 404 of the Clean Water Act is in some ways analogous to the determination of reasonably possible alternatives under this rule, and (2) the principle is consistent with the phrase ''to the extent possible'' in sections 515(b)(24) and 516(b)(11) of SMCRA. On the other hand, the fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. See Part VI.D. of this preamble for a more extensive discussion of the rationale for our use of the term ''reasonably possible'' and its consistency with statutory provisions.

On January 7, 2004 (69 FR 1036, 1047), we proposed to adopt the phrase ''to the maximum extent possible'' as part of 30 CFR 780.18(b)(3). Several commenters suggested that we replace ''possible'' with ''practicable'' or ''technologically and economically feasible.'' Other commenters stated that the proposed language was too vague, but they did not provide suggested replacement language.

In developing the proposed rule that we published on August 24, 2007, we decided not to propose any of the suggestions that commenters submitted on the 2004 proposed rule. The replacement language suggested by several commenters is no less vague or more specific than the statutory phrase ''to the extent possible.'' Nevertheless, we again solicited suggestions on how we could define the phrase ''to the extent possible.'' We received no suggestions.

We also sought comment on whether we should incorporate 40 CFR 230.70 through 230.75 (part of the 404(b)(1) Guidelines) as part of our rules to provide guidance in interpreting ''to the extent possible.'' We received one comment supporting incorporation and several comments opposing that action. One commenter pointed out the practical and legal problems and difficulties in having the SMCRA regulatory authority interpret and enforce Clean Water Act requirements. In view of those problems, and the fact that our review indicates that 40 CFR 230.70 through 230.75 would have relatively little relevance to surface coal mining and reclamation operations, we have decided not to incorporate those provisions as part of our regulations.

L. What does the phrase ''best technology currently available'' mean in these rules?

Our definition of ''best technology currently available'' at 30 CFR 701.5 embraces a wide range of activities, including those that may not be in routine use, if the regulatory authority determines they are currently available and will work. As such, it is sufficiently flexible to include new techniques developed over time that were not contemplated or in use at the time the definition was promulgated. Similarly, it is sufficiently flexible to include techniques that are not contemplated or in use today. Consequently, we cannot state with specificity what measures would constitute the best technology currently available in all situations.

Our regulations at 30 CFR 816.45 and 817.45 address sediment control measures and requirements for all surface coal mining and reclamation operations. Paragraph (a)(1) of those sections reiterates the requirements of sections 515(b)(10)(B)(i) and 516(b)(9)(B) of SMCRA concerning prevention of additional contributions of suspended solids to streamflow or runoff outside the permit area. Paragraph (b) of those rules lists various measures that may be employed to accomplish the sediment control requirements of paragraph (a).

At one time, paragraph (b)(2) of 30 CFR 816.46 and 817.46 prescribed siltation structures (sedimentation ponds and other treatment facilities with point-source discharges) as the best technology currently available for sediment control. However, that paragraph was struck down upon judicial review because the court found that we did not articulate a sufficient basis for the rule under the Administrative Procedure Act. In particular, the court held that the preamble to the rulemaking did not adequately discuss the benefits and drawbacks of siltation structures and alternative sediment control methods and did not enable the court ''to discern the path taken by [the Secretary] in responding to commenters' concerns'' that siltation structures in the West are not the best technology currently available. See *In re: Permanent Surface Mining Regulation Litigation II, Round III,* 620 F. Supp. 1519, 1566–1568 (D.D.C. July 15, 1985). On November 20, 1986 (51 FR 41961), we suspended the regulations that the court struck down. Therefore, those regulations are no longer dispositive in determining the best technology currently available. To avoid confusion on the part of readers of the Code of Federal regulations, we are removing paragraph (b)(2) of sections 816.46 and 817.46 as part of this rulemaking.

On November 13, 1990 (55 FR 47430–47435), we proposed to revise 30 CFR 816.45, 817.45, 816.46(b)(2), and 817.46(b)(2) to reestablish siltation structures as the best technology currently available for sediment control on surface coal mining and reclamation operations in areas receiving more than 26 inches of average annual precipitation. Regulatory authorities in areas with less than that amount of precipitation would have been able to specify alternative sediment control measures as the best technology currently available through the program amendment process. Most commenters opposed that approach and we never adopted the proposed rule, in part because it could have inhibited the development and implementation of new and innovative practices to control sediment. We decided that the regulatory authority should retain the discretion to determine what sediment control practices constitute the best technology currently available.

In addition to the sediment control regulations at 30 CFR 816.45 and 817.45 and the definition of ''best technology currently available'' in 30 CFR 701.5 discussed above, the legislative history of section 515(b)(15)(B)(i) of SMCRA provides some guidance as to what measures Congress considered to be the best technology currently available at that time to control sedimentation from minesites:

> Similarly, technology exists to prevent increased sediment loads resulting from mining from reaching streams outside the permit area. Sediment or siltation control systems are generally designed on a mine-by-mine basis which could involve several drainage areas or on a small-drainage-area basis which may serve several mines. There are a number of different measures that when applied singly or in combination can remove virtually all sediment or silt resulting from the mining operation. A range of individual siltation control measures includes: erosion and sediment control structures, chemical soil stabilizers, mulches, mulch blankets, and special control practices such as adjusting the timing and sequencing of earth movement, pumping drainage, and establishing vegetative filter strips.

H.R. Rep. No. 95–218 at 114 (April 22, 1977).

Furthermore, in Directive TSR–3, ''Sediment Control Using the Best Technology Currently Available,'' dated November 2, 1987, we state that we anticipate ''that in most cases sedimentation ponds or some other siltation structure will be BTCA [the

best technology currently available]'' for sedimentation control. Finally, the preamble to the 1990 proposed rule lists numerous literature resources concerning the best technology currently available for sedimentation control. See the footnotes at 55 FR 47431–47433, November 13, 1990. The preamble notes that ''[t]he effectiveness of specific practices may be restricted to specific areas and be dependent upon variables such as geomorphology, hydrology, climate and engineering design.'' *Id.* at 47342, col. 1.

In addition, the outcome of *Ohio Valley Environmental Council* v. *U.S. Army Corps of Engineers*, Civ. Action No. 3:05–0784 (S.D. W. Va., June 13, 2007), may affect what we consider to be the best technology currently available for sediment control below fills and impounding structures. The district court held that the stream segment between the toe of the fill or impounding structure and the sediment pond embankment must be considered waters of the United States rather than part of a waste treatment system designed to remove sediment prior to discharge into waters of the United States below the sediment pond. That decision is on appeal to the U.S. Court of Appeals for the Fourth Circuit as of the date of writing of this preamble.

As previously noted, SMCRA does not limit use of the term ''best technology currently available'' to the sediment control requirements of sections 515(b)(10)(B)(i) and 516(b)(9)(B). Sections 515(b)(24) and 516(b)(11) of SMCRA also require use of the best technology currently available to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible. Sections 515(b)(24) and 516(b)(11) are primarily implemented by the fish and wildlife protection performance standards at 30 CFR 816.97 and 817.97. Like the other regulations discussed in this part of the preamble, those performance standards and the related permitting requirements at 30 CFR 780.16 and 784.21 apply to all aspects of surface coal mining and reclamation operations, including those activities that are conducted in perennial and intermittent streams and activities that occur on the surface of lands within 100 feet of perennial or intermittent streams.

The preamble to 30 CFR 816.97(a) and 817.97(a) states that those rules ''allow an operator to consult any technical authorities on conservation methods to assure their compliance with the statutory requirement for use of the best technology currently available.'' 48 FR 30317, June 30, 1983. We anticipate that state and federal fish and wildlife, land management, and conservation agencies will be a useful resource in assisting the permittee and the regulatory authority in determining the best technology currently available under 30 CFR 780.16, 784.21, 816.97(a), and 817.97(a). For example, the Bureau of Land Management within the U.S. Department of the Interior has developed best management practices relating to stream crossings (see *http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/technical_information.html*) and the Utah Division of Oil, Gas and Mining has published ''The Practical Guide to Reclamation in Utah'' (see *https://fs.ogm.utah.gov/PUB/MINES/Coal_Related/RecMan/Reclamation_Manual.pdf*). Chapter 2 of the latter document discusses stream restoration and streambank bioengineering.

In some cases, the best technology currently available may consist primarily of minimizing the amount of land and waters affected. We anticipate that the analysis of alternatives and site selection requirements that we are adopting as part of the permitting requirements for disposal of coal mine waste and excess spoil in sections 780.25(d)(1), 784.16(d)(1), 780.35(a)(3), and 784.19(a)(3) would be the primary means of demonstrating use of the best technology currently available for those activities. The excess spoil minimization and fill design and construction requirements of paragraphs (a)(1) and (a)(2) of sections 780.35 and 784.19 are also significant. In addition, construction methodology and mining and reclamation techniques may play a role.

IX. Procedural Matters and Required Determinations

A. Executive Order 12866—Regulatory Planning and Review

This rule is considered a ''significant regulatory action'' under Executive Order 12866 and is subject to review by the Office of Management and Budget (OMB) because it may raise novel legal or policy issues, as discussed in the preamble.

With respect to other determinations required under Executive Order 12866—

a. This rule will not have an annual effect of $100 million or more on the economy. As discussed in the final environmental impact statement and, to a lesser extent, this preamble, it will not adversely affect in a material way the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities.

b. This rule will not create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

c. This rule will not alter the budgetary effects of entitlements, grants, user fees, or loan programs or the rights or obligations of their recipients.

With respect to the assessment required by section 6(a)(3)(B)(ii) of the executive order, the preamble discusses how the regulatory action is consistent with the statutory mandate in sections 515(b) and 516(b) of SMCRA to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or runoff outside the permit area and to minimize, to the extent possible using the best technology currently available, disturbances and adverse impacts on fish, wildlife, and related environmental values. To the extent permitted by law, the regulatory action also promotes the President's priorities, including energy production, and avoids undue interference with state, local, and tribal governments in the exercise of their governmental functions. See Parts IX.B. and IX.G. of this preamble.

We anticipate that the principal benefits of this rule will be (1) minimization of the adverse environmental impacts stemming from the construction of excess spoil fills and coal mine waste impoundments and fills and (2) clarification of the circumstances in which the prohibition in the stream buffer zone rule applies. As discussed in the final environmental impact statement, we cannot quantify these benefits.

The revisions are not expected to have an adverse economic impact on states and Indian tribes or the regulated industry, although some of the regulatory changes will result in an increase in the costs and burdens placed on coal operators and state regulatory authorities. Based on surveys conducted to prepare the supporting statements for this rule under the Paperwork Reduction Act, we estimate that the total annual cost increase for operators will be approximately $240,500, while the total annual cost increase for state regulatory authorities will be approximately $24,200. These increases are a result of the requirement to prepare and document the plans, analyses and findings required by the revised rules. The cost increases will principally affect those coal operators and states (Kentucky, Virginia, and West Virginia) located in the steep-slope terrain of the central Appalachian

coalfields, where the bulk of excess spoil is generated. Because all regulatory authorities in the Appalachian coalfields have implemented policies to minimize the volume of excess spoil disposed of outside the mined-out area, and because many operators already conduct alternative analyses to satisfy requirements under section 404 of the Clean Water Act, we expect no significant additional costs of implementing these regulatory changes. There may be other minor increases in costs associated with the new permitting requirements, in particular the alternatives analysis required for the disposal of excess spoil and coal mine waste in or near perennial and intermittent streams.

B. Executive Order 13211—Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This rule is not considered a significant energy action under Executive Order 13211. The revisions contained in this rule will not have a significant effect on the supply, distribution, or use of energy.

C. Regulatory Flexibility Act

The Department of the Interior certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). The revisions are expected to have only minimal adverse economic impact on the regulated industry, including small entities. Further, the rule will produce no adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States enterprises to compete with foreign-based enterprises in domestic or export markets. This determination is based upon the following analysis:

Baseline of Small Coal Mining Entities

The Small Business Administration (SBA) uses the North American Industry Classification System Codes (NAICS) to establish size standards for small businesses in the coal mining industry. The NAICS classification for the coal mining industry is code 2121. Subsets of this sector include Bituminous Coal and Lignite Surface Mining (code 212111), Bituminous Coal Underground Mining (code 212112), and Anthracite Mining (code 212113).

The size standard established for each of these categories is 500 or fewer employees for each business concern and associated affiliates. SBA considers business concerns to be affiliates when one concern ''controls or has the power to control the other, or a third party or parties controls or has the power to control both.''

The U.S. Census Bureau maintains statistics related to business employment, payroll and employment size categories for each NAICS description. Census Bureau data for 2005 show a total of 735 coal-mining firms employing a total of 74,260 persons. Of those firms, 672 had fewer than 500 employees. Those firms employed a total of 22,809 persons.

Data available from MSHA and the Energy Information Administration indicate that in 2006, there were 806 coal-mining firms employing a total of 81,891 persons and producing a total of 1,162,750,000 tons of coal. Within that total, there were 775 coal-mining firms with fewer than 500 employees. Those firms employed a total of 28,749 persons and produced a total of 247,400,000 tons of coal.

Thus, MSHA data indicate that in 2006 small coal-mining firms comprised 96 percent of the total number of coal-mining firms in the United States. Those firms employed 35 percent of the total number of persons engaged in coal mining nationwide and produced 21 percent of the nation's coal.

