

THE RIGHTS AND OBLIGATIONS OF OPERATORS TO CONTROL SEDIMENT
AND IMPLEMENT ALTERNATIVE SEDIMENT CONTROL TECHNOLOGIES
UNDER THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977 AND
THE FEDERAL WATER POLLUTION CONTROL ACT¹

Robert W. Micsak²
John R. Hinton³
Donald O. Doehring⁴

Abstract. Under the Surface Mining Control and Reclamation Act of 1977 ("SMCRA") coal mine operators have a right and an obligation to implement alternative sediment control in lieu of sediment ponds where the utilization of ponds would alter the prevailing hydrologic balance and cause channel deepening. Where the utilization of those alternative technologies results in the creation of a point source discharge, which is subject to the requirements of the Federal Water Pollution Control Act ("Act"), the Act provides for variances from the effluent limitations guidelines for some dischargers.

THE ENVIRONMENTAL IMPACT OF SEDIMENT PONDS

As discussed in the earlier paper by Dr. Doehring, *et al.*, there are several adverse environmental impacts which result as a consequence of installing sediment ponds at mines located in certain dryland areas of the United States, predominantly the western continental states. While it is not necessary to restate all of the conclusions reached in the earlier paper regarding these impacts, it is appropriate to reiterate some of the more significant conclusions reached regarding this issue for purposes of this paper. It is also important to recognize that the following impacts are assumed to occur for the purpose of the discussion contained in this paper.

For instance, where "clean water"⁵ is discharged into drainage channels, channel deepening and enlargement can occur. In addition, the "clean water" will pick up sediment as it flows down the channel, until a balanced but much higher sediment load is reached, based upon the volume and velocity of the water flowing, the type of soil, vegetation and the other factors which have an impact upon the water quality. Later, after the ponds or structures are removed or fail, head cutting will proceed up the drainage channel, causing erosion of the reclaimed areas. Thus, the drainage channel is dramatically altered in both the short term and the long term.

In the situation where no discharge from the ponds or other structures occurs, i.e., a "nondischarging mine," the impacts are two-fold. First, during the time that the water is being retained the channels below the ponds will collapse, thereby reducing channel capacity. Later, after the ponds are removed, or after they fail, downstream flooding will result, since the drainage capacity of the channel is no longer sufficient to handle the volume of water being released into the channel.

Under either of the approaches described in the preceding paragraphs, the volume, rate and duration of the flow event is dramatically

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- 1 Paper presented at the national meeting of the American Society for Surface Mining and Reclamation [Denver, Colorado, October 8-10, 1985].
 - 2 Attorney for The Pittsburg & Midway Coal Mining Co., Denver, Colorado. This author was assisted by Mr. John Miller, a third year law student at the University of Denver, Denver, Colorado.
 - 3 Manager of Reclamation for The Pittsburg & Midway Coal Mining Co., Denver, Colorado.
 - 4 Associate Professor of Geology, Acting Head of the Department of Earth Resources, Colorado State University, Fort Collins, Colorado and Vice President of Water, Waste and Land, Inc., Fort Collins, Colorado.

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- 5 "Clean water" is used to mean water which meets the effluent limitations set out at 40 C.F.R. Part 434 (1984).

different from the preexisting natural conditions. In addition, the erosion rates and sediment transport and deposition patterns are altered significantly.

THE ALTERNATIVES AVAILABLE

As discussed in the previous paper by Mr. Hinton, *et al.*, there are alternative methods of controlling erosion and sediment in such a way that these adverse environmental impacts can be greatly reduced or eliminated. At times, and probably in most instances, a combination of techniques and methods will be necessary to achieve these goals.

THE LEGAL OBLIGATION

The Surface Mining Control and Reclamation Act of 1977⁶

The relevant place to start an analysis of this issue is with the law as enacted by Congress. It was Congress' declared policy that SMCRA was enacted "to minimize damage to the environment."⁷ Congress also recognized that technologies existed and should be utilized which would "minimize so far as practicable the adverse ... environmental effects of ... mining operations."⁸ Finally, Congress declared that "coal mining operations ... should be conducted in an environmentally sound manner."⁹ There can hardly be a doubt that when Congress enacted SMCRA it did so with the intention of minimizing adverse environmental impacts resulting from the mining operation. The clear language of the above provisions make this clear and the legislative history confirms this conclusion.¹⁰

More specifically, under section 515(b)(10) of SMCRA,¹¹ the operation is required to:

(10) minimize disturbances to the prevailing hydrologic balance at the mine-site and in associated off site 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 -

* * *

(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 the contributions be in excess of requirements set by applicable State or Federal law;

(ii) constructing any siltation structures pursuant to subparagraph B(i) ... prior to commencement of surface coal mining operations,

* * *

(E) avoiding channel deepening or enlargement in operations requiring the discharge of water from mines.

It is worthwhile to note that the precise language Congress used in section 515(b)(10) of SMCRA is consistent with Congress' generally declared intention to minimize disturbances to the preexisting natural conditions.

