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Acid Mine Drainage: Balancing Environmental Protection and Mining Realities

BARKLEY J. STURGILL JR.* AND KIM BROWN POLAND**

A major environmental concern leading to the enactment of the Surface Mining Control and Reclamation Act of 1977 (SMCRA)\(^1\) was the degradation of streams and waterways from discharges of acid mine drainage (AMD) resulting from coal mining operations.\(^2\) Although SMCRA and its regulatory scheme contains specific provisions addressing the drainage of acidic water from mine sites, as do various other agencies’ statutes and regulations,\(^3\) AMD from active and abandoned mines remains a major environmental problem in the Appalachian region. The formation of acidic water during coal mining operations is pervasive and some believe impossible to prevent.\(^4\) During the extraction process, the sulfide minerals are exposed to oxygen and the oxidation process leads to acid formation.\(^5\) Water, already prevalent in the mine area, provides a natural

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\(1\) Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. §§ 1201, 1202, 1211, 1221, to 1230a, 1231 to 1243, 1251 to 1279, 1281, 1291 to 1309, 1311 to 1316, 1321 to 1328 (1986) [hereinafter SMCRA].

\(2\) APPALACHIAN CLEAN STREAMS INITIATIVE: A PROPOSAL TO CLEAN UP STREAMS POLLUTED BY ACID MINE DRAINAGE FROM COAL MINES (Draft Aug. 10, 1994) [hereinafter CLEAN STREAMS DRAFT].

\(3\) Id. OSM and several other agencies within the Department of Interior (U.S. Bureau of Mines, U.S. Geological Survey, and the Fish and Wildlife Service) as well as non-Interior agencies, such as the Department of Energy, the Environmental Protection Agency, the Soil Conservation Service and the National Mine Land Reclamation Center, have significant responsibility for AMD issues.

\(4\) See NATIONAL COAL ASSOC., AN EVALUATION OF THE OSMRE DRAFT POLICY STATEMENT: AVOIDING AND CONTROLLING ACID MINE DRAINAGE 4 (Nov. 30, 1994).

flow for the oxidized (acid) sulfide minerals, thus producing AMD. In essence, AMD occurs as an unavoidable byproduct of the mining process.

The adverse impacts of AMD can be far-reaching. Over 7,000 miles of streams have been degraded by AMD, and, in 1988, overall cleanup costs were estimated to be around 30 billion dollars. Industry, environmentalists, and state and federal regulatory agencies have long wrestled with the problems of controlling AMD. Largely, these problems stem from the lack of exact science in predicting the extent and degree of the potential for AMD formation prior to mining and the methods of controlling it post-mining. Although 17 years have passed since the passage of SMCRA, recently federal regulatory agencies, particularly the Department of Interior’s Office of Surface Mining Reclamation and Enforcement (OSM) and the Environmental Protection Agency (EPA) have undertaken a cumulative effort to address the particularly technical problems associated with controlling AMD.

The Appalachian Clean Streams Initiative and the Eastern Mine Drainage Federal Consortium initially emerged as a unified effort by federal and state regulators, environmentalists and industry to address the AMD problem. The focus of these programs was to harness the myriad of regulations potentially impacting AMD and retrofit the focus to provide a logical and consistent approach to the AMD dilemma.

However, what started out as a unified effort quickly turned antagonistic when OSM unveiled its draft report from the Acid Mine Drainage Policy Team on September 28, 1994. The draft