Baseline of Potentially Affected Entities

The principal change that could impact small coal mining firms is the requirement to minimize the volume of excess spoil generated at a particular mine site. Kentucky, Virginia, West Virginia, and Tennessee account for 98.6 percent of the total number of excess spoil fills approved nationwide in permits issued between October 2001 and June 2005. Thus, the baseline of potentially impacted entities has been limited to the coal-producing region of central Appalachia, which includes eastern Kentucky, Virginia, southern West Virginia, and Tennessee.

According to MSHA data, there were 389 coal-mining firms with fewer than 500 employees operating in central Appalachia in 2006. That number is approximately 23 percent of the total number of small coal-mining firms in the United States. The following data summarize coal production and employment in central Appalachia:

Total coal production: 236,127,000 tons.

Gross revenue from coal production: $11,275,064,250 (average price: $47.75 per ton).

Coal-mining firms with fewer than 500 employees: 389.

Coal produced by those firms: 87,447,368 tons.

Gross revenue from those firms: $4,175,611,822 (average price: $47.75 per ton).

Section 507(c) of SMCRA provides that an operator does not qualify for the small operator assistance program if the total annual production at all locations attributed to that operator exceeds 300,000 tons. We determined that 325 of the 389 firms within central Appalachia that MSHA identified as small entities produced less than 300,000 tons of coal per year.

Number of Potentially Affected Entities

According to MSHA data, in 2006 the 389 small coal-mining entities in central Appalachia operated a total of 765 mines, as shown in this table:

State	Number of small coal-mining entities	Number of mines operated by small entities	Percent of total number of mines operated by small entities in central Appalachia
Kentucky	224	397	51
Tennessee	10	35	5
Virginia	52	107	14
West Virginia	103	226	30
Total	389	765	100

We conducted an evaluation of permits issued in West Virginia between October 2001 and June 2005 to determine the number of stream miles impacted by excess spoil and coal mine waste fills permitted during that time. We used a sample of 110 of the 270 permits issued in West Virginia during that period. The sample included 28 permits for underground mining operations and 82 permits for surface mines and other types of mining-related operations regulated under SMCRA. A review of that data indicated that 4 percent (4) of all permits had refuse disposal facilities, 29 percent (24) of the permits for surface mines had excess spoil fills, and 4 percent (1) of the permits for underground mines had an excess spoil fill.

To collect information on excess spoil, we conducted an evaluation of 92 new permits issued in Kentucky during 2006. The data indicate that 64 percent of small surface mining operations have permits authorizing construction of excess spoil fills. Those fills will generate 32 percent of the total projected volume of fill material to be produced by surface mines in Kentucky. In addition, 67 percent of the small underground operations have permits authorizing construction of excess spoil fills. Those fills will generate 91 percent of the total projected volume of fill material to be produced by underground mines in Kentucky.

Extrapolating the data from the reviews of permits in Kentucky and West Virginia to all mines operated by small entities in central Appalachia, we estimate that the rule will impact 191 of the 389 small coal-mining entities in central Appalachia, based on the assumption that 64% (143) of the small entities in Kentucky will construct excess spoil fills and that 29% (48) of the small entities in West Virginia, Virginia, and Tennessee will do so.

Economic Impact on Potentially Affected Entities

We do not believe there will be any significant economic impact upon small entities. Only two new types of compliance costs would affect operators of coal mines: costs of an alternatives analysis for disposal of coal mine waste and/or excess spoil; and costs of minimizing the volume of excess spoil to the extent possible. It is not possible to quantify compliance costs for all potentially affected small entities because each mine site is unique and the operational costs of complying with the rule will vary.

Under the final rule, an operator must design and construct a mine to minimize both the volume of excess spoil created and the adverse impacts of excess spoil fills and coal mine waste disposal facilities on fish, wildlife, and related environmental values. Whenever a permit application proposes to place excess spoil or coal mine waste in or within 100 feet of a perennial or intermittent stream, the final rule requires the permit applicant to identify a range of reasonably possible alternatives and select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values. In determining whether an alternative is reasonable, the applicant must consider cost, logistics, and the availability of technology.

Based on discussions with mining consultants, developing the alternatives analysis for the permit application will cost between $10,000 and $15,000 per permit. However, most operators will incur little to no additional cost to provide the alternatives analysis because the Corps of Engineers usually requires a similar analysis to satisfy Clean Water Act requirements.

With respect to operational costs, Section IV of a draft environmental impact statement [5] issued in 2003 by the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, OSM, and the West Virginia Department of Environmental Protection contains the following discussion of fill minimization costs:

> Fill minimization may increase operational costs to the mining operator because spoil that must be returned to the mine site has higher handling costs than the current practice of end-dump valley fill construction. * * * While not a direct comparison, and somewhat dated, the regulatory analysis that we used for the permanent program regulations indicated that placing spoil in lifts versus end-dumping to build valley fills added 17 cents/ton to the cost of mining coal in central Appalachia.

The same document estimates the cost of compliance with a West Virginia Department of Environmental Protection policy intended to minimize the volume of excess spoil at 50 cents to one dollar for each cubic yard of spoil that, as a result of the policy, is retained on the mined-out area rather than placed in an excess spoil fill. We will use the West Virginia estimate as the cost of compliance with the fill minimization provisions of this final rule. However, some of those costs are offset by reduced mitigation expenses under other state and federal laws because compliance with the policy typically results in substantially reducing the length of stream segments impacted.

We have analyzed the impact on eastern Kentucky small coal mine operators in more detail because more data is available from that state. We estimate that coal mines operated by the 143 small coal-mining entities in Kentucky with excess spoil fills will generate 32 percent (114,514,880 cubic yards) of the 357,829,000 cubic yards of excess spoil approved in all surface mine permits issued in 2006 in Kentucky. If we assume that the requirement to minimize the placement of spoil outside the mined-out area would require small entities to reduce the volume of excess spoil fills by 25 percent, then those entities will have to retain approximately 28,628,720 additional cubic yards within the mined out area for the permits that they received in 2006. Further assuming that the unit cost for placing this amount of excess spoil within the mined-out area would be the same as in West Virginia (50 cents to one dollar per cubic yard), the total cost of this placement to small coal-mining entities in Kentucky will range from $14 million to $28 million, or an average of $98,000 to $196,000 per small entity with excess spoil.

We do not have sufficient data to perform a similar calculation for small coal-mining entities in the other three states. However, we can use the average cost per small entity with excess spoil in Kentucky to project a reasonable range of costs for small coal-mining entities in the remaining central Appalachian states. Specifically, the 48 potentially impacted small entities in Tennessee, Virginia, and West Virginia could incur an additional cost of $4.7 million to $9.4 million.

Combining the projections for the 143 small entities in Kentucky and the 48 small entities in other states results in an estimated total cost ranging between $18.7 million and $37.4 million for all 191 small entities projected to be impacted.

In the aggregate, the 224 small coal-mining entities in eastern Kentucky produced 41,587,096 tons of coal in 2006. At an average price of $47.75 per ton, the gross revenue from that production equals $1,985,783,800, with $1,270,901,653 of that amount attributable to the 64% (143) of the small entities that we project will be impacted by this rule. Thus, the estimated cost of compliance with the requirement to minimize the placement of spoil outside the mined-out area is projected to range from 1.1 percent to 2.2 percent of the gross revenue for the 143 potentially impacted eastern Kentucky small coal-mining entities.

[5] ''Mountaintop Mining/Valley Fills in Appalachia Draft Programmatic Environmental Impact Statement'' (EPA 9–03–R–00013, EPA Region 3, June 2003).

At the same average price of $47.75 per ton, gross revenue in 2006 for the other 165 small coal-mining entities in central Appalachia equals $2,985,783,834, of which $635,050,116 is attributable to the 29% (48) of those entities that we project will be impacted by this rule. Therefore, at an average price of $47.75 per ton, gross revenue in 2006 totals $1,905,951,769 for the 191 central Appalachian small entities that we project will be impacted by this rule.

Extrapolating this data to the central Appalachian region as a whole, we estimate the cost of compliance will range between $18.7 million and $37.4 million, which translates to a range of 0.98 percent to 1.9 percent of the total gross revenue ($1,905,951,769) generated by potentially impacted small coal-mining entities in central Appalachia. This estimate is based on the assumption that only 48 (29%) of the 165 small coal-mining entities in Tennessee, Virginia, and West Virginia produce excess spoil, while 64% (143) of the 224 Kentucky small coal-mining entities do so.

All regulatory authorities in central Appalachia have already implemented policies to minimize the volume of excess spoil placed outside the mined-out area, which means that, based on surveys conducted under the Paperwork Reduction Act, we expect that operators will incur no significant additional costs to implement these regulatory changes.

We received no comments on the proposed rule from small municipalities (those with 50,000 or fewer residents) or local public entities such as water authorities. We anticipate that the final rule will not have any significant impact on those entities because, as discussed in the final environmental impact statement (EIS) for this rulemaking, we do not expect that the rule will either increase or decrease mining activities, either nationwide or in central Appalachia. Pages IV–165 and IV–166 of the final EIS discuss the lack of impact of this rule on the economy of the coal mining regions.

D. Small Business Regulatory Enforcement Fairness Act

This rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. Based on the analysis in paragraphs A and C above, we have determined that the rule will not—

a. Have an annual effect on the economy of $100 million or more.

b. Cause a major increase in costs or prices for consumers, individual industries, Federal, state, or local government agencies, or geographic regions.

c. Have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

E. Unfunded Mandates

This rule will not impose an unfunded mandate on state, local, or tribal governments or the private sector of more than $100 million per year. The rule will not have a significant or unique effect on state, tribal, or local governments or the private sector. A statement containing the information required by the Unfunded Mandates Reform Act (2 U.S.C. 1534) is not required.

F. Executive Order 12630—Takings

This rule does not affect property rights. It governs how coal may be mined rather than whether it may be mined. For this reason and based on the discussion in the preamble and the analysis in the final environmental impact statement, we have determined that the rule will not have significant takings implications.

G. Executive Order 13132—Federalism

This rule does not alter or affect the relationship between states and the Federal Government. Therefore, the rule will not have significant Federalism implications. Consequently, there is no need to prepare a Federalism assessment.

H. Executive Order 12988—Civil Justice Reform

The Office of the Solicitor for the Department of the Interior has determined that this rule will not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Executive Order.

I. Executive Order 13175—Consultation and Coordination With Indian Tribal Governments

We have evaluated the potential effects of this rule on federally recognized Indian tribes and have determined that no consultation or coordination is required because the rule will not have substantial direct effects on the relationship between the Federal Government and Indian tribes or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

J. Paperwork Reduction Act

In accordance with 44 U.S.C. 3501 *et seq.*, we sought comments on the collections of information contained in the proposed rule for modifications to 30 CFR parts 780, 784, 816, and 817. We received no comments from the public regarding these collections of information. The Office of Management and Budget has approved the information collection activities for these parts and assigned control numbers 1029–0128 for sections 780.25, 780.28, and 780.35 (to be consolidated into 1029–0036 upon approval); 1029–0039 for part 784; and 1029–0047 for parts 816 and 817. The expiration date for these collections of information is December 31, 2011. These collections estimate the burden as follows:

30 CFR Part 780, Sections 780.25, 780.28, and 780.35

Title: Surface Mining Permit Applications-Minimum Requirements for Reclamation and Operation Plan.

OMB Control Number: 1029–0128 (To be consolidated into 1029–0036).

Summary: Section 506(a) of SMCRA, 30 U.S.C. 1256(a), requires that persons obtain a permit before conducting surface coal mining operations. Sections 507 and 508, 30 U.S.C. 1257 and 1258, respectively, establish application requirements, including a reclamation plan. The regulations in 30 CFR 780.25, 780.28, and 780.35 implement these statutory provisions with respect to coal mine waste, excess spoil, impoundments, siltation structures, and mining in or near perennial or intermittent streams. The regulatory authority uses the information submitted in the permit application to determine whether the reclamation plan will achieve the reclamation and environmental protection requirements of the Act and regulatory program. Without this information, OSM and state regulatory authorities could not make the findings that section 510 of SMCRA, 30 U.S.C. 1260, requires before a permit application for surface coal mining operations may be approved.

Bureau Form Number: None.

Frequency of Collection: Once.

Description of Respondents: Applicants for surface coal mining permits and state regulatory authorities.

Total Annual Respondents: 270 applicants and 24 state regulatory authorities.

Total Annual Burden Hours: 47,380.

SUMMARY OF ANNUAL BURDEN TO RESPONDENTS FOR 30 CFR 780.15, 780.25, 780.28, AND 780.35

Section	Number of applications	Number of state reviews	Hours per application	Hours per state review	Total hours requested	Hours currently approved	Difference
780.15	0	0	0	0	0	8	(8)
780.25	225	221	123	25.2	33,250	14,155	19,095
780.28	270	264	10	10	5,340	0	5,340
780.35	170	168	27	25	8,790	12,660	(3,870)
Totals			160	60.2	47,380	26,823	20,557

Non-Labor Cost Burden: $202,000.

30 CFR Part 784

Title: Underground Mining Permit Applications-Minimum Requirements for Reclamation and Operation Plan.

OMB Control Number: 1029–0039.