Particular attention should be paid to several phrases of section 515(b)(10). The first phrase worthy of note provides that the operation shall "minimize disturbances to the prevailing hydrologic balance." It is clear from the plain language of this provision that it is the prevailing, or preexisting, hydrologic balance to which disturbances should be minimized. The House Interior and Insular Affairs Committee, in discussing this issue in the report on House Bill 2 (1977),¹² recognized that the "total prevention of adverse effects from mining is impossible and thus, the bill sets attainable standards to protect the hydrologic balance of impacted areas within the limits of feasibility."¹³

Further, while the phrase is not defined in SMCRA, the legislative history indicates that the House Committee had a fairly sophisticated understanding of this issue. The Committee recognized that the hydrologic balance was maintained by a number of interrelated factors and that an alteration of one factor could trigger¹⁴ changes throughout the hydrologic system. The Committee stated that:

6 30 U.S.C.A. §§ 1201-1328 (1985 Supp.).
7 30 U.S.C.A. § 1201(d) (1985 Supp.).
8 30 U.S.C.A. § 1201(f) (1985 Supp.).
9 30 U.S.C.A. § 1201(j) (1985 Supp.).
10 See H.R. Rep. No. 493, 95th Cong., 1st Sess. 97-116 (1977) reprinted in 1977 U.S. Code Cong. and Ad. News, 728-747.
11 42 U.S.C.A. § 1265(b)(10) (1985 Supp.) (emphasis added). See 42 U.S.C.A. § 1266(b)(9) (1985 Supp.) (establishing similar performance standards regarding the hydrologic balance for underground mining operators).

12 H.R. 2, 95th Cong., 1st Sess. (1977) (this bill became the final SMCRA bill).
13 H.R. Rep. No. 218, *supra*, at 110. See also, S. Rep. No. 128, 95th Cong., 1st Sess. 54 (1977).
14 H.R. Rep. No. 218, *supra*, at 110.

The hydrologic balance is the equilibrium established between the ground and surface waters of an area between the recharge and discharge of water to and from that system. Some of the measureable indicators of such an equilibrium are: ... the quantity of surface water as measured by the volume[,] rate and duration of flow in streams; the erosion, transport, and deposition of sediment by surface runoff and streamflow; the quality of both ground and surface water including both suspended and dissolved materials; and the interrelationship between¹⁵ the ground and surface waters.

The factors recognized by the House Committee indicated that they intended that, to minimize disturbances to the hydrologic balance, streamflow rates and volumes, sediment loads, erosion rates and sediment deposition rates should be altered to the minimum extent practicable by the operators.

This conclusion is supported in the Senate reports. In discussing section 415 of Senate Bill 7 (1977)¹⁶ the Energy and Natural Resources Committee stated that section 415 set minimum criteria to be met by surface mining operations. The Senate Committee specified that the criteria were designed to "minimize the disturbances to the prevailing hydrologic balance of the mine site and associated off site areas."¹⁷ The Committee went on to recognize that conditions could vary from region to region and it was their view that the provisions were "fully intended to protect the hydrological integrity of any area ... impacted by [surface] mining."¹⁸

The second phrase worthy of note requires that surface water quality and quantity disturbances be minimized. The plain language of this provision requires the operator to minimize disturbances to water quality. One would conclude that this language would require that where the natural sediment loads are high the operator should take steps to see that those high sediment loads are maintained. This is particularly true where those high sediment loads are necessary to maintain the hydrologic balance. This conclusion is consistent with the House Report identified above and, once again, with the

Senate Energy and Natural Resources Committee Report on section 415 of Senate Bill 7 (1977). The Committee stated that the provisions were "designed to protect the quality and quantity of the water in areas where surface coal mining operations are being conducted."¹⁹

In addition, from the language of the statute which directs that "additional contributions" of suspended solids be reduced, it would be reasonable to conclude that only those amounts of sediment which are above natural background levels need to be minimized.²⁰ This language, when read in the context of the Committee reports from the Senate, and especially the House, strongly supports this position, particularly where disturbances to the prevailing hydrologic balance, as described in the House Report, would occur if sediment loads were reduced substantially below natural levels.

Subparagraph (B)(ii) of section 515(b)(10) of SMCRA,²¹ as quoted above, recognizes that only in some instances would siltation structures be required. The word "any" clearly contemplates that in some instances there may be no siltation structures necessary to achieve the stated goal of minimizing disturbances to the prevailing hydrologic balance. Further, the reference in subparagraph (B)(ii) to subparagraph (B)(i) indicates that, among other things, it may not be necessary to utilize siltation structures to prevent the addition of suspended solids to streamflow or runoff outside the permit area and that such structures may not be necessary to meet the best technology requirement.

The requirement of a siltation structure, where the use of one was deemed necessary, appears to have arisen in both the Senate and House bills. House Bill 2 did not use the words "siltation structure." However, the House Report did specifically mention several siltation control measures, including "erosion and sediment control measures, 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."²² The House wanted mine-by-mine designs to utilize the best technology currently available for sediment control to assure that disturbances to the prevailing hydrologic balance would be minimized.²³

15 Id. at 109-110 (emphasis added).

16 Portions of S. 7, 95th Cong., 1st Sess. § 415 (1977) that are discussed were incorporated into H.R. 2, 95th Cong., 1st Sess., § 515 (1977) to produce the final bill which became section 515(b)(10) of SMCRA.