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6 Id.
7 Id.
8 CLEAN STREAMS DRAFT, supra note 2.
9 The Appalachian Clean Streams Initiative is a non-regulatory effort aimed at remediation and clean up of existing sources of AMD often found at abandoned and bond forfeited sites. The Initiative was proposed by OSM and involves a partnership between state, local and federal government agencies, in cooperation with citizens, universities, the coal industry, and the environmental community to clean up streams polluted by AMD.
10 The Eastern Mine Drainage Federal Consortium is a conglomeration of federal agencies with responsibilities in the AMD arena. The Consortium, in consultation with Kentucky, Pennsylvania and West Virginia regulators, focuses on prevention of AMD from new sources. The Consortium has produced a Draft Comprehensive Plan for AMD Prevention.
11 See OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT, POLICY STATEMENT AVOIDING AND CONTROLLING ACID MINE DRAINAGE (1994) [hereinafter POLICY STATEMENT].
report, which sets out potential OSM policy regarding interpretation of the AMD regulatory program as provided in SMCRA and its regulations, concluded that an unconditional standard of SMCRA is to completely avoid AMD. To enforce this policy, OSM proposes an effective, and sometimes exacting, permit process, complete with strict enforcement policies. As anticipated, the coal industry has responded with a vastly different interpretation of the intent and meaning of SMCRA and regulatory provisions regarding AMD.

As reflected in the industry response, OSM's review of the statutory and regulatory requirements reaches conclusions that appear inconsistent with both the plain language and legislative history of the statute. In addition, the conclusions reached in the Draft Policy cannot be reconciled with the state of technology currently available. If the policy statement is officially adopted by OSM, the effect on the coal mining industry could be so extreme that the industry would be changed forever.

This article will review the agency's draft policy statement regarding AMD and the various problems raised by the limited interpretation placed on the statute and regulations by the policy. Additionally, a review of the industry response will illustrate the myopic approach taken by OSM, in light of SMCRA, the legislative history, and the various regulations in place to address AMD. Finally, this article will address a reconciliation of OSM's extreme position in anticipation of fashioning a realistic approach consistent with environmental protection and the need to mine coal.

12 Id. at 3.
13 Id. at 4.
14 See supra note 4. This evaluation was submitted by the National Coal Association as part of the commentary invited by OSM Director Robert Uram upon publication of the Draft Policy. The evaluation was submitted in conjunction with the Alabama Coal Association, Coal Operators and Associates, Illinois Coal Association, Indiana Coal Association, Kentucky Coal Association, Ohio Mining and Reclamation Association, Association of Oklahoma General Contractors, Pennsylvania Coal Association, Texas Mining and Reclamation Association, Virginia Coal Association, West Virginia Coal Association, and West Virginia Mining and Reclamation Association.
I. OSM'S POLICY STATEMENT

On March 15, 1994, OSM adopted a management guidance plan that contained, among other things, the provision that a team be established to develop a policy with a focus of avoiding and controlling AMD. On September 28, 1994, the policy team published a draft report which was based on existing law and regulation and which proposed an AMD policy.\(^{15}\) The draft policy is not yet official agency policy on AMD. OSM Director Robert Uram, in his Message from the Director accompanying the draft policy statement, requested both positive and negative comments on the draft policy statement so as to better articulate the policy OSM should adopt.\(^{16}\) However, Director Uram clearly endorsed the draft policy, and stated that the "team has done a credible job in articulating an effective AMD policy based on existing law and regulation."\(^{17}\)

The tool through which OSM plans to implement the policy articulated in the draft statement is a permitting process.\(^{18}\) OSM, or the state agency delegated the SMCRA program through primacy, will require operators to demonstrate in a permit application that the proposed coal mining operations will result in a total avoidance of AMD on a permanent basis.\(^{19}\) The policy statement's message is clear: the permit will be denied if the application does not contain a hydrologic reclamation plan which demonstrates, through scientific prediction methods, that AMD formation will be avoided throughout mining.\(^{20}\) This conclusion is based solely on OSM's review of the environmental protection performance standards relating to acid mine drainage in SMCRA and its regulations.

The draft policy characterizes the avoidance of AMD as an "unconditional hydrologic balance protection standard of SMCRA and the federal regulations."\(^{21}\) OSM concludes that once started,

\(^{15}\) See POLICY STATEMENT, supra note 11. In the report, OSM undertakes only to review the provisions of SMCRA and the regulations promulgated pursuant thereto in supporting its AMD policy. Other regulatory programs impacting AMD, especially provisions of the Clean Water Act and its regulations, are not discussed in detail.

\(^{16}\) POLICY STATEMENT, supra note 11, at 1.

\(^{17}\) Id. at 1.