Summary: Among other things, section 516(d) of SMCRA, 30 U.S.C. 1266(d), in effect requires applicants for permits for underground coal mines to prepare and submit an operation and reclamation plan for coal mining activities as part of the application. The regulatory authority uses this information to determine whether the plan will achieve the reclamation and environmental protection requirements of the Act and regulatory program. Without this information, OSM and state regulatory authorities could not approve permit applications for underground coal mines and related facilities.

Bureau Form Number: None.

Frequency of Collection: Once.

Description of Respondents: Applicants for underground coal mine permits and state regulatory authorities.

Total Annual Respondents: 62 applicants and 24 state regulatory authorities.

Total Annual Burden Hours: 21,761.

INFORMATION COLLECTION SUMMARY FOR 30 CFR PART 784

Section	Industry responses	Industry hours per response	State responses	State hours per response	Total hours requested	Currently approved burden hours	Program changes	Adjustment	Change to burden hours
784.11	62	4	61	3	431	347	0	84	84
.12	25	6	24	2.25	204	198	0	6	6
.13	62	53	61	4.5	3,561	3,101	0	460	460
.14	62	40	61	8.75	3,014	3,063	0	−49	−49
.15	62	6	61	1	433	398	0	35	35
.16	62	16	61	10	1,602	814	801	−13	788
.17	1	6	1	5	11	99	−95	7	−88
.18	28	8	27	2	278	278	0	0	0
.19	47	9	46	12	975	583	369	23	392
.20	62	12	61	4	988	1,004	0	−16	−16
.21	62	4	61	8	736	245	0	491	491
.22	62	24	61	6	1,854	1,404	0	450	450
.23	62	40	61	7.5	2,938	2,954	0	−16	−16
.24	62	20	61	4.5	1,515	1,392	0	123	123
.25	34	6	33	4	336	346	0	−10	−10
.28	49	10	48	10	970	0	970	0	970
.29	62	16	61	5	1,297	331	0	966	966
.30	62	8	61	2	618	628	0	−10	−10
Totals					21,761	17,185	2,045	2,531	4,576

Non-Labor Cost Burden: $612,106.

30 CFR Parts 816 and 817

Title: Permanent Program Performance Standards—Surface and Underground Mining Activities.

OMB Control Number: 1029–0047.

Summary: Sections 515 and 516 of SMCRA provide that permittees conducting coal mining and reclamation operations must meet all applicable performance standards of the regulatory program approved under the Act. The information collected is used by the regulatory authority in monitoring and inspecting surface coal mining and reclamation operations to ensure that they are conducted in compliance with the requirements of the Act.

Bureau Form Number: None.

Frequency of Collection: Once, on occasion, quarterly and annually.

Description of Respondents: Coal mine operators, permittees, permit applicants, and state regulatory authorities.

Total Annual Respondents: 4764 permittees and 24 state regulatory authorities

Total Annual Burden Hours: 1,092,430.

INFORMATION COLLECTION SUMMARY FOR 30 CFR PARTS 816 AND 817

Section	Industry responses	Industry hours per response	State responses	State hours per response	Total hours requested	Currently ,LI≤ approved burden hours	Changes to burden hours
.41	68,900	6.5	0	0	447,850	447,850	0
.43	616	16	270	5	11,206	4,480	6,726
.49	17,592	6	0	0	105,552	126,144	(20,592)
.57	0	0	0	0	0	30,800	(30,800)
.62	38,480	4	0	0	153,920	101,010	52,910
.64	962	4	0	0	3,848	3,848	0
.67	150,072	1.2	0	0	180,086	180,086	0
.68	962	12	0	0	11,544	11,544	0
.71	9,072	8	0	0	72,576	475,136	(402,560)
.81	0	0	0	0	0	15,528	(15,528)
.83 & .87	7,764	3	0	0	23,292	23,292	0
.116	880	80	2	100	70,600	70,600	0
817.121	80	4	0	0	320	320	0
817.122	1,638	.5	0	0	819	816	3
.131	335	16	331	.5	5,526	5,360	166
.151	481	11	0	0	5,291	5,291	0
Totals	297,834		603		1,092,430	1,502,105	(409,675)

Note: Under 30 CFR 816/817.41, the water monitoring reports required under the National Pollutant Discharge Elimination System (NPDES) are not counted as an OSM burden.

Non-Labor Cost Burden: $371,064.

These burden estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collections of information. We may not conduct or sponsor and you are not required to respond to a collection of information unless we display a currently valid OMB control number. These control numbers are identified in sections 780.10, 784.10, 816.10, and 817.10 of 30 CFR parts 780, 784, 816, and 817, respectively.

You should direct any comments on the accuracy of our burden estimates; ways to enhance the quality, utility, and clarity of the information to be collected; and ways to minimize the burden of collection on respondents, to the Information Collection Clearance Officer, Office of Surface Mining Reclamation and Enforcement, 1951 Constitution Ave, NW., Room 202 SIB, Washington, DC 20240.

K. National Environmental Policy Act

This rule constitutes a major Federal action significantly affecting the quality of the human environment under the National Environmental Policy Act of 1969 (NEPA). Therefore, we have prepared a final environmental impact statement (FEIS) pursuant to section 102(2)(C) of NEPA, 42 U.S.C. 4332(2)(C). The FEIS, which is entitled ''OSM–EIS–34: Proposed Revisions to the Permanent Program Regulations Implementing the Surface Mining Control and Reclamation Act of 1977 Concerning the Creation and Disposal of Excess Spoil and Coal Mine Waste and Stream Buffer Zones,'' is available on the Internet at *www.regulations.gov.* The Docket ID number is OSM–2007–0008. A copy of the FEIS is also available for inspection as part of the administrative record for this rulemaking in the South Interior Building, Room 101, 1951 Constitution Avenue, NW., Washington, DC 20240.

Both we and EPA published notices of availability of the FEIS on October 24, 2008 (73 FR 63510 and 63470, respectively). The wait period for the FEIS under 40 CFR 1506.10(b)(2) expired November 24, 2008. During that period, we received approximately 930 comments. However, the vast majority of commenters did not address the FEIS. Instead, the commenters variously expressed opposition to mountaintop removal operations, the placement of fill material in streams, mining activities adjacent to streams, or all or part of the proposed rule that we published on August 24, 2007, for which the comment period closed almost one year earlier (November 23, 2007). Some commenters opposed EPA concurrence with the final rule. A few commenters urged adoption of a wider buffer zone for streams to provide greater environmental protection. To the limited extent that commenters referred to the FEIS, they generally either expressed a preference for one of the alternatives (usually the no action alternative) or criticized the FEIS for not analyzing in detail the alternative prohibiting all mining activities within the stream buffer zone. There were no comments that raised substantive issues or identified significant errors or admissions that would necessitate reconsideration of the adequacy of the FEIS.

The preamble to this final rule serves as the ''Record of Decision'' under NEPA. Because of the length of the preamble, we have prepared the following concise summary of the FEIS and the decisions made in the final rule relative to the alternatives considered in the FEIS.

Because of the comments we received on the proposed rule and draft EIS, the final rule differs somewhat from the proposed rule, which means that the preferred alternative in the final EIS differs somewhat from the preferred alternative in the draft EIS. In making these changes and in developing the final rule, we used the EIS to understand the potential environmental impacts.

Alternatives Considered

The draft and final environmental impact statements contain an analysis of five rulemaking alternatives, which are summarized below. Alternative 1 is both the preferred alternative and the environmentally preferable alternative; it forms the basis for the final rule that we are adopting today.

No Action Alternative

Under this alternative, we would not adopt any new or revised rules. The current regulations applicable to excess spoil generation, coal mine waste disposal, fill construction, and stream buffer zones would remain unchanged.

One state regulatory authority supported this alternative because it would require no changes in state regulatory programs.

Alternative 1: Preferred Alternative

Under this alternative, as set forth in the draft EIS, we would revise our rules to—

- Require the permit applicant to demonstrate that the operation has been designed to minimize the volume of excess spoil to the extent possible.
- Require that excess spoil fills be designed and constructed to be no larger than needed to accommodate the anticipated volume of excess spoil that the proposed operation will generate.
- Require that permit applicants for operations that would generate excess spoil develop various alternative excess spoil disposal plans in which the size, numbers, configuration, and locations of the fills vary; submit an analysis of the environmental impacts of those alternatives; and select the alternative with the least overall adverse environmental impact or demonstrate to the satisfaction of the regulatory authority why implementation of that alternative is not possible.
- Require that excess spoil fills be constructed in accordance with the plans approved in the permit and in a manner that minimizes disturbances to and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available.
- Require that permit applicants for operations that would include coal mine waste disposal structures identify alternative disposal methods and alternative locations for any disposal structures; analyze the viability and environmental impacts of each alternative; and select the alternative with the least overall adverse environmental impact or demonstrate to the satisfaction of the regulatory authority why implementation of that alternative is not possible.
- Revise the stream buffer zone rules to apply to all waters of the United States and modify the permit application requirements accordingly; identify those activities that are not subject to the prohibition on conducting mining and reclamation activities on the surface of lands within 100 feet of waters of the United States; consolidate and revise requirements for stream-channel diversions in 30 CFR 816.43 and 817.43, and replace the existing findings regarding stream water quantity and quality and State and Federal water quality standards with language that better correlates with the underlying provisions of SMCRA (paragraphs (b)(10)(B)(i) and (b)(24) of section 515 and paragraphs (b)(9)(B) and (b)(11) of section 516).

However, after evaluating the comments that we received on the draft EIS and the proposed rule, we substantially revised the preferred alternative. A description of the modified preferred alternative appears below, organized by subject (excess spoil, coal mine waste, stream buffer zones):

Excess Spoil

This alternative would revise 30 CFR 780.35 and 784.19 to require that a permit application in which the applicant proposes to generate excess spoil include a demonstration, to the satisfaction of the regulatory authority, that the operation is designed to minimize, to the extent possible, the volume of excess spoil that the operation will generate, thus ensuring that spoil is returned to the mined-out area to the extent possible, taking into consideration applicable regulations concerning restoration of the approximate original contour, safety, stability, and environmental protection and the needs of the proposed postmining land use. The revised regulations would also require a demonstration, prepared to the satisfaction of the regulatory authority, that the designed maximum cumulative volume of all proposed excess spoil fills within the permit area is no larger than the capacity needed to accommodate the anticipated cumulative volume of excess spoil that the operation will generate, as approved by the regulatory authority.

The revised regulations also would provide that the applicant must design the operation to avoid placement of excess spoil in or within 100 feet of a perennial or intermittent stream to the extent possible. The purpose of this provision is to minimize adverse impacts on fish, wildlife, and related environmental values. If avoidance is not possible, the applicant would have to explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of excess spoil in or within 100 feet of a perennial or intermittent stream is not reasonably possible. In addition, the applicant would have to identify a reasonable range of alternatives that vary with respect to the number, size, location, and configuration of proposed fills. The applicant would have to identify only those alternatives that are reasonably possible and that are likely to differ in terms of impacts on fish, wildlife, and related environmental values.

An alternative would be reasonably possible if it conformed to the safety, engineering, design, and construction requirements of the regulatory program and is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative would not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally could be considered unreasonable if its cost was substantially greater than the costs normally associated with this type of project. In addition, to be considered reasonable, a potential alternative would have to be consistent with the coal recovery provisions of 30 CFR 816.59 and 817.59, which provide that mining activities must be conducted so as to maximize the utilization and conservation of the coal, while utilizing the best appropriate technology currently available to maintain environmental integrity, so that reaffecting the land in the future through surface coal mining operations is minimized.

The applicant would have to analyze the impacts of each of the identified alternatives on fish, wildlife, and related environmental values, taking into consideration both terrestrial and aquatic ecosystems. For every alternative that would involve placement of excess spoil in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed fill, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the excess spoil may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream. If the applicant prepared an analysis of alternatives for the proposed fill under 40 CFR 230.10 to meet Clean Water Act requirements, the applicant could initially submit a copy of that analysis with the application in lieu of complying with the analytical requirements detailed in the preceding sentence. The regulatory authority would determine whether and to what extent the analysis prepared for Clean Water Act purposes satisfies the analytical requirements under this alternative.

The applicant would be required to select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and terrestrial and aquatic ecosystems.

Finally, under the preferred alternative, we would revise the performance standards concerning

excess spoil at 30 CFR 816.71 and 817.71 by adding a requirement that the permittee construct the fill in accordance with the design and plans approved in the permit. We also would add a provision requiring the permittee to place excess spoil in a location and manner that would minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available.

Coal Mine Waste

This alternative would revise our coal mine waste disposal regulations in a fashion similar to what we proposed for excess spoil disposal. The permitting regulations at 30 CFR 780.25 and 784.16 would be revised to provide that the applicant must design the operation to avoid placement of coal mine waste in or within 100 feet of perennial or intermittent stream to the extent possible. If avoidance is not reasonably possible, the applicant would have to identify a reasonable range of alternative locations or configurations for any proposed refuse piles or coal mine waste impoundments. The applicant would have to identify only alternatives that are reasonably possible and that are likely to differ in terms of impacts on fish, wildlife, and related environmental values. The fact that one alternative may cost somewhat more than a different alternative would not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally could be considered unreasonable if its cost is substantially greater than the costs normally associated with this type of project. In addition, to be considered reasonable, a potential alternative would have to be consistent with the coal recovery provisions of 30 CFR 816.59 and 817.59, which provide that mining activities must be conducted so as to maximize the utilization and conservation of the coal, while utilizing the best appropriate technology currently available to maintain environmental integrity, so that reaffecting the land in the future through surface coal mining operations is minimized.