17 S. Rep. No. 128, supra, at 82.

18 Id. at 54.

19 Id.

20 See In Re: Permanent Surface Mining Regulation Litigation II (Round III), 22 E.R.C. 2153, 2193 (D.C.D.C. 1985) (hereinafter "Round III").

21 30 U.S.C.A. § 1265(b)(10)(B)(ii) (1985 Supp.).

22 H. Rep. No. 218, supra, at 114.

23 Id.

Senate Bill 7 specifically mentioned "siltation structures" but it did not limit the meaning of this term.²⁴ Further, the Senate was seeking, as was the House, to "protect the hydrological integrity [of the mine area]."²⁵

The final SMCRA bill combined the technology standard of the House Bill with the siltation structure language of the Senate Bill. Thus, it is reasonable to conclude that the "siltation structure" language of the Senate Bill, when read along with the types of siltation control measures listed in the House Report, supports the conclusion that the Congress intended that a variety of sediment control structures would qualify as "siltation structures" under section 515(b)(10) of SMCRA.

The final phrase of section 515(b)(10) which needs to be discussed directs that channel deepening and enlargement be avoided in surface coal mining operations. The House Report from the Interior and Insular Affairs Committee, discussing House Bill 2 (1977), in which this language was set out, singled out channel deepening and enlargement as one of the evils the Committee sought to avoid. The Committee went on to note that this requirement:

is particularly important in the arid and semiarid areas where the natural erosional balance of the streams is in accordance with ground water levels. Deepening of the channel often results in lowering the ground water level since in such areas streams maintain the equilibrium of ground water systems The lowering of ground water in the semiarid and arid areas could result in a reduction in the vegetative cover which in turn would trigger greater erosion from the landscape during rainstorms. Thus the cycle of increased runoff and erosion, channel deepening, and additional lowering of the ground water is started and continued.²⁶

Senate Bill 7 (1977) also required the operator to "avoid[] channel deepening or enlargement."²⁷ Thus, it is clear that SMCRA was intended, by Congress, to reduce or eliminate channel deepening and enlargement and that this concern was recognized as being a particular problem in arid and semiarid areas and critical to the maintenance of the hydrologic balance.

All of the provisions cited above make it quite clear that Congress intended to have SMCRA

implemented in a way which would result in a minimum of environmental harm from surface coal mining operations. It is also equally clear that, with regard to the hydrologic balance, Congress intended to have the Office of Surface Mining Reclamation and Enforcement of the Department of the Interior ("OSM") implement these provisions in a manner which would cause the smallest practicable disturbance to the hydrologic balance prevailing before the mining operation began. The legislative history and the organization of section 515(b)(10) of SMCRA also clearly indicate that, while Congress sought to have the operators minimize disturbances to the prevailing hydrologic balance, the precise method of attaining this goal was multifold and Congress intended only that the operator be required to utilize the best technology available to achieve that goal, whether or not it meant utilizing "siltation structures" or some other treatment technique. The legislative history makes it clear, and so to does the language of section 515(b)(10) of SMCRA, that the operator should not substantially lower natural sediment loads or alter streamflow characteristics, particularly where doing so would maximize disturbances to the prevailing hydrologic balance.

This review of SMCRA and some of the legislative history gives a clear indication of Congress' primary concerns and objectives with regard to sediment control. With these concerns and objectives in mind it is now appropriate to review the regulations promulgated and adopted by OSM to implement section 515(b)(10) of SMCRA.

The Implementing Regulations

The regulations implementing section 515(b)(10) of SMCRA have been adopted by OSM for the interim²⁸ and permanent programs²⁹ for both Indian lands and non-Indian lands. While it

28 The interim standards regarding the hydrologic balance for Indian lands are set out at 25 C.F.R. § 216.108 (1985). The permanent program standards for Indian lands are set out at 30 C.F.R. §§ 816.41 - 816.47. The permanent program standards for Indian lands are made applicable pursuant to 30 C.F.R. § 750.16 (49 Fed. Reg. 38462, 38479) (Sept. 28, 1984). Due to the page limitation set for this paper it is not possible to reproduce all of the language of these regulations herein. Reference should be made to the appropriate titles of the Code of Federal Regulations to obtain the language of the cited provisions.

29 The interim standards for non-Indian lands are set out at 30 C.F.R. § 715.17 (1984). The permanent program standards for non-Indian lands are set out at 30 C.F.R. §§ 816.41 - 816.47. Due to page limitations for this paper it is not possible to reproduce all of the language of these

24 S. Rep. No. 128, supra, at 25 and 82.

25 Id. at 54.

26 H. Rep. No. 218, supra, at 116 (emphasis added).

27 S. Rep. No. 128, supra, at 25.

is not possible, due to page limitations, to restate all of these regulations, it is important to recognize that the interim regulatory programs generally require, among other things, that the operator minimize disturbances to the prevailing hydrologic balance, both on and off-site in order to prevent long term adverse changes in the hydrologic balance.³⁰ The permanent program standards direct the operator to minimize disturbances to the prevailing hydrologic balance within the permit and adjacent areas and to prevent material damage to the hydrologic balance outside the permit area.³¹

"Hydrologic balance" is defined in both interim programs as "the relationship between the quality and quantity of inflow to, outflow from, and storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake or reservoir. It encompasses the quantity and quality relationships between precipitation, runoff, evaporation, and the change in ground and surface water storage."³² The term is left undefined in the permanent programs.