\(^{18}\) Id. at 3.

\(^{19}\) Id. at 6.

\(^{20}\) Id.

\(^{21}\) Id. at 3. The concept that SMCRA and the regulations require that AMD be completely avoided comes from 30 U.S.C. § 1256(b)(10)(A) and 30 C.F.R. §§ 816.41(f) and 817.41(f) which state that acid/toxic mine drainage is to be "avoided." However, to reach such a conclusion requires a reading of the above provisions in isolation. All three
AMD is often permanent in nature and without remedy. Therefore, the only absolute method of avoiding the environmental impact of AMD is to avoid its initial formation. However, the policy distinguishes between AMD and short-term, on-site acidic/toxic conditions that may result in the formation of acidic water. This material is regulated through the concepts of “minimizing on-site disturbances” and “preventing off-site material damage.” Apparently, OSM’s draft policy allows “[t]he occurrence of temporary controllable on-site acidic conditions . . . so long as AMD will be avoided on a permanent basis, all other hydrologic disturbances are minimized, and material damage is prevented.” Clearly, water at a mine site may be acidic in nature and still not become AMD.

However, OSM’s draft policy creates a distinction between the two which simply does not exist in the regulatory program. Pursuant to statute and regulation, operators must take steps to avoid the drainage of acid/toxic water from mine sites through various measures in order to minimize disturbances to the hydrologic balance. The draft policy allows mining which potentially produces this lower level acid water if the permit application demonstrates, through scientific prediction methods, that on-site disturbances will be minimized and off-site material damage will be prevented.

The draft policy statement concludes that SMCRA and the federal regulations provide three hydrologic balance protection standards requiring mining and reclamation operations be designed and conducted to: (1) avoid acid or other toxic mine drainage on a permanent basis; (2) minimize disturbances of the prevailing hydrologic

of the above provisions provide “measures” to avoid acid drainage which clearly contemplate the existence of AMD.

Policy Statement, supra note 11, at 7-8.

Id. apparently concedes the temporal allowance of acidic/toxic conditions, while totally precluding the formation of AMD, pursuant to 30 C.F.R. § 816.41(a) which provides the general hydrologic balance protection standard required to be met through demonstration in the permit application. That provision requests, inter alia, that “all surface mining and reclamation activities shall be conducted to minimize disturbance of the hydrologic balance within the permit and adjacent areas, to prevent material damage to the hydrologic balance outside the permit area. . . .” While the provision contains no limitation in applicability, OSM creates a limitation through its interpretation that 30 CFR § 816.41(a) allows acid water but not to the extent of allowing AMD.

Policy Statement, supra, note 11, at 7. However, pursuant to 30 C.F.R. §§ 816.41(a) and 817.41(a), this demonstration must be made for all mining activities, including activities which contribute to the formation of AMD.
balance at the mine site and in associated off-site areas; and, (3) prevent material damage outside the permit area. These hydrologic balance protection standards are gathered from a myriad of statutory and regulatory provisions. Yet, the draft policy statement concludes these standards are the cornerstone of the general hydrologic balance protection policy and the specific AMD policy in SMCRA.

The statutory provision from which these hydrologic balance protection standards originate is SMCRA Section 515(b)(10), which requires the adoption of general performance standards. Specifically, this section requires the operation at a minimum to:

minimize the disturbances of 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 groundwater systems both during and after surface coal mining operations and during reclamation by -

(A) avoiding acid or other toxic mine drainage by such measures as, but not limited to -

(i) preventing or removing water from contact with toxic producing deposits;
(ii) treating drainage to reduce toxic content which adversely affects downstream water upon being released to water courses;
(iii) casing, sealing, or otherwise managing bore holes, shafts, and wells and keep acid or other toxic drainage from entering ground and surface waters.

Although the statute provides three measures by which acid mine drainage may be avoided, including treatment of the drainage, the draft policy statement concludes that SMCRA and the regulations disallow the existence of any acid mine drainage at new mine sites.