The applicant would have to analyze the impacts of each of the identified alternatives on fish, wildlife, and related environmental values, taking into consideration both terrestrial and aquatic ecosystems. For every alternative that would involve placement of coal mine waste in a perennial or intermittent stream, the analysis would have to include an evaluation of the impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed refuse pile or slurry impoundment, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the coal mine waste may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream. If the applicant prepared an analysis of alternatives for the proposed refuse pile or slurry impoundment under 40 CFR 230.10 to meet Clean Water Act requirements, the applicant could initially submit a copy of that analysis with the application in lieu of complying with the analytical requirements detailed in the preceding sentence. The regulatory authority would then determine whether and to what extent the analysis prepared for Clean Water Act purposes satisfies the analytical requirements under this alternative.

The applicant would be required to select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

Stream Buffer Zones

This alternative would add new regulations at 30 CFR 780.28 and 784.28 to establish permit application requirements and regulatory authority review responsibilities if mining or related regulated activities are proposed in or within 100 feet of a perennial or intermittent stream. The new requirements, which would reflect the SMCRA provisions upon which the stream buffer zone rule is based, would replace the findings that the regulatory authority must make under existing 30 CFR 816.57(a)1) and 817.57(a)(1) before authorizing activities within 100 feet of a perennial or intermittent stream. The findings in the existing rule include several Clean Water Act-related provisions that would be removed under this alternative.

When an applicant proposes to conduct activities in the stream itself, the preferred alternative would require that the applicant demonstrate that avoiding disturbance of the stream is not reasonably possible. The applicant also would have to demonstrate that the activities would comply with all applicable regulations concerning use of the best technology currently available to prevent contributions of additional suspended solids to streamflow or runoff outside the permit area to the extent possible and to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible. Before approving the proposed activities in the stream, the regulatory authority would have to prepare written findings concurring with those demonstrations.

When an applicant proposes to conduct activities within the buffer zone but not within the stream itself, the preferred alternative would require that the applicant demonstrate that avoiding disturbance of the stream buffer zone either is not reasonably possible or is not necessary to meet the hydrologic balance and fish and wildlife protection requirements of the regulatory program. The applicant also would have to identify any lesser buffer zone that he or she proposes to maintain and explain how the lesser buffer zone, together with any other protective measures proposed, constitute the best technology currently available to prevent contributions of additional suspended solids to streamflow or runoff outside the permit area to the extent possible and to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible. Before approving the applicant's proposed activities in the stream buffer zone, the regulatory authority would have to prepare written findings concurring with the demonstration and explanation in the application.

In all cases, the new rules would require that the applicant identify the authorizations and certifications that would be needed under the Clean Water Act and its implementing regulations. The preferred alternative would clarify that, while the SMCRA permit may be issued in advance of any necessary Clean Water Act authorization, issuance of a SMCRA permit does not allow the permittee to initiate any activities for which Clean Water Act authorization or certification is needed.

Under the preferred alternative, we also would revise the stream buffer zone performance standards at 30 CFR 816.57 and 817.57 to provide that the requirement to maintain an undisturbed buffer around a perennial or intermittent stream does not apply to those stream segments for which the regulatory authority approves one or more of the following activities:

- Diversion of a perennial or intermittent stream.
- Placement of bridge abutments, culverts, or other structures in or within 100 feet of a perennial or intermittent stream to facilitate crossing of the stream by roads, railroads, conveyors, pipelines, utilities, or similar facilities.
- Construction of sedimentation pond embankments in a perennial or

intermittent stream, including the pool or storage area created by the embankment.

• Construction of excess spoil fills and coal mine waste disposal facilities in a perennial or intermittent stream.

Each of these activities would remain subject to all other existing performance standards, including standards that regulate the environmental impacts of the activities. Thus, for example, all surface activities conducted in or within 100 feet of a perennial or intermittent stream must comply with SMCRA sections 515(b)(10)(B)(i) and 515(b)(24) and various regulations implementing those statutory provisions. Also, paragraph (b) of 30 CFR 816.57 and 817.57 (1983), which requires that buffer zones be marked, would be deleted and merged with our other signs and markers requirements at 30 CFR 816.11(e) and 817.11(e).

In the draft EIS, we also sought comment on a variant of this alternative, which would revise the buffer zone rule to apply to all waters of the United States and would eliminate paragraph (a)(2) of 30 CFR 816.57 and 817.57 (1983), which contained a redundant requirement for a finding that stream-channel diversions will comply with 30 CFR 816.43 or 817.43. However, the variant otherwise would retain much of the 1983 stream buffer zone rule language at 30 CFR 816.57(a) and 817.57(a), with several modifications. The first modification would revise paragraph (a)(1), which required that the regulatory authority find that the ''mining activities will not cause or contribute to the violation of applicable State or Federal water quality standards, and will not adversely affect the water quantity and quality or other environmental resources of the stream,'' by inserting the clause ''as indicated by issuance of a certification under section 401 of the Clean Water Act or a permit under section 402 or 404 of the Clean Water Act'' after ''State or Federal water quality standards,'' by replacing the phrase ''adversely affect'' with ''significantly degrade,'' and by replacing the phrase ''of the stream'' with ''of the waters outside the permit area.'' In addition, this variant would add a new finding that would require minimization of disturbances and adverse impacts on fish, wildlife, and other related environmental values of the waters to the extent possible using the best technology currently available.

Apart from its expansion to include all waters of the United States, this variant would largely preserve the status quo in terms of application of the 1983 stream buffer zone rule. The revised rule language would be more consistent than the existing rule language with the historical application of the 1983 stream buffer zone rule, which we discussed earlier in Parts III.D. and III.E. of this preamble. The change from ''adversely affect'' to ''significantly degrade'' would replace language of uncertain provenance with language similar to that found in the 404(b)(1) Guidelines at 40 CFR 230.10(c), which pertains to placement of dredged or fill materials in waters of the United States under section 404 of the Clean Water Act. The proposed new finding in paragraph (a)(3) would reiterate the requirements of section 515(b)(24) of SMCRA.

We sought comment on the benefits and drawbacks of this variant as contrasted with the buffer zone rule changes that we proposed. In particular, we invited comment on the extent to which our rules can or should incorporate broad references to Clean Water Act requirements and use Clean Water Act terminology in place of SMCRA terminology. We also invited comment on whether and how our preferred alternative and this variant differ in terms of impact on the ability of proposed surface coal mining and reclamation operations to qualify for a nationwide permit under section 404 of the Clean Water Act.

We received very few comments in response to this request. Those that we did receive generally opposed adoption of the variant because of the change from ''adversely affect'' to ''significantly degrade'' and, in one case, replacing the phrase ''of the stream'' with ''of the waters outside the permit area.''

Alternative 2: January 7, 2004, Proposed Rule

Under this alternative, we would revise our regulations in a manner similar to that set forth in our January 7, 2004, proposed rule (69 FR 1036). In essence, the changes to our excess spoil regulations would be generally analogous to the changes described in Alternative 1, but we would not make similar changes to our coal mine waste disposal rules. With respect to the stream buffer zone rules, we would retain the prohibition on disturbance of land within 100 feet of a perennial or intermittent stream, but alter the findings that the regulatory authority must make before granting a variance to this requirement. The revised rule would replace the findings in the 1983 stream buffer zone rule with a requirement that the regulatory authority find in writing that the activities would, to the extent possible, use the best technology currently available to—

(1) Prevent additional contributions of suspended solids to the section of stream within 100 feet downstream of the mining activities, and outside the area affected by mining activities; and

(2) Minimize disturbances and adverse impacts on fish, wildlife, and other related environmental values of the stream.

Under this alternative, persons seeking to conduct surface mining activities (or, for underground mines, surface activities) on the surface of lands within the buffer zone of a perennial or intermittent stream would have to seek and obtain a variance from the regulatory authority in all cases, even if the stream segment is to be diverted or filled. There would be no categorical exceptions for certain activities as there are under Alternative 1.

Essentially, Alternative 2 differs from Alternative 1 in the following respects: Under Alternative 2, the changes to the excess spoil regulations would be generally analogous to the changes described in Alternative 1, with the exception that an alternatives analysis would be required in every case in which an operation generated excess spoil, not just those for those operations that propose to place excess spoil in or within 100 feet of a perennial or intermittent stream. In addition, Alternative 2 would not amend the coal mine waste disposal rules. With respect to the stream buffer zone rule, Alternative 2, unlike Alternative 1, would not establish separate permitting requirements for proposed activities in or within 100 feet of a perennial or intermittent stream. Unlike Alternative 1, Alternative 2 provides no exception from the requirement to either avoid the buffer zone or obtain a variance from the regulatory authority. The findings required for a variance also differ. Most significantly, under Alternative 2, applicants would not need to demonstrate—and the regulatory authority would not need to find—that it is not reasonably possible to avoid disturbing the stream or its buffer zone.

Several industry commenters supported adoption of this alternative, primarily because it would reduce ambiguity associated with the 1983 stream buffer zone rule and included more modest excess spoil minimization and alternatives analysis requirements than Alternative 1. In addition, they noted favorably that, unlike the preferred alternative, Alternative 2 would not use the term ''waters of the United States'' in lieu of perennial or intermittent streams in defining the scope of the stream buffer zone rule, and did not include requirements for an

alternatives analysis of proposals to place coal mine waste in or near waters of the United States.

Alternative 3: Change Only the Excess Spoil Regulations

Under this alternative, we would revise our excess spoil regulations as described in Alternative 1. We would not revise our coal mine waste disposal rules or the stream buffer zone regulations.

This alternative received little support from commenters. One industry commenter opposed it because it included requirements for an alternatives analysis of proposals to place coal mine waste and excess spoil in or near waters of the United States.

Alternative 4: Change Only the Stream Buffer Zone Regulations

Under this alternative, we would revise our stream buffer zone regulations as described in Alternative 1. We would not revise our excess spoil or coal mine waste disposal regulations.

This alternative received some support from those commenters who saw no benefit and many difficulties with our proposed excess spoil and coal mine waste disposal requirements, as described in the preferred alternative, but who wanted to see the controversy surrounding the stream buffer zone rule resolved.

Decision

We are adopting the preferred alternative as described in the final EIS. The final rule and the preferred alternative in the final EIS differ from the proposed rule and the preferred alternative in the draft EIS in several respects. The most significant differences are summarized below:

1. In the final rule, we retained the scope of the 1983 stream buffer zone rule, which included only perennial and intermittent streams, rather than adopting those provisions of our proposed rules that would have applied the buffer zone restrictions to waters of the United States. As discussed in Part VII of this preamble, almost all commenters who opined on this issue opposed the proposed change to waters of the United States. In general, commenters preferred the relatively well-understood concept of perennial and intermittent streams as opposed to the uncertain meaning of the term waters of the United States.

2. In response to concerns that the proposed rule did not adequately protect headwater streams, we added a requirement that the operation be designed to avoid placement of excess spoil or coal mine waste in or within 100 feet of perennial or intermittent streams to the extent possible.

3. We extensively revised the rule to clearly differentiate between permit application requirements and findings required for approval of activities that would take place in perennial or intermittent streams and the requirements and findings for those activities that would disturb only the buffer zone for those streams. Specifically, in the final rule, new sections 780.28 and 784.28 provide that, as a prerequisite for approval of activities in a perennial or intermittent stream, the permit applicant must demonstrate, and the regulatory authority must find, that it is not reasonably possible to avoid disturbance of the stream or its buffer zone. In addition, the SMCRA permit must include a condition requiring a demonstration of compliance with all applicable Clean Water Act authorization or certification requirements before the permittee may conduct any activities in the stream for which authorization or certification is required under the Clean Water Act. For activities that would occur within the buffer zone, but not in the stream itself, the final rule provides that the permit applicant must demonstrate, and the regulatory authority must find, that avoiding disturbance of the buffer zone either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection requirements of the regulatory program.

4. We revised the rules governing the disposal of coal mine waste and placement of excess spoil to require identification and analysis of alternatives only when the applicant proposes to place coal mine waste or excess spoil in or within 100 feet of a perennial or intermittent stream. In addition, as revised, the final rule provides that the permit applicant need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. The proposed rule would have required identification of a reasonable range of alternatives, which could have included alternatives that are possible from a technological perspective, but are impracticable because of cost or other considerations. The final rule specifies that an alternative is reasonably possible if it—

(A) Conforms to the safety, engineering, design, and construction requirements of the regulatory program.

(B) Is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially greater than the costs normally associated with that type of project.

(C) Is consistent with the provisions of 30 CFR 816.59/817.59, which require maximization of coal recovery to minimize the likelihood that the land will be reaffected by mining operations in the future.

5. The final rule requires a permit applicant proposing to place excess spoil or coal mine waste in or within 100 feet of a perennial or intermittent stream to select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values. The proposed rule would have allowed an applicant to select a less protective alternative based upon a demonstration that the most protective alternative was not possible. However, under the revised final rule, an applicant need only identify and consider reasonably possible alternatives, which means that this provision of the proposed rule is no longer appropriate or relevant.