In addition, under all programs, and with a few limited exceptions, the operator is required to pass all surface drainage from the disturbed areas through sedimentation ponds³³ or, in the case of the permanent program, to otherwise discharge water through a point source.³⁴ Certain design requirements are also mandated for sedimentation ponds.³⁵

In neither of the interim programs is the operator directed to prevent channel deepening or enlargement. In the permanent programs the only time the operator is directed to prevent channel deepening or enlargement is with regard to discharges from various structures.³⁶

Finally, under all programs the operator is instructed that "mining and reclamation practices that minimize water pollution and changes in flow

shall be used in preference to water treatment.³⁷

In the recent Round III decision United States District Judge Thomas Flannery struck down and remanded a number of OSM's permanent program rules. One of the rules which Judge Flannery remanded was the "siltation structure" requirement contained in 30 C.F.R. § 816.46(b)(2).³⁸ This regulation required that "all surface drainage from disturbed areas ... be passed through a siltation structure before leaving the permit area."³⁹ The term "siltation structure" is defined as "a sedimentation pond, a series of sedimentation ponds, or other treatment facility."⁴⁰ The term "other treatment facility" is defined as "any chemical treatments ... or mechanical structures ... that have a point source discharge."⁴¹

As a result of an industry challenge that sedimentation ponds cause environmental harm and that alternative sediment control technologies should have been considered by the Secretary of the Interior ("Secretary"), the rule was remanded by the Court because it felt that the Secretary, in promulgating the regulation, had failed to adequately consider and discuss the "benefits and drawbacks of sedimentation ponds, and the competing alternatives."⁴² The Court also felt that the Secretary, having admitted that "the use of sedimentation ponds and other siltation structures in the West presents some problems,"⁴³ failed to adequately identify the problems and to describe why, in the face of such problems, sediment ponds were still considered the best technology currently available.⁴⁴ The Judge went on to say that because he could not "discern the path taken by [the Secretary] in responding to [these issues]," he⁴⁵ was left with no choice but to remand the rule.

In reaching this decision the Court discussed several other pertinent issues. First, the Court recognized that the statute required that the hydrologic balance be maintained.⁴⁶ The Court also recognized that channel deepening and enlargement was a specific statutory requirement which coal operators are directed to avoid.⁴⁷ The Court then recognized, although it did not rule on the issue, that industry's argument that

regulations herein. Reference should be made to the appropriate titles of the Code of Federal Regulations to obtain the language of the cited provisions.

30 25 C.F.R. § 216.108 (1985) (Indian lands interim program) and 30 C.F.R. § 715.17 (1984) (non-Indian lands interim program).

31 30 C.F.R. § 816.41 (1984) (permanent program standards for Indian and non-Indian lands).

32 25 C.F.R. § 216.101 (1985) (Indian lands) and 30 C.F.R. § 710.5 (1984) (non-Indian lands).

33 See 25 C.F.R. § 216.108(a) (1985) and 30 C.F.R. § 715.17(a) (1984).

34 See 30 C.F.R. § 816.46(a) and (b) (1984). But see Round III, *supra*, at 2195 (30 C.F.R. § 816.46(a)(2) remanded to OSM).

35 See 30 C.F.R. §§ 715.17(e) and 816.46(c) (1984) and 25 C.F.R. § 216.108(e) (1985).

36 See 30 C.F.R. § 816.47 (1984).

37 30 C.F.R. § 816.41(a) (1984) (emphasis added). See 30 C.F.R. § 715.17 (1984) and 25 C.F.R. § 216.108 (1985).

38 Round III, *supra*, at 2195.

39 30 C.F.R. § 816.46(b)(2) (1984).

40 30 C.F.R. § 816.46(a)(1) (1984).

41 30 C.F.R. § 816.46(a)(3) (1984).

42 Round III, *supra*, at 2194.

43 *Id.* (citing 48 Fed. Reg. 44036 (1983)).

44 *Id.* at 2194-95.

45 *Id.* at 2195.

46 *Id.* at 2193.

47 *Id.*

only "additional" contributions of sediment above natural background levels needed to be controlled, might be meritorious.⁴⁸

The Court's recognition of these arguments, along with the Secretary's preamble statement in which he recognized that sediment ponds create problems in the West, strongly indicates that the Court felt that the primary objectives of section 515(b)(10) of SMCRA were to minimize disturbances to the prevailing hydrologic balance and to prevent channel deepening and enlargement. It appears the Court felt that if a particular technology would make these goals unachievable, then it is the technology which should be altered so that these statutory goals will be met.⁴⁹ The Secretary was directed to "articulate a satisfactory explanation for [his] action including a 'rational connection between the facts found and the choice made.'"⁵⁰ This decision appears to be quite consistent with Congress' stated goals and the clear language of SMCRA.