The draft statement acknowledges that SMCRA allows treatment of drainage to avoid AMD. However, permit applications containing perpetual treatment plans for anticipated discharges of AMD rather than plans for elimination of such discharges are generally denied due to the risks and uncertainties associated with long-term treatment. The draft policy statement provides that

27 POLICY STATEMENT, supra note 11, at 5.
28 Id.
30 POLICY STATEMENT, supra note 11, at 5.
31 Id. at 6-7. It is interesting to note that OSM proposes to totally preclude AMD
"plans for perpetual treatment contained in a permit application inherently do not provide the requisite assurance that AMD will be avoided to allow permit approval." The statement accepts treatment as a viable measure to control the *unanticipated* occurrence of AMD; however, treatment is only allowable in this narrow instance if no other suitable alternative exists.

One responsibility of the regulatory authority is to avoid acid mine drainage. Additionally, the draft proposal attaches the responsibility to determine whether the proposed operation has been designed to minimize disturbance of the prevailing hydrogeologic balance and to prevent material damage to the hydrologic balance outside the permit area. This is the third hydrologic balance protection standard which OSM plans to recognize. Section 510(b) of SMCRA emphasizes the importance of preventing material damage by requiring the permit not be issued if material damage cannot be prevented on a permanent basis. Thus, the operator's responsibility for protecting the hydrologic balance extends beyond the permit boundary according to the draft policy. The final determination that material damage will be prevented can be made only by the regulatory authority.

Because prevention of off-site material damage is a performance standard, failure to prevent such damage must result in appropriate enforcement action and remedial/preventive modifications to the approved mining and

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32 *Policy Statement*, supra note 11, at 6-7.
33 *Id.* Curiously, OSM condones treatment of unanticipated occurrences of AMD, and precludes treatment of anticipated AMD, while not distinguishing the environmental impact of the two. Apparently, no difference exists.
34 *Id.* at 8.
35 *Id.* 30 C.F.R. § 780.21(g) (1988) also acknowledges the importance of preventing material damage outside the permit area by requiring the regulatory authority to prepare a Cumulative Hydrologic Impact Assessment (CHIA) which "shall be sufficient to determine, for purposes of permit approval, whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area."
36 *Policy Statement*, supra note 11, at 8. 30 C.F.R. § 780.21(g) (1988).
reclamation plan.\textsuperscript{37}

The draft policy proposal refers to enforcement only to the extent that enforcement action must be taken upon the occurrence of an AMD discharge.\textsuperscript{38} The report vaguely indicates the nature of the enforcement action should depend upon the severity of environmental impact, and it may range from the issuance of a notice of violation, to a cessation of operations when continued mining activity would result in imminent environmental harm.\textsuperscript{39}

Finally, the draft proposal addresses the bonding considerations involved with acid mine drainage. The policy statement requires that the bond must include an amount adequate to provide for continued treatment of acid mine drainage when the mining and reclamation plan anticipates treatment will be needed during mining and at the early stages of reclamation.\textsuperscript{40} Further, the amount and terms of the bond must be adjusted whenever the cost of future reclamation changes due to unanticipated developments, such as seeps occurring, even into phase I or II bond release.\textsuperscript{41} The policy puts an obligation on the regulatory authority to increase the bond amount for the site if water treatment is required.\textsuperscript{42}

The draft policy is an attempt to bring together all of the various statutory and regulatory provisions bearing on AMD. While OSM has attempted to do so, they have taken liberties afforded neither in law nor legislative history. The draft policy takes a rigid and myopic view toward SMCRA's statutory and regulatory provisions in addressing acid mine drainage. OSM has failed to incorporate into its analysis certain statutory and regulatory requirements for water quality as well as the clear spirit and intent of the law as set forth in the legislative history of SMCRA.

\textsuperscript{37} POLICY STATEMENT, supra note 11, at 8. Nowhere in the regulatory program, however, does it mandate total avoidance of AMD as the only means to prevent off-site material damage.

\textsuperscript{38} Id. at 9. Once again, regulatory enforcement action is couched in terms of discharge of AMD when the definition of acid drainage clearly contemplates discharge.

\textsuperscript{39} Id.