6. The final rule clarifies that the stream buffer zone requirement does not apply to any stream segment for which a stream-channel diversion is approved and constructed. The proposed rule would have applied the exception only to mining through streams, which has limited utility in the context of underground mines. Furthermore, it would be illogical to apply the buffer zone requirement to any stream segment that has been diverted, regardless of the reason for the diversion, because there is no longer a need or purpose for a buffer zone for a former stream channel from which all flows have been diverted.

Environmental Effects of the Alternatives

The information obtained in the course of preparing this EIS indicates that the proposed Federal action may have the most significant effects in the central Appalachian coal fields, particularly eastern Kentucky, southwestern Virginia, and southern West Virginia. The steep-slope terrain, ample rainfall, and abundant surface-minable reserves of high quality bituminous coal in these areas help explain why 98% of all excess spoil fills nationally and approximately 61 percent of the stream miles directly impacted by mining are located in these areas.

Alternatives 1, 2, and 3 would revise the excess spoil regulations to enhance consideration of the environmental effects of fill construction by requiring that applicants minimize the volume of spoil placed outside the mined-out area, design and construct excess spoil fills to reduce the amount of land and water directly affected outside the mined-out area, and configure fills to minimize adverse impacts on fish, wildlife, and related environmental values. States in the central Appalachian coalfields (Kentucky, Virginia, Tennessee, and West Virginia) have taken various steps in accordance with their approved SMCRA regulatory programs to implement similar actions, so the impacts of the excess spoil elements of alternatives likely would be limited by the changes already made by those states.

We do not anticipate that the revisions that Alternatives 1, 2, and 4 would make to the stream buffer zone rule would have any major on-the-ground consequences because we do not expect that those revisions would alter the rate at which surface coal mining and reclamation operations are impacting perennial and intermittent streams. Between 1992 and 2002, we estimate that coal mining operations directly impacted 1,208 miles of stream in the central Appalachian coal fields, which constitutes 2.05 percent of the total stream miles in the central Appalachian coal fields. At this rate, 4.1% of the total stream miles in central Appalachia would be directly impacted within the subsequent 10 years. The miles of stream directly impacted by excess spoil fills for permits issued between 1985 and 2001 is 724 miles, which is approximately 1.2 percent of the streams in central Appalachia. If fill construction continued at this rate, an additional 724 miles of headwater streams would be buried in the next 17 years (by 2018). This trend likely would decline as surface-minable coal reserves in central Appalachia are depleted in the next few decades.

Alternative 1 is uniquely different from the other alternatives in that it incorporates changes to reduce the adverse impacts of coal mine waste disposal facilities (refuse piles and slurry impoundments) on fish, wildlife, and related environmental values. We anticipate that these changes would positively impact the environment.

We estimate that the combination of the excess spoil and coal mine waste provisions in Alternative 1 would result in slight positive effects on the human environment with respect to direct hydrologic impacts, water quality, and aquatic fauna when compared to the ''no action'' alternative. In the final rule, we are adopting this alternative, which is both the most environmentally protective alternative and the preferred alternative.

Mitigation, Monitoring and Enforcement

We have adopted all practicable means to avoid or minimize environmental harm from the alternative selected. SMCRA's permitting requirements and performance standards generally require avoidance or minimization of adverse impacts to important environmental resources, and our regulations do likewise. In particular, this final rule requires that surface coal mining operations be designed to minimize the amount of spoil placed outside the mined-out area, thus minimizing the amount of land disturbed. The final rule also requires that, to the extent possible, surface coal mining and reclamation operations be designed to avoid disturbance of perennial or intermittent streams and the surface of lands within 100 feet of those streams. If avoidance is not reasonably possible, the rule requires that the permit applicant develop and analyze a reasonable range of reasonably possible alternatives and select the alternative that would have the least overall adverse impact on fish, wildlife, and related environmental values.

Each SMCRA regulatory program includes five major elements: Permitting requirements and procedures, performance bonds to guarantee reclamation in the event that the permittee defaults on any reclamation obligations, performance standards to which the operator must adhere, inspection and enforcement to maintain compliance with performance standards and the terms and conditions of the permit, and a process for the designation of lands as unsuitable for surface coal mining operations. Under 30 CFR 730.5, 732.15, and 732.17, each state regulatory program must be no less effective than our regulations in achieving the requirements of the Act. We conduct oversight of each state's implementation of its approved regulatory program.

List of Subjects

30 CFR Part 780

Incorporation by reference, Reporting and recordkeeping requirements, Surface mining.

30 CFR Part 784

Incorporation by reference, Reporting and recordkeeping requirements, Underground mining.

30 CFR Part 816

Environmental protection, Reporting and recordkeeping requirements, Surface mining.

30 CFR Part 817

Environmental protection, Reporting and recordkeeping requirements, Underground mining.

Dated: December 1, 2008,

C. Stephen Allred,

Assistant Secretary, Land and Minerals Management.

■ For the reasons set forth in the preamble, the Department revises 30 CFR parts 780, 784, 816, and 817 as set forth below.

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

■ 1. The authority citation for part 780 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.* and 16 U.S.C. 470 *et seq.*

■ 2. The part heading is revised to read as set forth above.

■ 3. Section 780.10 is revised to read as follows:

§ 780.10 Information collection.

In accordance with 44 U.S.C. 3501 *et seq.*, the Office of Management and Budget (OMB) has approved the information collection requirements of this part and assigned clearance number 1029–0036. Sections 507 and 508 of SMCRA contain permit application requirements for surface coal mining activities, including a requirement that the application include an operation and reclamation plan. The regulatory authority uses this information to determine whether the proposed surface coal mining operation will achieve the environmental protection requirements of the Act and regulatory program. Without this information OSM and state regulatory authorities could not approve permit applications for surface coal mines and related facilities. Persons intending to conduct such operations must respond to obtain a benefit. A Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

■ 4. Amend § 780.14 by revising paragraphs (b)(11) and (c) to read as follows:

§ 780.14 Operation plan: Maps and plans.

* * * * *

(b) * * *

(11) Locations of each siltation structure, permanent water impoundment, refuse pile, and coal mine waste impoundment for which plans are required by § 780.25 of this part, and the location of each fill for the disposal of excess spoil for which plans are required under § 780.35 of this part.

(c) Except as provided in §§ 780.25(a)(2), 780.25(a)(3), 780.35, 816.73(c), 816.74(c), and 816.81(c) of this chapter, cross-sections, maps, and plans required under paragraphs (b)(4), (5), (6), (10), and (11) of this section must be prepared by, or under the direction of, and certified by a qualified registered professional engineer, a professional geologist, or, in any state that authorizes land surveyors to prepare and certify cross-sections, maps, and plans, a qualified, registered, professional land surveyor, with assistance from experts in related fields such as landscape architecture.

■ 5. Amend § 780.25 as follows:

■ A. Revise the section heading, paragraph (a) introductory text, paragraph (a)(1) introductory text, and paragraph (a)(2);

■ B. Revise paragraph (c)(2) and add paragraph (c)(4);

■ C. Revise paragraph (d); and

■ D. Remove paragraphs (e) and (f).

The revisions and addition read as follows:

§ 780.25 Reclamation plan: Siltation structures, impoundments, and refuse piles.

(a) *General.* Each application must include a general plan and a detailed design plan for each proposed siltation structure, impoundment, and refuse pile within the proposed permit area.

(1) Each general plan must—

* * * * *

(2)(i) Impoundments meeting the criteria for Significant Hazard Class or High Hazard Class (formerly Class B or C) dams in ''Earth Dams and Reservoirs,'' Technical Release No. 60 (210–VI–TR60, July 2005), published by the U.S. Department of Agriculture, Natural Resources Conservation Service, must comply with the requirements of this section for structures that meet the criteria in § 77.216(a) of this title. Technical Release No. 60 (TR–60) is hereby incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may review and download the incorporated document from the Natural Resources Conservation Service's Web site at *http://www.info.usda.gov/scripts/lpsiis.dll/TR/TR_210_60.htm.* You may inspect and obtain a copy of this document which is on file at the Administrative Record Room, Office of Surface Mining Reclamation and Enforcement, 1951 Constitution Avenue, NW., Washington, DC 20240. For information on the availability of this document at OSM, call 202–208–2823. You also may inspect a copy of this document at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(ii) Each detailed design plan for a structure that meets the criteria in § 77.216(a) of this title must—

(A) Be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture;

(B) Include any geotechnical investigation, design, and construction requirements for the structure;

(C) Describe the operation and maintenance requirements for each structure; and

(D) Describe the timetable and plans to remove each structure, if appropriate.

* * * * *

(c) * * *

(2) Each plan for an impoundment meeting the criteria in § 77.216(a) of this title must comply with the requirements of § 77.216–2 of this title. The plan required to be submitted to the District Manager of MSHA under § 77.216 of this title must be submitted to the regulatory authority as part of the permit application.

* * * * *

(4) If the structure meets the Significant Hazard Class or High Hazard Class criteria for dams in TR–60 or meets the criteria of § 77.216(a) of this chapter, each plan must include a stability analysis of the structure. The stability analysis must include, but not be limited to, strength parameters, pore pressures, and long-term seepage conditions. The plan also must contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods.

(d) *Coal mine waste impoundments and refuse piles.* If you, the permit applicant, propose to place coal mine waste in a refuse pile or impoundment, or if you plan to use coal mine waste to construct an impounding structure, you must comply with the applicable requirements in paragraphs (d)(1) through (d)(3) of this section.

(1) *Addressing impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of coal mine waste in or within 100 feet of a perennial or intermittent stream to the extent possible. If avoidance is not possible, you must—

(i) Explain, to the satisfaction of the regulatory authority, why an alternative coal mine waste disposal method or an alternative location or configuration that does not involve placement of coal mine waste in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

(ii) Identify a reasonable range of alternative locations or configurations for any proposed refuse piles or coal mine waste impoundments. This provision does not require identification of all potential alternatives. You need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. An alternative is reasonably possible if it meets all the following criteria:

(A) The alternative conforms to the safety, engineering, design, and construction requirements of the regulatory program.

(B) The alternative is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially greater than the costs normally associated with this type of project.

(C) The alternative is consistent with the coal recovery provisions of § 816.59 of this chapter.

(iii) Analyze the impacts of the alternatives identified in paragraph (d)(1)(ii) of this section on fish, wildlife, and related environmental values. The analysis must consider impacts on both aquatic and terrestrial ecosystems.

(A) For every alternative that proposes placement of coal mine waste in a perennial or intermittent stream, the analysis required under paragraph (d)(1)(iii) of this section must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed refuse pile or coal mine waste impoundment, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the

coal mine waste may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream.

(B) If you have prepared an analysis of alternatives for the proposed impoundment or refuse pile under 40 CFR 230.10 to meet Clean Water Act requirements, you may initially submit a copy of that analysis in lieu of the analysis required under paragraph (d)(1)(iii)(A) of this section. The regulatory authority will determine the extent to which that analysis satisfies the requirements of paragraph (d)(1)(iii)(A) of this section.

(iv) Select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

(2) *Design requirements for refuse piles.* Refuse piles must be designed to comply with the requirements of §§ 816.81 and 816.83 of this chapter.

(3) *Design requirements for impoundments and impounding structures.* Impounding structures constructed of or intended to impound coal mine waste must be designed to comply with the requirements of §§ 816.81 and 816.84 of this chapter, which incorporate the requirements of paragraphs (a) and (c) of § 816.49 of this chapter. In addition,—

(i) The plan for each structure that meets the criteria of § 77.216(a) of this title must comply with the requirements of § 77.216–2 of this title; and

(ii) Each plan for a coal mine waste impoundment must contain the results of a geotechnical investigation to determine the structural competence of the foundation that will support the proposed impounding structure and the impounded material. An engineer or engineering geologist must plan and supervise the geotechnical investigation. In planning the investigation, the engineer or geologist must—

(A) Determine the number, location, and depth of borings and test pits using current prudent engineering practice for the size of the impoundment and the impounding structure, the quantity of material to be impounded, and subsurface conditions.

(B) Consider the character of the overburden and bedrock, the proposed abutment sites for the impounding structure, and any adverse geotechnical conditions that may affect the particular impoundment.

(C) Identify all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the proposed impoundment.

(D) Consider the possibility of mudflows, rock-debris falls, or other landslides into the impoundment or impounded material.

■ 6. Add § 780.28 to read as follows:

§ 780.28 Activities in or adjacent to perennial or intermittent streams.

(a) *Applicability.* (1) *In general.* Except as otherwise provided in paragraph (a)(2) of this section, this section applies to applications to conduct surface mining activities in perennial or intermittent streams or on the surface of lands within 100 feet, measured horizontally, of perennial or intermittent streams.

(2) *Exceptions.* (i) *Coal preparation plants not located within the permit area of a mine.* This section does not apply to applications under § 785.21 of this chapter for coal preparation plants that are not located within the permit area of a mine.

(ii) *Stream-channel diversions.* Paragraphs (b) through (e) of this section do not apply to diversions of perennial or intermittent streams, which are governed by § 780.29 of this part and § 816.43 of this chapter.

(b) *Application requirements for surface mining activities in a perennial or intermittent stream.* If you propose to conduct one or more of the activities listed in paragraphs (b)(2) through (b)(4) of § 816.57 of this chapter in a perennial or intermittent stream, your application must demonstrate that—

(1) Avoiding disturbance of the stream is not reasonably possible; and

(2) The proposed activities will comply with all applicable requirements in paragraphs (b) and (c) of § 816.57 of this chapter.