The Law Regarding Conflicting Statutory or Regulatory Obligations

The general rule requires that where a regulation, when read literally, is contrary to the legislative purpose, the courts are to restrict the regulatory language so that the legislative purpose is fulfilled.⁵¹ Similarly, courts will disregard particular language of a provision "in order to accomplish the plain intention of the legislature."⁵² It is also a generally followed rule that where portions of an

act or regulatory program are so inconsistent with each other that one portion negates another, the court may determine which provision will be effective.⁵³ Finally, it is a well established rule that a statutory provision should not be isolated in an attempt to determine its meaning, but the entire statute should be construed as a whole.⁵⁴

Under these rules, if a surface coal mine operator is required by regulation to use "sediment ponds" or "siltation structures," as defined, and to also minimize disturbances to the prevailing hydrologic balance, but cannot do both, the law will require that the intent of Congress, i.e. the legislative purpose, be fulfilled. If Congress intended that operators minimize disturbances to the prevailing hydrologic balance in preference to the utilization of any particular control technology, then the operator would be required to use that sediment control technology which did actually minimize disturbances to the prevailing hydrologic balance, even though such technology did not meet the regulatory definitions of "sediment pond" or "siltation structure." That is, the requirement in the regulations and SMCRA to minimize disturbances to the prevailing hydrologic balance and to prevent channel deepening can be used to negate the requirement that drainage be passed through a "sediment pond" or "siltation structure," as defined, when it is determined that the two requirements cannot both be met and that the former requirements more fairly reflect the intention of Congress.

From the analysis of section 515(b)(10) of SMCRA and the legislative history, above, it is clear that Congress was most concerned that disturbances to the hydrologic balance be minimized and that channel deepening and enlargement be avoided. Congress was less concerned that any particular sediment control technology be utilized. OSM's present interim rules and their permanent rules, before Judge Flannery remanded the rule requiring sediment ponds, on the other hand, make it impossible to ascertain which of the two conflicting mandates is most important. Thus, the operator is left with the risk of complying with one requirement and violating the other. Since the sanctions for violating a regulation can be severe and the remedial action required costly, it is imperative that OSM and industry promptly recognize which of the two conflicting regulatory obligations is most important and to focus their energies on

48 *Id.*

49 The decision also raises serious questions about the continued enforceability of the sediment pond provisions in the interim programs at 25 C.F.R. § 216.108(a) (1985) and 30 C.F.R. § 715.17(a) (1984), although such a discussion is beyond the scope of this paper.

50 Round III, *supra*, at 2193 (citing *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 103 S.Ct. 2856, 2866-67 (1983) which was quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)).

51 *Kenai Peninsula Borough v. Andrus*, 436 F.Supp. 288, 291 (D.Alaska 1977), *aff'd.*, 612 F.2d 1210 (9th Cir. 1980), *aff'd.*, 451 U.S. 259, 101 S.Ct. 1673, 68 L.Ed.2d 80 (1981). Courts will apply the principles of statutory construction to interpret rules and regulations. *General Electric v. United States*, 610 F.2d 730 (Ct. Cl. 1979); *Trustees of Indiana University v. United States*, 618 F.2d 736 (Ct. Cl. 1980).

52 *Iglehart v. Iglehart*, 204 U.S. 478, 484, 27 S.Ct. 329, 51 L.Ed. 575 (1907) and see *Haggar Co. v. Helvering*, 308 U.S. 389, 394, 60 S.Ct. 337, 84 L.Ed. 340 (1940).

53 *Booth Fisheries Corp. v. Case*, 47 P.2d 834, 835 (Wash. 1935); *In Re Wilson's Estate*, 56 P.2d 733, 737 (Mt. 1936).

54 *United States v. American Trucking Association*, 310 U.S. 534, 542-43, 60 S.Ct. 1059, 84 L.Ed. 1345 (1940), *reh'g denied*, 311 U.S. 724, 61 S.Ct. 53, 85 L.Ed. 472 (1940).

meeting that obligation. Judge Flannery's decision offers OSM and industry the opportunity to resolve this conflict under the permanent programs at this time outside the courtroom. If this issue is resolved it should also be used as a basis to revise the interim programs. Otherwise, as long as the conflicting regulatory obligations exist the operators will face the risk of sanctions in the short term, for violation of the sediment control rules, or over the longer term, for violation of the rules requiring the operator to minimize disturbances to the prevailing hydrologic balance. The environmentally sound practice, though somewhat more elusive, is clearly what Congress intended the operator pursue, and it is that rule which OSM should make its paramount concern.

The Federal Water Pollution Control Act⁵⁵

Section 702(a)(3) of SMCRA⁵⁶ provides that nothing in SMCRA "shall be construed as superseding, amending, modifying, or repealing ... the Federal Water Pollution Control Act (79 Stat. 903), as amended (33 U.S.C. 1151-1175)" This requirement has been construed by the United States Court of Appeals for the District of Columbia Circuit to mean that where there is a variance or exemption available under the Act, then OSM could not abolish or restrict such exemption or variance. OSM further could not impose more stringent standards on the operator under SMCRA than were imposed under the Act, to the extent the operator's activities were subject to regulation by the Act.⁵⁷ Thus, where the provisions of the Act are applicable to surface coal mining, those provisions cannot be altered by SMCRA.