\textsuperscript{40} Id. at 9-10.

\textsuperscript{41} Id.

\textsuperscript{42} Id.
II. FLEXIBILITY OF THE STATUTORY AND REGULATORY PERFORMANCE STANDARDS

A. SMCRA, AMD Policy

The OSM policy statement articulates the narrow interpretation the agency intends to place on SMCRA Section 515(b)(10)(A). Permanent avoidance of AMD will become a prerequisite demonstration through the mine reclamation plan under the policy and permits will not be issued without this scientific, technical demonstration. This is true even though control alternatives, such as treatment, are recognized under the regulatory program. However, the coal industry, in direct response to OSM's draft policy statement, takes the position that the plain statutory language and regulations regarding the general performance standards applicable to surface coal mining and reclamation operations are simply not as limited in scope as the draft policy statement proposes.43

The stated objective of SMCRA's performance standard for mine drainage is to minimize disturbances to the prevailing hydrologic balance by various means.44 One of the means available under this statute to minimize disturbances to the hydrologic balance is avoidance acid or other toxic mine drainage through the following listed, although unlimited, measures: (i) preventing water from contacting toxic producing deposits; (ii) treating drainage to reduce toxic content; and (iii) casing, etc., to prohibit acid or other toxic drainage from entering ground and surface waters.45 Therefore, on its face, the general hydrology performance standard acknowledges flexibility in the avoidance of AMD by providing certain measures to reach that end.

One of the measures allowed by the statute to reach the goal of avoiding acid or other toxic mine drainage is the treatment of drainage to reduce the toxic content before such water is released into water courses.46 Although treatment is not preferred under the

43 See supra note 4.
46 30 U.S.C. § 1265(b)(10)(A)(ii). The treatment option for avoiding AMD combined with the definition of acid drainage at 30 C.F.R. § 701.5 bolsters the notion that the statutory intent of SMCRA contemplates the discharge of AMD to receiving waters. The statutory language leads to the conclusion that “avoiding” AMD means taking appropriate measures to minimize the effect of AMD on the hydrologic balance and not outright prohibition.
regulations, the statute does not prohibit treatment and certainly does not restrict its application to short-term acidic conditions, as the draft statement suggests. In fact, nowhere in the statute is there a limitation on the concept of treatment as a viable option in avoiding acid mine drainage and, therefore, minimizing disturbance to the prevailing hydrologic balance.

That SMCRA’s hydrologic performanic standard is flexible is bolstered by the legislative history of the act. The House report on SMCRA manifests this premise as the debate unfolded prior to SMCRA’s passage. The report, in passing on acid mine or other toxic drainage, states that “a wide range of alternatives are available to industry to avoid pollution of ground and surface waters through a number of techniques." Congress also recognized “[t]he total prevention of adverse hydrologic 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.’

The House Report further recognizes the treatment of AMD is acceptable to meet an attainable standard, and not, as the draft report alleges, indicative of less than fully successful reclamation. That report states:

In cases where there will be water discharged from the mine site, the number of discharges should be minimized by collectively controlling and channeling the watercourse around into an acceptable receiving stream or areal 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.

It is clear from this statement that Congress not only contemplated treatment as an alternative measure to avoid AMD, but also that AMD formation could not be completely prohibited since such water may be discharged “off the permit area” and “from the mine site.” More recently, Congress confirmed its policy in this area. During budget considerations in 1994, the Senate Appropriations Committee noted that it continues to fund research and development

47 See, e.g., 30 C.F.R. §§ 816.41(a) and 817.41(a) (mining and reclamation practices that minimize water pollution and changes in water flow shall be used in preference to water treatment); 30 C.F.R. §§816.41(d)(1) and 817.41(d)(1) (preferring other reclamation and remedial practices to water-treatment facilities).
49 Id. at 110.
50 Id. at 116.
51 Id.
of acid mine drainage treatment and abatement technology. To this end, the Committee stated that it:

expects that the department will build upon the existing body of research, and that in pursuit of any new AMD initiatives, the department will continue to recognize the provision of the Surface Mining Control and Reclamation Act (SMCRA), which provides the coal industry with a wide range of alternatives for minimizing acid mine drainage, including treatment to reduce pollutants that may be present before discharge off the mine permit area.\(^5\)