(c) *Application requirements for surface mining activities within 100 feet of a perennial or intermittent stream.* If you propose to conduct surface mining activities within 100 feet of a perennial or intermittent stream, but not in the stream itself, and those activities would occur on land subject to the buffer requirement of § 816.57(a)(1) of this chapter, your application must—

(1) Demonstrate that avoiding disturbance of land within 100 feet of the stream either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection requirements of the regulatory program;

(2) Identify any lesser buffer that you propose to implement instead of maintaining a 100-foot undisturbed buffer between surface mining activities and the perennial or intermittent stream; and

(3) Explain how the lesser buffer, together with any other protective measures that you propose to implement, constitute the best technology currently available to—

(i) Prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible, as required by §§ 780.21(h) and 816.41(d)(1) of this chapter; and

(ii) Minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by §§ 780.16(b) and 816.97(a) of this chapter.

(d) *Approval requirements for activities in a perennial or intermittent stream.* Before approving any surface mining activities in a perennial or intermittent stream, the regulatory authority must—

(1) Find in writing that—

(i) Avoiding disturbance of the stream is not reasonably possible; and

(ii) The plans submitted with the application meet all applicable requirements in paragraphs (b) and (c) of § 816.57 of this chapter.

(2) Include a permit condition requiring a demonstration of compliance with the Clean Water Act in the manner specified in § 816.57(a)(2) of this chapter before the permittee may conduct any activities in a perennial or intermittent stream that require authorization or certification under the Clean Water Act.

(e) *Approval requirements for activities within 100 feet of a perennial or intermittent stream.* Before approving any surface mining activities that would disturb the surface of land subject to the buffer requirement of § 816.57(a)(1) of this chapter, the regulatory authority must find in writing that—

(1) Avoiding disturbance of the surface of land within 100 feet of the stream either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection requirements of the regulatory program; and

(2) The measures proposed under paragraphs (c)(2) and (c)(3) of this section constitute the best technology currently available to—

(i) Prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible, as required by §§ 780.21(h) and 816.41(d)(1) of this chapter; and

(ii) Minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by §§ 780.16(b) and 816.97(a) of this chapter.

(f) *Relationship to the Clean Water Act.* (1) In all cases, your application must identify the authorizations and certifications that you anticipate will be needed under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, and describe the steps that you have taken or will take to procure those authorizations and certifications.

(2) The regulatory authority will process your application and may issue the permit before you obtain all necessary authorizations and certifications under the Clean Water Act, 33 U.S.C. 1251 et seq., provided your application meets all applicable requirements of subchapter G of this chapter. However, issuance of a permit does not authorize you to initiate any activities for which Clean Water Act authorization or certification is required. Information submitted and analyses conducted under subchapter G of this chapter may inform the agency responsible for authorizations and certifications under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, but they are not a substitute for the reviews, authorizations, and certifications required under those sections of the Clean Water Act.

■ 7. Revise § 780.35 to read as follows:

§ 780.35 Disposal of excess spoil.

(a) If you, the permit applicant, propose to generate excess spoil as part of your operation, you must include the following items in your application—

(1) *Demonstration of minimization of excess spoil.* A demonstration, prepared to the satisfaction of the regulatory authority, that the operation has been designed to minimize, to the extent possible, the volume of excess spoil that the operation will generate, thus ensuring that spoil is returned to the mined-out area to the extent possible, taking into consideration applicable regulations concerning restoration of the approximate original contour, safety, stability, and environmental protection and the needs of the proposed postmining land use.

(2) *Capacity demonstration.* A demonstration, prepared to the satisfaction of the regulatory authority, that the designed maximum cumulative volume of all proposed excess spoil fills within the permit area is no larger than the capacity needed to accommodate the anticipated cumulative volume of excess spoil that the operation will generate, as approved by the regulatory authority under paragraph (a)(1) of this section.

(3) *Discussion of how you will address impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of excess spoil in or within 100 feet of a perennial or intermittent stream to the extent possible. If avoidance is not possible, you must—

(i) Explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of excess spoil in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

(ii) Identify a reasonable range of alternatives that vary with respect to the number, size, location, and configuration of proposed fills. This provision does not require identification of all potential alternatives. You need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. An alternative is reasonably possible if it meets all the following criteria:

(A) The alternative conforms to the safety, engineering, design, and construction requirements of the regulatory program;

(B) The alternative is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially greater than the costs normally associated with this type of project.

(C) The alternative is consistent with the coal recovery provisions of § 816.59 of this chapter.

(iii) Analyze the impacts of the alternatives identified in paragraph (a)(3)(ii) of this section on fish, wildlife, and related environmental values. The analysis must consider impacts on both terrestrial and aquatic ecosystems.

(A) For every alternative that proposes placement of excess spoil in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed fill, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the excess spoil may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream.

(B) If you have prepared an analysis of alternatives for the proposed fill under 40 CFR 230.10 to meet Clean Water Act requirements, you may initially submit a copy of that analysis with your application in lieu of the analysis required by paragraph (a)(3)(iii)(A) of this section. The regulatory authority will determine the extent to which that analysis satisfies the analytical requirements of paragraph (a)(3)(iii)(A) of this section.

(iv) Select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

(4) *Location.* Maps and cross-section drawings showing the location of all proposed disposal sites and structures. You must locate fills on the most moderately sloping and naturally stable areas available, unless the regulatory authority approves a different location based upon the alternatives analysis under paragraph (a)(3) of this section or on other requirements of the Act and this chapter. Whenever possible, you must place fills upon or above a natural terrace, bench, or berm if that location would provide additional stability and prevent mass movement.

(5) *Design plans.* Detailed design plans for each structure, prepared in accordance with the requirements of this section and §§ 816.71 through 816.74 of this chapter. You must design the fill and appurtenant structures using current prudent engineering practices and any additional design criteria established by the regulatory authority.

(6) *Geotechnical investigation.* The results of a geotechnical investigation of each proposed disposal site, with the exception of those sites at which spoil will be placed only on a pre-existing bench under § 816.74 of this chapter. You must conduct sufficient foundation investigations, as well as any necessary laboratory testing of foundation material, to determine the design requirements for foundation stability for each site. The analyses of foundation conditions must take into consideration the effect of underground mine workings, if any, upon the stability of the fill and appurtenant structures. The information submitted must include—

(i) The character of the bedrock and any adverse geologic conditions in the proposed disposal area.

(ii) A survey identifying all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the proposed disposal site.

(iii) A survey of the potential effects of subsidence of subsurface strata as a result of past and future mining operations.

(iv) A technical description of the rock materials to be utilized in the

construction of disposal structures containing rock chimney cores or underlain by a rock drainage blanket.

(v) A stability analysis including, but not limited to, strength parameters, pore pressures, and long-term seepage conditions. This analysis must be accompanied by a description of all engineering design assumptions and calculations and the alternatives considered in selecting the design specifications and methods.

(7) *Operation and reclamation plans.* Plans for the construction, operation, maintenance, and reclamation of all excess spoil disposal structures in accordance with the requirements of §§ 816.71 through 816.74 of this chapter.

(8) *Additional requirements for keyway cuts or rock-toe buttresses.* If keyway cuts or rock-toe buttresses are required under § 816.71(d) of this chapter, the number, location, and depth of borings or test pits, which must be determined according to the size of the spoil disposal structure and subsurface conditions. You also must provide the engineering specifications used to design the keyway cuts or rock-toe buttresses. Those specifications must be based upon the stability analysis required under paragraph (a)(7)(v) of this section.

(b) *Design certification.* A qualified registered professional engineer experienced in the design of earth and rock fills must certify that the design of all fills and appurtenant structures meets the requirements of this section.

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

■ 8. The authority citation for part 784 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.* and 16 U.S.C. 470 *et seq.*

■ 9. Section 784.10 is revised to read as follows:

§ 784.10 Information collection.

In accordance with 44 U.S.C. 3501 *et seq.*, the Office of Management and Budget (OMB) has approved the information collection requirements of this part and assigned clearance number 1029–0039. Collection of this information is required under section 516(d) of SMCRA, which in effect requires applicants for permits for underground coal mines to prepare and submit an operation and reclamation plan for coal mining activities as part of the application. The regulatory authority uses this information to determine whether the plan will achieve the reclamation and environmental protection requirements of the Act and regulatory program. Without this information, OSM and state regulatory authorities could not approve permit applications for underground coal mines and related facilities. Persons intending to conduct such operations must respond to obtain a benefit. A Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

■ 10. Amend § 784.16 as follows:

■ A. Revise the section heading, paragraph (a) introductory text, paragraph (a)(1) introductory text, and paragraph (a)(2);

■ B. Revise paragraph (c)(2) and add paragraph (c)(4);

■ C. Revise paragraph (d); and

■ D. Remove paragraphs (e) and (f).

The revisions and addition read as follows:

§ 784.16 Reclamation plan: Siltation structures, impoundments, and refuse piles.

(a) *General.* Each application must include a general plan and a detailed design plan for each proposed siltation structure, impoundment, and refuse pile within the proposed permit area.

(1) Each general plan must—

* * * * *

(2)(i) Impoundments meeting the criteria for Significant Hazard Class or High Hazard Class (formerly Class B or C) dams in ''Earth Dams and Reservoirs,'' Technical Release No. 60 (210–VI–TR60, July 2005), published by the U.S. Department of Agriculture, Natural Resources Conservation Service, must comply with the requirements of this section for structures that meet the criteria in § 77.216(a) of this title. Technical Release No.60 (TR–60) is hereby incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may review and download the incorporated document from the Natural Resources Conservation Service's Web site at *http://www.info.usda.gov/scripts/lpsiis.dll/TR/TR_210_60.htm.* You may inspect and obtain a copy of this document which is on file at the Administrative Record Room, Office of Surface Mining Reclamation and Enforcement, 1951 Constitution Avenue, NW., Washington, DC 20240. For information on the availability of this document at OSM, call 202–208–2823. You also may inspect a copy of this document at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(ii) Each detailed design plan for a structure that meets the criteria in § 77.216(a) of this title must—

(A) Be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture;

(B) Include any geotechnical investigation, design, and construction requirements for the structure;

(C) Describe the operation and maintenance requirements for each structure; and

(D) Describe the timetable and plans to remove each structure, if appropriate.

* * * * *

(c) * * *

(2) Each plan for an impoundment meeting the criteria in § 77.216(a) of this title must comply with the requirements of § 77.216–2 of this title. The plan required to be submitted to the District Manager of MSHA under § 77.216 of this title must be submitted to the regulatory authority as part of the permit application.

* * * * *

(4) If the structure meets the Significant Hazard Class or High Hazard Class criteria for dams in TR–60 or meets the criteria of § 77.216(a) of this chapter, each plan must include a stability analysis of the structure. The stability analysis must include, but not be limited to, strength parameters, pore pressures, and long-term seepage conditions. The plan also must contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods.

(d) *Coal mine waste impoundments and refuse piles.* If you, the permit applicant, propose to place coal mine waste in a refuse pile or impoundment, or if you plan to use coal mine waste to construct an impounding structure, you must comply with the applicable requirements in paragraphs (d)(1) through (d)(3) of this section.

(1) *Addressing impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of coal mine waste in or within 100 feet of a perennial or intermittent stream to the extent possible. If avoidance is not possible, you must—

(i) Explain, to the satisfaction of the regulatory authority, why an alternative coal mine waste disposal method or an alternative location or configuration that does not involve placement of coal mine waste in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

(ii) Identify a reasonable range of alternative locations or configurations for any proposed refuse piles or coal mine waste impoundments. This provision does not require identification of all potential alternatives. You need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. An alternative is reasonably possible if it meets all the following criteria:

(A) The alternative conforms to the safety, engineering, design, and construction requirements of the regulatory program.

(B) The alternative is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially greater than the costs normally associated with this type of project.

(C) The alternative is consistent with the coal recovery provisions of § 817.59 of this chapter.

(iii) Analyze the impacts of the alternatives identified in paragraph (d)(1)(ii) of this section on fish, wildlife, and related environmental values. The analysis must consider impacts on both aquatic and terrestrial ecosystems.

(A) For every alternative that proposes placement of coal mine waste in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed refuse pile or coal mine waste impoundment, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the coal mine waste may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream.

(B) If you have prepared an analysis of alternatives for the proposed impoundment or refuse pile under 40 CFR 230.10 to meet Clean Water Act requirements, you may initially submit a copy of that analysis in lieu of the analysis required under paragraph (d)(1)(iii)(A) of this section. The regulatory authority will determine the extent to which that analysis satisfies the requirements of paragraph (d)(1)(iii)(A) of this section.

(iv) Select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

(2) *Design requirements for refuse piles.* Refuse piles must be designed to comply with the requirements of §§ 817.81 and 817.83 of this chapter.