Therefore, a discussion of OSM's sediment control rules under SMCRA would not be complete without some discussion of the Act. The Act is a very complex and comprehensive statute. The purpose of this discussion is to briefly alert the reader to some of the more significant features of the Act and the implementing regulations as they relate to sediment control⁵⁸ for the surface coal mining industry. The

discussion herein will focus on the National Pollution Discharge Elimination System ("NPDES") set out in section 402 of the Act.⁵⁹ The NPDES program requires that those who discharge a pollutant from a point source to waters of the United States obtain a permit from the United States Environmental Protection Agency ("EPA").⁶⁰

The regulations implementing these requirements for the coal mining industry are set out at 40 C.F.R. Part 434 (1984).⁶¹ Sediment is one of the pollutants regulated at coal mines. The sediment limitations, while they may vary slightly for various parts of the mining operation, can be significantly lower than their natural levels in arid and semiarid areas of the United States.⁶²

However, it is important to recognize that only the "discharge" of sediment from a "point source" is subject to regulation under 40 C.F.R. Part 434.⁶³ A "point source" is defined as "any

the Mining Industry, Chapter 169 (2d Ed. of The American Law of Mining 1984).

59 33 U.S.C.A. § 1342 (1978).

60 See 33 U.S.C.A. §§ 1311(a) and 1362(12) (1978).

61 The regulations cover Coal Preparation Plants and Coal Preparation Plant Associated Areas (Subpart B), Acid or Ferruginous Mine Drainage (Subpart C), Alkaline Mine Drainage (Subpart D), and Post-Mining Areas (Subpart E).

62 Permissible sediment discharges vary depending upon the type of facility or area from which the discharge occurs. In active mine areas and for coal preparation plants and in coal preparation plant associated areas the effluent limitation is set at 35 mg/liter as an average of daily values for 30 consecutive days or a maximum of 70 mg/liter for any one day. 40 C.F.R. §§ 434.22, 434.25, 434.32, 434.35, 434.42 and 434.45 (1984). For post-mining reclamation areas the limitations are set at a maximum of .5 ml/liter for any one day. 40 C.F.R. § 434.52 (1984). See also, 40 C.F.R. § 434.63(a) (1984) (imposing a settleable solids limitation of .5 ml/liter as the maximum for any one day in place of the otherwise applicable limitations during precipitation events within any 24 hour period where the event is less than or equal to the 10 year, 24-hour event). For precipitation events greater than the 10 year/24-hour event, there are no sediment limitations during the precipitation event but the operator has the burden of proving the size of the precipitation event. 40 C.F.R. § 434.63(b) and(c) (1984). See earlier paper by D. Doehring, et al.

63 See 40 C.F.R. §§ 434.22, 434.25, 434.32, 434.35, 434.42, 434.45 and 122.2 (1984) (references to "discharge," and definitions

55 33 U.S.C.A. §§ 1251-1376 (1978).

56 30 U.S.C.A. § 1292(a)(3) (1985 Supp.).

57 In re Surface Mining Regulation Litigation, 627 F.2d 1346, 1366-69 (D.C. Cir. 1980) (hereinafter "In Re Surface Mining").

58 This discussion is not intended to be a comprehensive discussion of the requirements of the Act or the implementing regulations. For a complete discussion of the Act reference should be made to a treatise on this matter. See, e.g., R. Connery, R. Pomeroy, P. Frohardt, J. Fognani, J. Hook, T. Kimmell, D. Quander, J. Walpole and B. Hanson, Environmental Regulation of

discernable, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, [or] rolling stock⁶⁴ This term has been interpreted quite broadly by the courts.⁶⁵ Nevertheless, sheetflow or other non-point sources of pollution are not subject to the NPDES requirements of 40 C.F.R. Part 434.⁶⁶

Thus, discharges from a sediment pond clearly are "point sources" and are subject to the NPDES requirements of Part 434. In addition, the permanent program specifies that even if a sediment pond is not used, the discharge from the "siltation structure" must be through a "point source."⁶⁷ Further, even the utilization of some alternative sediment control technologies will likely result in the creation of "point source" discharges of sediment.

Thus, if the operator, under SMCRA, is obligated to minimize disturbances to the prevailing hydrologic balance and if to do so the operator must discharge sediment through a point source in excess of that permitted by 40 C.F.R. Part 434 (1984), the issue which must be resolved is whether there is any way that these effluent limitations can be varied or their application avoided.

As already noted, if there is no point source discharge of sediment the provisions of Part 434, by their terms, do not apply. Also, for precipitation events greater than a 10 year, 24 hour event, the effluent limits for settleable solids are not applicable but the operator must prove that an event of such magnitude occurred. If there is a point source discharge there are at least two variances available. The first variance to be discussed may be available for dischargers if their mine is not a "new source coal mine."⁶⁸

of "discharge" and "point source," where definition of "discharge" uses the term "point source").

64 40 C.F.R. § 122.2 (1984).