Indeed, this idea found its way onto the Senate floor during debate over the Department of Interior's appropriations bill for fiscal year 1995. Senators Wallop and Byrd again emphasized the importance of OSM adhering to the legislative intent of SMCRA in addressing acid mine drainage by assuring that operators retain the availability of the alternatives for minimizing acid mine drainage, including treatment.\(^5\) Finally, the conference report echoed the flexibility theme by indicating that "a wide range of alternatives should continue to be considered to reduce pollutants during mining and to prevent post-mining discharge of polluted water, including mitigation and treatment to reduce pollutants that may be present before final discharge off the mine permit area."\(^5\)

The alternatives approach to meeting performance standards is also contained in SMCRA Section 508(a), which sets forth the reclamation plan requirements. Like hydrology performance standards, the reclamation plan provisions refer to measures to be taken during mining and reclamation to assure the quality of surface and groundwater systems, which includes the treatment of drainage contemplated in Section 515(b)(10)(A).\(^5\) All of these provisions lead to the conclusion that the statute, bolstered by its legislative history, was drafted with the anticipation that acid drainage is a consequence of mining and that alternative measures are available to meet the hydrology performance standards contained in the Act.

B. The Regulatory Program

The draft policy maintains that SMCRA and federal regulations provide for three separate and distinct hydrologic balance protection
standards. The regulations, when read in context and not isolated, recognize the inevitability of AMD. Control and remediation emerge as answers to the potential contamination of ground and surface water resulting from the mining process. The hydrologic reclamation plan, required as a part of the mine reclamation plan in the permit application, must demonstrate and describe how the hydrologic balance protection standards will be met. It shall specifically demonstrate

steps to be taken during mining and reclamation through bond release to minimize disturbances to the hydrologic balance within the permit and adjacent areas; to prevent material damage outside the permit area; to meet applicable federal and state water quality laws and regulations; and to protect the rights of present water users.

The plan shall further include the measures to be taken to avoid acid or toxic drainage. The regulation stops short of naming the specific measures to be taken to avoid AMD; however, reference should be made to the statute which does provide acceptable measures to be taken to avoid AMD. The SMCRA regulations do, in fact, provide some guidance on measures available to avoid AMD. 30 C.F.R. § 816.41(f) provides a hydrologic balance performance standard applicable to acid and toxic-forming materials. This regulation indicates that drainage from acid and toxic-forming materials shall be avoided by identifying and burying and/or treating, when necessary, materials which may adversely affect water quality. To infer this regulatory language calls for complete avoidance of acid mine drainage on a permanent basis clearly indicates a failure to read and apply the regulatory scheme as a whole.

To further illustrate the flexibility inherent in the regulatory program regarding AMD control, and the myopic view posed in OSM's draft policy, one need only recognize the treatment provisions of the regulations. The draft OSM report states that treatment does not provide the requisite assurance that AMD will be avoided, therefore, a plan containing perpetual treatment will result in permit denial. The regulations, however, specifically recognize and require the treatment of AMD as a viable alternative when other practices
cannot prevent or minimize acid drainage.\textsuperscript{61} Similarly, the hydrologic reclamation plan also calls for "water treatment facilities when needed" to meet the performance standard.\textsuperscript{62} The validity of water treatment is aptly recognized in the preamble to 30 C.F.R. § 780.21(h):

Of course in addition to sedimentation, persons must use treatment facilities to reduce acid or other toxic contents of drainage from the disturbed area, to meet effluent limitations of Section 816.42(a)(7) for pH, iron, and manganese, and any other pollutant parameters limited by applicable state or federal law... for acid and other toxic mine drainage, treatment facilities are to be required during and after mining operations as necessary technology under Section 515(b)(10)(A) of the act and Best Available Control Technology [BACT] under Section 515(b)(24) of the act.\textsuperscript{63}