(3) *Design requirements for impoundments and impounding structures.* Impounding structures constructed of or intended to impound coal mine waste must be designed to comply with the requirements of §§ 817.81 and 817.84 of this chapter, which incorporate the requirements of paragraphs (a) and (c) of § 817.49 of this chapter. In addition,—

(i) The plan for each structure that meets the criteria of § 77.216(a) of this title must comply with the requirements of § 77.216–2 of this title; and

(ii) Each plan for a coal mine waste impoundment must contain the results of a geotechnical investigation to determine the structural competence of the foundation that will support the proposed impounding structure and the impounded material. An engineer or engineering geologist must plan and supervise the geotechnical investigation. In planning the investigation, the engineer or geologist must—

(A) Determine the number, location, and depth of borings and test pits using current prudent engineering practice for the size of the impoundment and the impounding structure, the quantity of material to be impounded, and subsurface conditions.

(B) Consider the character of the overburden and bedrock, the proposed abutment sites for the impounding structure, and any adverse geotechnical conditions that may affect the particular impoundment.

(C) Identify all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the proposed impoundment.

(D) Consider the possibility of mudflows, rock-debris falls, or other landslides into the impoundment or impounded material.

■ 11. Revise § 784.19 to read as follows:

§ 784.19 Disposal of excess spoil.

(a) If you, the permit applicant, propose to generate excess spoil as part of your operation, you must include the following items in your application—

(1) *Demonstration of minimization of excess spoil.* A demonstration, prepared to the satisfaction of the regulatory authority, that the operation has been designed to minimize, to the extent possible, the volume of excess spoil that the operation will generate, thus ensuring that spoil is returned to the mined-out area to the extent possible, taking into consideration applicable regulations concerning restoration of the approximate original contour, safety, stability, and environmental protection and the needs of the proposed postmining land use.

(2) *Capacity demonstration.* A demonstration, prepared to the satisfaction of the regulatory authority, that the designed maximum cumulative volume of all proposed excess spoil fills within the permit area is no larger than the capacity needed to accommodate the anticipated cumulative volume of excess spoil that the operation will generate, as approved by the regulatory authority under paragraph (a)(1) of this section.

(3) *Discussion of how you will address impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of excess spoil in or within 100 feet of a perennial or intermittent stream to the extent possible. If avoidance is not possible, you must—

(i) Explain, to the satisfaction of the regulatory authority, why an alternative that does not involve placement of excess spoil in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

(ii) Identify a reasonable range of alternatives that vary with respect to the number, size, location, and configuration of proposed fills. This provision does not require identification of all potential alternatives. You need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. An alternative is reasonably possible if it meets all the following criteria:

(A) The alternative conforms to the safety, engineering, design, and construction requirements of the regulatory program;

(B) The alternative is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially

greater than the costs normally associated with this type of project.

(C) The alternative is consistent with the coal recovery provisions of § 817.59 of this chapter.

(iii) Analyze the impacts of the alternatives identified in paragraph (a)(3)(ii) of this section on fish, wildlife, and related environmental values. The analysis must consider impacts on both terrestrial and aquatic ecosystems.

(A) For every alternative that proposes placement of excess spoil in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed fill, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the excess spoil may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream.

(B) If you have prepared an analysis of alternatives for the proposed fill under 40 CFR 230.10 to meet Clean Water Act requirements, you may initially submit a copy of that analysis with your application in lieu of the analysis required by paragraph (a)(3)(iii)(A) of this section. The regulatory authority will determine the extent to which that analysis satisfies the analytical requirements of paragraph (a)(3)(iii)(A) of this section.

(iv) Select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

(4) *Location.* Maps and cross-section drawings showing the location of all proposed disposal sites and structures. You must locate fills on the most moderately sloping and naturally stable areas available, unless the regulatory authority approves a different location based upon the alternatives analysis under paragraph (a)(3) of this section or on other requirements of the Act and this chapter. Whenever possible, you must place fills upon or above a natural terrace, bench, or berm if that location would provide additional stability and prevent mass movement.

(5) *Design plans.* Detailed design plans for each structure, prepared in accordance with the requirements of this section and §§ 817.71 through 817.74 of this chapter. You must design the fill and appurtenant structures using current prudent engineering practices and any additional design criteria established by the regulatory authority.

(6) *Geotechnical investigation.* The results of a geotechnical investigation of each proposed disposal site, with the exception of those sites at which spoil will be placed only on a pre-existing bench under § 817.74 of this chapter. You must conduct sufficient foundation investigations, as well as any necessary laboratory testing of foundation material, to determine the design requirements for foundation stability for each site. The analyses of foundation conditions must take into consideration the effect of underground mine workings, if any, upon the stability of the fill and appurtenant structures. The information submitted must include—

(i) The character of the bedrock and any adverse geologic conditions in the proposed disposal area.

(ii) A survey identifying all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the proposed disposal site.

(iii) A survey of the potential effects of subsidence of subsurface strata as a result of past and future mining operations.

(iv) A technical description of the rock materials to be utilized in the construction of disposal structures containing rock chimney cores or underlain by a rock drainage blanket.

(v) A stability analysis including, but not limited to, strength parameters, pore pressures, and long-term seepage conditions. This analysis must be accompanied by a description of all engineering design assumptions and calculations and the alternatives considered in selecting the design specifications and methods.

(7) *Operation and reclamation plans.* Plans for the construction, operation, maintenance, and reclamation of all excess spoil disposal structures in accordance with the requirements of §§ 817.71 through 817.74 of this chapter.

(8) *Additional requirements for keyway cuts or rock-toe buttresses.* If keyway cuts or rock-toe buttresses are required under § 817.71(d) of this chapter, the number, location, and depth of borings or test pits, which must be determined according to the size of the spoil disposal structure and subsurface conditions. You also must provide the engineering specifications used to design the keyway cuts or rock-toe buttresses. Those specifications must be based upon the stability analysis required under paragraph (a)(7)(v) of this section.

(b) *Design certification.* A qualified registered professional engineer experienced in the design of earth and rock fills must certify that the design of all fills and appurtenant structures meets the requirements of this section.

■ 12. Amend § 784.23 by removing ''817.71(b),'' in paragraph (c) and revising paragraph (b)(10) to read as follows:

§ 784.23 Operation plan: Maps and plans.

* * * * *

(b) * * *

(10) Locations of each siltation structure, permanent water impoundment, refuse pile, and coal mine waste impoundment for which plans are required by § 784.16 of this part, and the location of each fill for the disposal of excess spoil for which plans are required under § 784.19 of this part.

* * * * *

■ 13. Add § 784.28 to read as follows:

§ 784.28 Surface activities in or adjacent to perennial or intermittent streams.

(a) *Applicability.* (1) *In general.* Except as otherwise provided in paragraph (a)(2) of this section, this section applies to underground mining permit applications that propose to conduct surface activities in perennial or intermittent streams or on the surface of lands within 100 feet, measured horizontally, of perennial or intermittent streams.

(2) *Exceptions.* (i) *Coal preparation plants not located within the permit area of a mine.* This section does not apply to applications under § 785.21 of this chapter for coal preparation plants that are not located within the permit area of a mine.

(ii) *Stream-channel diversions.* Paragraphs (b) through (e) of this section do not apply to diversions of perennial or intermittent streams, which are governed by § 784.29 of this part and § 817.43 of this chapter.

(b) *Application requirements for activities in a perennial or intermittent stream.* If you propose to conduct one or more of the activities listed in paragraphs (b)(2) through (b)(4) of § 817.57 of this chapter in a perennial or intermittent stream, your application must demonstrate that—

(1) Avoiding disturbance of the stream is not reasonably possible; and

(2) The proposed activities will comply with all applicable requirements in paragraphs (b) and (c) of § 817.57 of this chapter.

(c) *Application requirements for surface activities within 100 feet of a perennial or intermittent stream.* If you propose to conduct surface activities within 100 feet of a perennial or intermittent stream, but not in the stream itself, and those activities would occur on the surface of land subject to

the buffer requirement of § 817.57(a)(1) of this chapter, your application must—

(1) Demonstrate that avoiding disturbance of land within 100 feet of the stream either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection requirements of the regulatory program;

(2) Identify any lesser buffer that you propose to implement instead of maintaining a 100-foot undisturbed buffer between surface activities and the perennial or intermittent stream; and

(3) Explain how the lesser buffer, together with any other protective measures that you propose to implement, constitute the best technology currently available to—

(i) Prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible, as required by §§ 784.14(g) and 817.41(d)(1) of this chapter; and

(ii) Minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by §§ 784.21(b) and 817.97(a) of this chapter.

(d) *Approval requirements for activities in a perennial or intermittent stream.* Before approving any surface activities in a perennial or intermittent stream, the regulatory authority must—

(1) Find in writing that—

(i) Avoiding disturbance of the stream is not reasonably possible; and

(ii) The plans submitted with the application meet all applicable requirements in paragraphs (b) and (c) of § 817.57 of this chapter.

(2) Include a permit condition requiring a demonstration of compliance with the Clean Water Act in the manner specified in § 817.57(a)(2) of this chapter before the permittee may conduct any activities in a perennial or intermittent stream that require authorization or certification under the Clean Water Act.

(e) *Approval requirements for surface activities within 100 feet of a perennial or intermittent stream.* Before approving any surface activities that would disturb the surface of land subject to the buffer requirement of § 817.57(a)(1) of this chapter, the regulatory authority must find in writing that—

(1) Avoiding disturbance of the surface of land within 100 feet of the stream either is not reasonably possible or is not necessary to meet the fish and wildlife and hydrologic balance protection requirements of the regulatory program; and

(2) The measures proposed under paragraphs (c)(2) and (c)(3) of this section constitute the best technology currently available to—

(i) Prevent the contribution of additional suspended solids to streamflow or runoff outside the permit area to the extent possible, as required by §§ 784.14(g) and 817.41(d)(1) of this chapter; and

(ii) Minimize disturbances and adverse impacts on fish, wildlife, and related environmental values to the extent possible, as required by §§ 784.21(b) and 817.97(a) of this chapter.

(f) *Relationship to the Clean Water Act.* (1) In all cases, your application must identify the authorizations and certifications that you anticipate will be needed under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, and describe the steps that you have taken or will take to procure those authorizations and certifications.

(2) The regulatory authority will process your application and may issue the permit before you obtain all necessary authorizations and certifications under the Clean Water Act, 33 U.S.C. 1251 *et seq.*, provided your application meets all applicable requirements of subchapter G of this chapter. However, issuance of a permit does not authorize you to initiate any activities for which Clean Water Act authorization or certification is required. Information submitted and analyses conducted under subchapter G of this chapter may inform the agency responsible for authorizations and certifications under sections 401, 402, and 404 of the Clean Water Act, 33 U.S.C. 1341, 1342, and 1344, but they are not a substitute for the reviews, authorizations, and certifications required under those sections of the Clean Water Act.

PART 816—PERMANENT PROGRAM PERFORMANCE STANDARDS—SURFACE MINING ACTIVITIES

■ 14. The authority citation for part 816 is revised to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*

■ 15. Section 816.10 is revised to read as follows:

§ 816.10 Information collection.

In accordance with 44 U.S.C. 3501 *et seq.*, the Office of Management and Budget (OMB) has approved the information collection requirements of this part and assigned clearance number 1029–0047. Collection of this information is required under section 515 of SMCRA, which provides that permittees conducting surface coal mining and reclamation operations must meet all applicable performance standards of the regulatory program approved under the Act. The regulatory authority uses the information collected to ensure that surface mining activities are conducted in compliance with the requirements of the applicable regulatory program. Persons intending to conduct such operations must respond to obtain a benefit. A Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

■ 16. In § 816.11, revise paragraph (e) to read as follows:

§ 816.11 Signs and markers.

* * * * *

(e) *Buffer markers.* The boundaries of any buffer to be maintained between surface mining activities and a perennial or intermittent stream in accordance with §§ 780.28 and 816.57 of this chapter must be clearly marked to avoid disturbance by surface mining activities.

* * * * *

■ 17. Amend § 816.43 as follows:

■ A. Remove the last sentence of paragraph (a)(3);

■ B. Redesignate paragraph (a)(4) as paragraph (a)(5) and add a new paragraph (a)(4);

■ C. Revise paragraphs (b)(1) and (b)(4); and

■ D. Add paragraph (b)(5).

The revisions and additions will read as follows:

§ 816.43 Diversions.

(a) * * *

(4) A permanent diversion or a stream channel restored after the completion of mining must be designed and constructed so as to restore or approximate the premining characteristics of the original stream channel, including any natural riparian vegetation, to promote the recovery and enhancement of the aquatic habitat.

* * * * *

(b) * * *

(1) The regulatory authority may approve the diversion of perennial or intermittent streams within the permit area if the diversion is located and designed to minimize adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available. The permittee must construct and maintain the diversion in accordance with the approved design.

* * * * *

(4) A permanent stream-channel diversion or a stream channel restored after the completion of mining must be designed and constructed using natural channel design techniques so as to restore or approximate the premining characteristics of the original stream channel, including the natural riparian vegetation and the natural hydrological characteristics of the original stream, to promote the recovery and enhancement of the aquatic habitat and to minimize adverse alteration of stream channels on and off the site, including channel deepening or enlargement, to the extent possible.

(5) A qualified registered professional engineer must separately certify both the design and construction of all diversions of perennial and intermittent streams and all stream restorations. The design certification must certify that the design meets the design requirements of this section and any design criteria set by the regulatory authority. The construction certification must certify that the stream-channel diversion or stream restoration meets all construction requirements of this section and is in accordance with the approved design.

* * * * *

§ 816.46 [Amended]

■ 18. In § 816.46, remove paragraph (b)(2) and redesignate paragraphs (b)(3) through (b)(6) as (b)(2) through (b)(5), respectively.