65 See *Sierra Club v. Abston Construction Co.*, 620 F.2d 41, 45 (5th Cir. 1980) (runoff through gullies naturally eroded by rain on a spoil pile may constitute a "point source").

66 *Id.* See also *Appalachian Power Co. v. Train*, 545 F.2d 1351 (4th Cir. 1976) (unchanneled and uncollected surface waters are not "point sources").

67 But see Round III, *supra*, at 2194 (the court recognized that the Act does not require that the operator create point sources).

68 See 40 C.F.R. §§ 434.25(c), 434.35(a), 434.45(a), 434.55(a) and (b) (1984). 40 C.F.R. § 434.11(j) (1984) provides that a "new source coal mine" is a "coal mine (excluding coal preparation plants and coal preparation plant associated areas): (1) The

The variance is set out at 40 C.F.R. §§ 125.30 - 125.32 (1984) and provides that the effluent limitations of Part 434 can be altered if it can be shown that the discharger's facilities, equipment, processes or other factors relating to the discharge are fundamentally different from the factors considered by EPA in the development of national limits.⁶⁹ A request for the variance may be made by the discharger or proposed by the Director.⁷⁰

The criteria which are to be considered in determining whether fundamentally different factors exist require that an applicable national limitation exist, that the factors relating to the discharge are, in fact, fundamentally different from those considered by EPA in establishing the national limits and that the request be made in accordance with the procedural requirements of 40 C.F.R. Part 124.⁷¹

The regulation then goes on to provide that where a less stringent effluent limitation is requested, the request will be granted only if the alternative effluent limitation is no less stringent than justified by the fundamental difference, that the alternative effluent limitation will ensure compliance with sections 208(e) (treatment works plans) and 301(b)(1)(C) (water quality standards and treatment standards) of the Act, and that compliance with the national limits would result in "(i) removal cost wholly out of proportion to the removal cost considered during development of the national limits; or (ii) a non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the national limits."⁷²

construction of which is commenced after May 29, 1981 ...; or (ii) which is determined by the EPA Regional Administrator to constitute a "major alteration." The Regional Administrator is directed to take several factors into consideration in determining whether a "major alteration" has been made. The factors to be considered include whether, after the date of proposal of applicable new source performance standards, a new coal seam is extracted, a discharge into a new drainage area is undertaken, new extensive surface disruption occurs, a new shaft, slope or drift is initiated, new land or mineral rights are acquired, a significant capital investment in additional equipment or additional facilities occurs, and other relevant factors. 40 C.F.R. § 434.11(j)(1)(ii) (1984).

69 40 C.F.R. § 125.30(a) (1984).

70 40 C.F.R. § 125.30(b) (1984).

71 40 C.F.R. § 125.31(a) (1984).

72 40 C.F.R. § 125.31(b) (1984).

The factors which may be considered fundamentally different include:

(1) The nature or quality of pollutants contained in the raw waste load of the applicant's process wastewater;

(2) The volume of the discharger's process wastewater and effluent discharged;

(3) Non-water quality environmental impact of control and treatment of the discharger's raw waste load;

(4) Energy requirements of the application of control and treatment technology;

(5) Age, size, land availability, and configuration as they relate to the discharger's equipment or facilities; processes employed; process changes; and engineering aspects of the application of control technology;

(6) Cost of compliance with required control technology.⁷³

Several factors are listed which are not to be used as a basis for granting a fundamentally different factors variance. These include:

(1) The infeasibility of installing the required waste treatment equipment within the time the Act allows;

(2) The assertion that the national limits cannot be achieved with the appropriate waste treatment facilities installed, if such assertion is not based on factor(s) listed in paragraph (d) of this section;

(3) The discharger's ability to pay for the required waste treatment; or

(4) The impact of a discharge on local receiving water quality.⁷⁴

Finally, it is provided that the states can impose more stringent limitations under section 10 of the Act, notwithstanding EPA's issuance of variance.⁷⁵

In reviewing an application for a variance under these provisions EPA will consider all documents related to the development of the

national limitations.⁷⁶ It must be shown that the listed factors fundamentally are different from those considered by EPA in establishing the national limitations. This is a high standard and EPA has indicated that these variances are granted only in rare circumstances.⁷⁷ Nevertheless, to the extent the discharger can satisfy the variance requirements, the national effluent limitations of Part 434 can be altered.

A second variance mechanism may also be available, although at present there appears to be a difference of opinion between the Secretary and industry as to whether or not this variance is available to the coal mining industry.⁷⁸

This second variance is set out at 40 C.F.R. § 122.45(g)⁷⁹ and it would appear that if the conditions set out therein are met, the variance would be available to any discharger. The variance provides that the "technology-based effluent limitations or standards shall be adjusted to reflect credit for pollutants in the discharger's intake water."⁸⁰ Thus, credit for natural or background levels of sediment could be utilized in obtaining a permit under this variance. This variance has obvious advantages where the maintenance of naturally high sediment loads is necessary to meet SMCRA's requirement of minimizing disturbances to the prevailing hydrologic balance.

To qualify for this variance the discharger must show that "the intake water is drawn from the same body of water into which the discharge is made, [although t]he Director may waive this requirement if he finds that no environmental degradation will result."⁸¹ Most surface coal mining operations should be able to satisfy the former requirement for virtually all of their discharges.