In fact, OSM considered the ability of mine operations to meet hydrologic balance standards through mechanisms other than drainage treatment and concluded that treatment was \textit{per se} necessary in most cases:

Treatment ponds for treatment of acid and other toxic mine drainage, including chemical treatment and settling are required under... the act. Such facilities are a necessary element of effective acid and toxic mine drainage treatment. Moreover, commenters submitted no data whatsoever to show that effluent limitations of 816.42(a)(7) could be met without the use of sediment ponds. To the contrary, available data show, that untreated sediment discharges will ordinarily far exceed the effluent limits.\textsuperscript{64}

As illustrated, OSM policy to date has recognized the need for treatment as a measure to avoid AMD. There is no authority in the SMCRA regulatory program to limit the flexibility contemplated by the act regarding AMD. The realistic concept throughout the statute and regulations is attainment of the hydrologic balance performance standards and effluent limitations through technological control of AMD. Demonstrating in a permit application that incorporation of the various authorized "measures" will adequately avoid AMD, meeting performance standards and effluent limitations set by law, should result in permit approval and issuance.

\textsuperscript{61} 30 C.F.R. §816.41(d)(1).
\textsuperscript{62} 30 C.F.R. §780.21(h).
\textsuperscript{64} \textit{Id.} at 15,152.
III. CLEAN WATER ACT CONSIDERATIONS

The draft report makes its conclusions with no reference to the provisions of the Clean Water Act applicable to acid mine drainage. Section 702 of SMCRA states that:

(a) Nothing in this chapter shall be construed as superseding, amending, modifying, or repealing ... any of the following Acts or with any rule or regulation promulgated thereunder, including ... . . .

(3) The Federal Water Pollution Control Act 79 Stat. 903), as amended (33 U.S.C. 1151-1175 [33 U.S.C.A. §1251 et seq.], the State laws enacted pursuant thereto, or other Federal laws relating to preservation of water quality.65

Where there is an overlap of regulation for coal mining hydrologic impacts between SMCRA and the Clean Water Act, Section 702 of SMCRA directs that the Clean Water Act regulatory framework controls, and SMCRA is not to be interpreted as altering this framework in any fashion.66 The relationship between SMCRA and the Clean Water Act is further evidenced by the SMCRA regulatory provisions regarding surface mining67 and underground mining.68 Those sections provide identically that:

Discharges of water from areas disturbed by surface (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 C.F.R. Part 434.

The effluent limitations for coal mining point source categories are set forth at 40 C.F.R. Part 434. These numerical effluent limitations control point source discharges to navigable waters and are currently based on Best Available Technology Economically Achievable (BAT).69 This allows the use of recognized technology to control acid/toxic conditions at coal mines so that ultimate "dis-

66 See In Re: Surface Mining Regulations Litigation, 627 F.2d 1346, 1366-67 (D.C. Cir. 1980).
69 See NATIONAL COAL ASSOC., AN EVALUATION OF THE OSMRE DRAFT POLICY STATEMENT: AVOIDING AND CONTROLLING ACID MINE DRAINAGE 37 (Nov. 30, 1994).
charge” to navigable waters will meet the numerical effluent limitations. OSM has adopted EPA’s effluent limitations by cross-reference to eliminate duplication and confusion. Therefore, the mandates established by 40 C.F.R. Part 434 are applicable to the control of AMD at mine sites and OSM has no authority to freely mandate conflicting requirements.

The draft policy references EPA’s effluent limitations without regard to their appropriate applicability to active mine areas, post-mining areas, and reclaimed areas. In doing so, the draft policy avoids a very important aspect of acid mine drainage regulation, specifically, that EPA’s technology-based effluent limitations apply to such drainage to limit environmental degradation upon discharge. As written, the draft policy does not tolerate any technological control because AMD is deemed prohibited. Given that these effluent limitations apply to acid mine drainage, greater credence is afforded the premise that Congress never intended that AMD be completely avoided on a permanent basis and that longstanding policy dictates measures to avoid acid mine drainage can be taken to minimize the disturbances to the prevailing hydrologic balance. Congress intended that such a demonstration in the permit application would result in permit issuance.