■ 19. Revise § 816.57 to read as follows:

§ 816.57 Hydrologic balance: Activities in or adjacent to perennial or intermittent streams.

(a)(1) *Buffer requirement.* Except as provided in paragraph (b) of this section and consistent with paragraph (a)(2) of this section, you, the permittee or operator, may not conduct surface mining activities that would disturb the surface of land within 100 feet, measured horizontally, of a perennial or intermittent stream, unless the regulatory authority authorizes you to do so under § 780.28(e) of this chapter.

(2) *Clean Water Act requirements.* Surface mining activities, including those activities in paragraphs (b)(1) through (b)(4) of this section, may be authorized in perennial or intermittent streams only where those activities would not cause or contribute to the violation of applicable State or Federal water quality standards developed pursuant to the Clean Water Act, as determined through certification under section 401 of the Clean Water Act or a permit under section 402 or 404 of the Clean Water Act.

(b) *Exception.* The buffer requirement of paragraph (a) of this section does not apply to those segments of a perennial or intermittent stream for which the regulatory authority, in accordance with § 780.28(d) of this chapter or § 816.43(b)(1) of this part, approves one or more of the activities listed in paragraphs (b)(1) through (b)(4) of this section.

(1) Diversion of a perennial or intermittent stream. You must comply with all other applicable requirements of the regulatory program, including the requirements of § 816.43(b) of this part for the permanent or temporary diversion of a perennial or intermittent stream.

(2) Placement of bridge abutments, culverts, or other structures in or within 100 feet of a perennial or intermittent stream to facilitate crossing of the stream by roads, railroads, conveyors, pipelines, utilities, or similar facilities. You must comply with all other applicable requirements of the regulatory program, including the requirements of §§ 816.150, 816.151, and 816.181 of this part, as appropriate.

(3) Construction of sedimentation pond embankments in a perennial or intermittent stream. This provision extends to the pool or storage area created by the embankment. You must comply with all other applicable requirements of the regulatory program, including the requirements of § 816.45(a) of this part. Under § 816.56 of this part, you must remove and reclaim all sedimentation pond embankments before abandoning the permit area or seeking final bond release unless the regulatory authority approves retention of the pond as a permanent impoundment under § 816.49(b) of this part and provisions have been made for sound future maintenance by the permittee or the landowner in accordance with § 800.40(c)(2) of this chapter.

(4) Construction of excess spoil fills and coal mine waste disposal facilities in a perennial or intermittent stream. You must comply with all other applicable requirements of the regulatory program, including the requirements of paragraphs (a) and (f) of § 816.71 of this part for excess spoil fills and the requirements of §§ 816.81(a), 816.83(a), and 816.84 of this part for coal mine waste disposal facilities.

(c) *Additional clarifications.* All surface mining activities conducted in or within 100 feet of a perennial or intermittent stream must comply with paragraphs (b)(10)(B)(i) and (b)(24) of section 515 of the Act and the regulations implementing those provisions of the Act, including—

(1) The requirement in § 816.41(d)(1) of this part that surface mining activities be conducted according to the plan approved under § 780.21(h) of this chapter and that earth materials, ground-water discharges, and runoff be handled in a manner that prevents, to the extent possible using the best technology currently available, additional contribution of suspended solids to streamflow outside the permit area; and otherwise prevents water pollution.

(2) The requirement in § 816.45(a) that appropriate sediment control measures be designed, constructed, and maintained using the best technology currently available to prevent, to the extent possible, additional contributions of sediment to streamflow or to runoff outside the permit area.

(3) The requirement in § 816.97(a) of this part that the operator must, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts on fish and wildlife and related environmental values and achieve enhancement of those resources where practicable.

(4) The requirement in § 816.97(f) of this part that the operator avoid disturbances to, enhance where practicable, restore, or replace wetlands, habitats of unusually high value for fish and wildlife, and riparian vegetation along rivers and streams and bordering ponds and lakes.

■ 20. In § 816.71, revise paragraphs (a) through (d) to read as follows:

§ 816.71 Disposal of excess spoil: General requirements.

(a) *General.* You, the permittee or operator, must place excess spoil in designated disposal areas within the permit area in a controlled manner to—

(1) Minimize the adverse effects of leachate and surface water runoff from the fill on surface and ground waters;

(2) Ensure mass stability and prevent mass movement during and after construction;

(3) Ensure that the final fill is suitable for reclamation and revegetation compatible with the natural surroundings and the approved postmining land use; and

(4) Minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available.

(b) *Static safety factor.* The fill must be designed and constructed to attain a minimum long-term static safety factor of 1.5. The foundation and abutments of

the fill must be stable under all conditions of construction.

(c) *Compliance with permit.* You, the permittee or operator, must construct the fill in accordance with the design and plans submitted under § 780.35 of this chapter and approved as part of the permit.

(d) *Special requirement for steep-slope conditions.* When the slope in the disposal area exceeds 2.8h:1v (36 percent), or any lesser slope designated by the regulatory authority based on local conditions, you, the permittee or operator, must construct keyway cuts (excavations to stable bedrock) or rock-toe buttresses to ensure fill stability.

* * * * *

PART 817—PERMANENT PROGRAM PERFORMANCE STANDARDS—UNDERGROUND MINING ACTIVITIES

■ 21. The authority citation for part 817 is revised to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*

■ 22. Section 817.10 is revised to read as follows:

§ 817.10 Information collection.

In accordance with 44 U.S.C. 3501 *et seq.*, the Office of Management and Budget (OMB) has approved the information collection requirements of this part and assigned clearance number 1029–0047. Collection of this information is required under section 516 of SMCRA, which provides that permittees conducting underground coal mining operations must meet all applicable performance standards of the regulatory program approved under the Act. The regulatory authority uses the information collected to ensure that surface mining activities are conducted in compliance with the requirements of the applicable regulatory program. Persons intending to conduct such operations must respond to obtain a benefit. A Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

■ 23. In § 817.11, revise paragraph (e) to read as follows:

§ 817.11 Signs and markers.

* * * * *

(e) *Buffer markers.* The boundaries of any buffer to be maintained between surface activities and a perennial or intermittent stream in accordance with §§ 784.28 and 817.57 of this chapter must be clearly marked to avoid disturbance by surface operations and facilities.

* * * * *

■ 24. Amend § 817.43 as follows:

■ A. Remove the last sentence of paragraph (a)(3);

■ B. Redesignate paragraph (a)(4) as paragraph (a)(5) and add a new paragraph (a)(4);

■ C. Revise paragraphs (b)(1) and (b)(4); and

■ D. Add paragraph (b)(5).

The revisions and additions will read as follows:

§ 817.43 Diversions.

(a) * * *

(4) A permanent diversion or a stream channel restored after the completion of mining must be designed and constructed so as to restore or approximate the premining characteristics of the original stream channel, including any natural riparian vegetation, to promote the recovery and enhancement of the aquatic habitat.

* * * * *

(b) * * *

(1) The regulatory authority may approve the diversion of perennial or intermittent streams within the permit area if the diversion is located and designed to minimize adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available. The permittee must construct and maintain the diversion in accordance with the approved design.

* * * * *

(4) A permanent stream-channel diversion or a stream channel restored after the completion of mining must be designed and constructed using natural channel design techniques so as to restore or approximate the premining characteristics of the original stream channel, including the natural riparian vegetation and the natural hydrological characteristics of the original stream, to promote the recovery and enhancement of the aquatic habitat and to minimize adverse alteration of stream channels on and off the site, including channel deepening or enlargement, to the extent possible.

(5) A qualified registered professional engineer must separately certify both the design and construction of all diversions of perennial and intermittent streams and all stream restorations. The design certification must certify that the design meets the design requirements of this section and any design criteria set by the regulatory authority. The construction certification must certify that the stream-channel diversion or stream restoration meets all construction requirements of this section and is in accordance with the approved design.

* * * * *

§ 817.46 [Amended]

■ 25. In § 817.46, remove paragraph (b)(2) and redesignate paragraphs (b)(3) through (b)(6) as (b)(2) through (b)(5), respectively.

■ 26. Revise § 817.57 to read as follows:

§ 817.57 Hydrologic balance: Surface activities in or adjacent to perennial or intermittent streams.

(a)(1) *Buffer requirement.* Except as provided in paragraph (b) of this section and consistent with paragraph (a)(2) of this section, you, the permittee or operator, may not conduct surface activities that would disturb the surface of land within 100 feet, measured horizontally, of a perennial or intermittent stream, unless the regulatory authority authorizes you to do so under § 784.28(e) of this chapter.

(2) *Clean Water Act requirements.* Surface activities, including those activities in paragraphs (b)(1) through (b)(4) of this section, may be authorized in perennial or intermittent streams only where those activities would not cause or contribute to the violation of applicable State or Federal water quality standards developed pursuant to the Clean Water Act, as determined through certification under section 401 of the Clean Water Act or a permit under section 402 or 404 of the Clean Water Act.

(b) *Exception.* The buffer requirement of paragraph (a) of this section does not apply to those segments of a perennial or intermittent stream for which the regulatory authority, in accordance with § 784.28(d) of this chapter or § 817.43(b)(1) of this part, approves one or more of the activities listed in paragraphs (b)(1) through (b)(4) of this section.

(1) Diversion of a perennial or intermittent stream. You must comply with all other applicable requirements of the regulatory program, including the requirements of § 817.43(b) of this part for the permanent or temporary diversion of a perennial or intermittent stream.

(2) Placement of bridge abutments, culverts, or other structures in or within 100 feet of a perennial or intermittent stream to facilitate crossing of the stream by roads, railroads, conveyors, pipelines, utilities, or similar facilities. You must comply with all other applicable requirements of the regulatory program, including the requirements of §§ 817.150, 817.151, and 817.181 of this part, as appropriate.

(3) Construction of sedimentation pond embankments in a perennial or intermittent stream. This provision extends to the pool or storage area created by the embankment. You must

comply with all other applicable requirements of the regulatory program, including the requirements of § 817.45(a) of this part. Under § 817.56 of this part, you must remove and reclaim all sedimentation pond embankments before abandoning the permit area or seeking final bond release unless the regulatory authority approves retention of the pond as a permanent impoundment under § 817.49(b) of this part and provisions have been made for sound future maintenance by the permittee or the landowner in accordance with § 800.40(c)(2) of this chapter.

(4) Construction of excess spoil fills and coal mine waste disposal facilities in a perennial or intermittent stream. You must comply with all other applicable requirements of the regulatory program, including the requirements of paragraphs (a) and (f) of § 817.71 of this part for excess spoil fills and the requirements of §§ 817.81(a), 817.83(a), and 817.84 of this part for coal mine waste disposal facilities.

(c) *Additional clarifications.* All surface activities conducted in or within 100 feet of a perennial or intermittent stream must comply with paragraphs (b)(9)(B) and (b)(11) of section 516 of the Act and the regulations implementing those provisions of the Act, including—

(1) The requirement in § 817.41(d)(1) of this part that surface activities be conducted according to the plan approved under § 784.14(g) of this chapter and that earth materials, ground-water discharges, and runoff be handled in a manner that prevents, to the extent possible using the best technology currently available, additional contribution of suspended solids to streamflow outside the permit area; and otherwise prevents water pollution.

(2) The requirement in § 817.45(a) that appropriate sediment control measures be designed, constructed, and maintained using the best technology currently available to prevent, to the extent possible, additional contributions of sediment to streamflow or to runoff outside the permit area.

(3) The requirement in § 817.97(a) of this part that the operator must, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts on fish and wildlife and related environmental values and achieve enhancement of those resources where practicable.

(4) The requirement in § 817.97(f) of this part that the operator avoid disturbances to; enhance where practicable; restore; or replace wetlands, habitats of unusually high value for fish and wildlife, and riparian vegetation along rivers and streams and bordering ponds and lakes.

■ 27. In § 817.71, remove paragraph (k) and revise paragraphs (a) through (d) to read as follows:

§ 817.71 Disposal of excess spoil: General requirements.

(a) *General.* You, the permittee or operator, must place excess spoil in designated disposal areas within the permit area in a controlled manner to—

(1) Minimize the adverse effects of leachate and surface water runoff from the fill on surface and ground waters;

(2) Ensure mass stability and prevent mass movement during and after construction;

(3) Ensure that the final fill is suitable for reclamation and revegetation compatible with the natural surroundings and the approved postmining land use; and

(4) Minimize disturbances to and adverse impacts on fish, wildlife, and related environmental values to the extent possible, using the best technology currently available.

(b) *Static safety factor.* The fill must be designed and constructed to attain a minimum long-term static safety factor of 1.5. The foundation and abutments of the fill must be stable under all conditions of construction.

(c) *Compliance with permit.* You, the permittee or operator, must construct the fill in accordance with the design and plans submitted under § 784.19 of this chapter and approved as part of the permit.

(d) *Special requirement for steep-slope conditions.* When the slope in the disposal area exceeds 2.8h:1v (36 percent), or any lesser slope designated by the regulatory authority based on local conditions, you, the permittee or operator, must construct keyway cuts (excavations to stable bedrock) or rock-toe buttresses to ensure fill stability.

* * * * *

[FR Doc. E8–29150 Filed 12–11–08; 8:45 am]

BILLING CODE 4310–05–P