Also, the discharger must show that either "(i) The applicable effluent limitations and standards contained in 40 C.F.R. Subchapter N specifically provide that they shall be applied on a net basis; or (ii) The discharger [must] demonstrate[] that the control system it proposes or uses to meet applicable technology-based limitations and standards would, if properly installed and operated, meet the limitations and standards in the absence of pollutants in the

76 See comments (1) and (2) to 40 C.F.R. § 125.31(d) (1984).

77 Meeting between EPA and various industry representatives at EPA offices in Dallas, Texas, June 20, 1985.

78 See In Re Surface Mining, *supra*.

79 49 Fed. Reg. 37998, 38050 (1984).

80 40 C.F.R. § 122.45(g)(1) (49 Fed. Reg. 37998, 38050 (1984)).

81 40 C.F.R. § 122.45(g)(4) (49 Fed. Reg. 37998, 38050 (1984)).

3 40 C.F.R. § 125.31(d) (1984).
4 40 C.F.R. § 125.31(e) (1984).
5 40 C.F.R. § 125.31(f) (1984).

intake waters."⁸² Since the provisions of 40 C.F.R. Part 434, although part of Subchapter N, do not provide that the credits shall be calculated on a net basis, the discharger must meet the latter requirement if he is to obtain the benefit of the variance. Whether this can be shown will obviously depend upon the facts of each case. However, it appears that the alternative sediment control technology discussed in the previous paper by Hinton, et al., can be demonstrated to meet this requirement.

If the requisite showing can be made the discharger must still satisfy some other regulatory conditions. First:

Credit for generic pollutants such as ... total suspended solids (TSS) should not be granted unless the permittee demonstrates that the constituents of the generic measure in the effluent are substantially similar to the constituents of the generic measure in the intake water or unless appropriate additional limits are placed on process water pollutants⁸³ either at the outfall or elsewhere.

The phrase "substantially similar" was intentionally left rather vague, so that the permit writer could exercise his judgment in establishing whether this requirement had been met. The requirement was intended, however, to provide "adequate protection" against environmental harm.⁸⁴

Second, the credit will be "granted only to the extent necessary to meet the applicable limitation or standard, up to⁸⁵ a maximum value equal to the influent value." The regulation provides that additional monitoring requirements can be imposed to "determine eligibility for credits and compliance with permit limits."⁸⁶ Thus, it appears that the discharger can receive a credit for all of the influent constituents when calculating the effluent limitations under this variance.

Finally, EPA has clearly indicated that a facility's ineligibility for intake credits "does not affect that facility's right to apply for a fundamentally different factors (FDF) variance."⁸⁷ Therefore, the applicant for an NPDES permit does not have to elect between one or the other

variances. If the permit applicant is unsuccessful under one approach he may proceed under the other.

The limitations imposed by this second variance have recently been liberalized, making it easier for a discharger to take advantage of its provisions. The procedures for obtaining such a variance are much less rigorous than those required for dischargers seeking a variance based on fundamentally different factors.

Under both variances it is possible to have the effluent limitations set out in 40 C.F.R. Part 434 altered or enforced in a manner which will permit some dischargers to maintain sediment loads at or near their natural levels when the discharges are subject to the NPDES requirements of the Act.

CONCLUSION

The Surface Mining Control and Reclamation Act of 1977, and its implementing regulations, require operators to utilize sediment control techniques which minimize disturbances to the prevailing hydrologic balance and which avoid channel deepening and enlargement, even though those techniques may not involve the use of "sediment ponds" or "siltation structures," as those terms are defined in the interim or permanent program regulations. OSM has the obligation to see that these objectives are met by the operators through the utilization of alternative sediment control, rather than through the utilization of "sediment ponds" or "siltation structures." The operators have the right and obligation to see that their alternative sediment control and water control practices achieve these goals.

Where the creation of point source discharges result from the utilization of the alternative sediment control techniques, the effluent limitations of the Federal Water Pollution Control Act set out at 40 C.F.R. Part 434 apply to limit the discharge of sediment to the receiving waters. However, variances are available which may permit some dischargers to increase the level of sediment discharged beyond those set out in Part 434, or to obtain "intake credits" for the levels of sediment in the incoming surface water. These variance mechanisms provide limited relief, however, to a limited group of dischargers. The variance provisions should be made more flexible and capable of broader application in situations where the discharger can show that environmental harm will result from the application of nationwide effluent limitations. Where water containing sediment or other pollutants is not discharged through a point source the requirements of 40 C.F.R. Part 434 do not apply to limit the quality of water discharged from the coal mining operation.

82 40 C.F.R. § 122.45(g)(1), *supra*.
83 40 C.F.R. § 122.45(g)(2) (49 Fed. Reg. 37998, 38050 (1984)) (emphasis added).
84 49 Fed. Reg. 37998, 38027 (1984).
85 40 C.F.R. § 122.45(g)(3) (49 Fed. Reg. 37998, 38050 (1984)).
86 *Id.*
87 49 Fed. Reg. 37998, 38028 (1984) (background to final rule of 40 C.F.R. § 122.45(g)).