IV. LINKING ENFORCEMENT AND REMEDIATION TO ACHIEVE ENVIRONMENTAL BENEFIT

Harking back to the opening passages of this commentary, it is clear that the present existence of stream degradation due to uncontrolled AMD from past mining has served as the catalyst for the draconian approach proposed by OSM in its draft policy. The work of the Appalachian Clean Streams Initiative and the Eastern Mine Drainage Federal Consortium attempts to respond to that remediation challenge on a regional basis with goals of cleanup and pollution prevention through cooperation and non-regulatory approaches.

In this vein, the stakeholders of the problem might take a page from a new approach to enforcement that the EPA initiated on February 12, 1991. That year, the EPA’s Office of Enforcement devised its “Policy on the Use of Supplemental Environmental Projects in EPA Settlements” (SEPs). This policy can be used in

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70 Interim Revised EPA Supplemental Environmental Projects Policy, 60 Fed. Reg. 24,856 (1995) ("This policy supercedes the February 12, 1991 Policy on the Use of
connection with consent orders and decrees to resolve civil penalty actions. Under the policy, the defendant/respondent may undertake approved projects or activities in exchange for a reduction in the amount of the assessed civil penalty. The SEP policy applies to both administrative and judicial settlements. Acceptable mitigation projects can be considered in seven categories: (1) public health; (2) pollution prevention; (3) pollution reduction; (4) environmental restoration and protection; (5) environmental auditing and assessment; (6) environmental compliance promotion; and, (7) emergency planning and preparedness.71

The whole idea behind SEPs is to secure additional protection of human health and the environment as a part of an enforcement action. This allows and funds beneficial activities that would otherwise never happen. Even though this policy, in effect, diverts money from the general coffers, it has the salutary effect of making that money immediately available for environmentally beneficial use addressing problems in the same area as the infraction, or wherever else some good might be done.

To no one's surprise, there are limits. The policy still requires the assessment of a substantial monetary penalty (generally sufficient to capture the respondent's economic benefit of noncompliance plus some for the gravity of the action). There must be a nexus between the project and the violation. No additional time can be given to correct a violation in exchange for a SEP. The amount to be accepted in penalties cannot be lowered by more than the after-tax amount the violator spends on the project. The Commonwealth of Kentucky and the other states grappling with AMD control and remediation would do well to adopt a similar approach to enforcement of mining-related water laws and rules. The use of SEPs to address "orphan" AMD sites and to provide other corrective or treatment solutions could result in a significant contribution to stream and wetland restoration, protection or replacement, as well as prevention through education.

This does not suggest enforcement be increased in order to capture such benefits. Rather, it suggests that in cases where enforcement is appropriate, SEPs can be used as a partial means of directly mitigating the deleterious effects of AMD without more

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71 Id at 24,858-60.
laws and more rules, while still serving as a deterrent against non-compliance. Such a policy can be readily initiated by the Commonwealth.

CONCLUSION

The discharge of acid-bearing water from a mine site is an inevitable fact of coal mining. Permit issuance conditioned on a demonstration that AMD will be totally avoided on a permanent basis would sound the death knell for the mining industry. Such a burden is not required by SMCRA nor contemplated in its regulations. In fact, the statute and regulations contain a myriad of references to the control and remediation of AMD through various measures in order to assure the integrity of the hydrologic balance at the mine site and water quality. While efforts should certainly continue to minimize the formation and consequences of AMD, an outright ban on its formation has no foundation in law or basis in frank reality. Controlling AMD can only result from a partnership between the agencies and the regulated community, not from recasting the law and longstanding OSM policy.

The mining of coal is a part of the rich history and present prosperity of the Commonwealth. The benefits of the use of this important natural resource must be recognized and preserved in the context of protecting water quality both presently and in the future. This requires an open, realistic dialogue among regulators, industry, elected officials, and the public to fashion a multi-dimensional approach to the minimization, control and clean up of AMD burdening neither the economy nor the environment. Kentucky has an opportunity to be a creative leader in that effort just as it is a national leader in coal production.