pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

October 23, 2015

Office of Surface Mining Reclamation and Enforcement
Administrative Record, Room 252 SIB
1951 Constitution Avenue NW
Washington, DC 20240

Re: Proposed Stream Protection Rule (Docket ID OSM-2010-0018)
Draft EIS (Docket ID OSM-2001-0021)
Draft RIA (Docket ID OSM-2015-0002)

Dear Director Pizarchik:

The Commonwealth of Pennsylvania's Department of Environmental Protection (PA DEP) offers the enclosed comments on the above-referenced proposed stream protection rule and the supporting draft environmental impact statement (EIS) and draft regulatory impact analysis (RIA). As a primacy state, the Commonwealth has a vested interest in the proposed rule since it significantly re-writes key elements of the existing regulations that implement the federal Surface Mining Control and Reclamation Act.

The proposed regulations, if finalized, will set minimal standards for Pennsylvania's approved regulatory program. Consequently, we have spent considerable time and effort reviewing the proposed regulations. Where possible, specific recommendations are provided for alternate approaches or revised language is suggested to improve the proposed regulations. In some cases, where sections of the proposed regulations are unclear or are not well supported in the preamble, we were unable to provide meaningful input and our comments are limited to requests for clarification. For this reason, we would strongly encourage OSMRE to: (1) expand the preamble to comprehensively address each aspect of the proposed rule and the supporting science; (2) clarify the proposed regulatory language based on feedback received during the initial comment period.

Please do not hesitate to contact my office if there are questions regarding the enclosed comments. Thank you for the opportunity to provide comments.

Sincerely,

Richard Morrison
Deputy Secretary,
Active and Abandoned Mine Operations

Proposed Stream Protection Rule (OSM-2010-0018)

General Comments

The Pennsylvania Department of Environmental Protection (PA DEP) appreciates the opportunity to comment on the Office of Surface Mining Reclamation and Enforcement's (OSMRE) proposed Stream Protection Rule. The PA DEP Office of Active and Abandoned Mine Operations oversees a nationally recognized regulatory program, addressed to protecting the environment and the health and safety of miners, while providing for the continued vitality of Pennsylvania's important coal industry. PA DEP would like to make clear at the outset that it appreciates and supports OSMRE's efforts to address environmental impacts associated with mountaintop mining. While mountaintop mining operations have not been conducted in Pennsylvania, PA DEP has developed a strong regulatory program which effectively addresses all mining activity in the Commonwealth. PA DEP believes that allowing states the flexibility to develop regulations tailored to conditions within the state, so long as they meet threshold federal standards, is appropriate. As such, we find aspects of the proposed rule to be more prescriptive than necessary to achieve the objectives of Section 101(f) of federal SMCRA. In the comments below, we note a number of suggestions for improving the rule by providing language that outlines suitable levels of discretion for state regulatory authorities (RA).

In addition, after a detailed review of the proposed rule, we have noted a number of sections which we believe contain drafting errors or ambiguities. This includes the following sections: 773.17 (e)(4), 779.19 (a)(1), 779.19(b), 780.12(e)(1)(ii), 779.24(a)(2), 780.12(d), 780.19(b)(4), 780.23(a)(2)(ii)(I), 784.19(b)(4), 784.23(a)(2)(ii)(I), 780.19(h), 784.19 (h), 780.24(e), 784.24(e), 784.19(b)(6)(C), 784.19(c)(3)(i)(D), 816.34(d), 817.34(d), 816.57 (b)(2)(iii)(C), 817(b)(2)(iii)(c), 816.67 (b), 817.67(b). These aspects of the proposed rule are too unclear to provide sufficient notice of "either the terms or substance of the proposed rule or a description of the subjects and issues involved," as required under Section 553(b) of the Administrative Procedure Act, 5 U.S.C.A. § 553(b).

Finally, the preamble supporting the proposed rule generally does not provide appropriate context or explanation for the new requirements. Interpretation of the proposed rule requires this context and detail. Preambles serve as valuable references for the interpretation of regulations. Because the preamble fails to provide the foundation and rationale for the rule changes, it falls short of this standard. In many instances, this failure, in conjunction with lack of clarity in the regulations, has resulted in questions rather than constructive and/or critical comments. PA DEP requests that OSMRE carefully consider the comments that follow and make appropriate corrections. PA DEP looks forward to working with OSMRE to ensure a Stream Protection Rule which effectively protects natural resources and coal communities.

Application

It is not clear what parts of the proposed rule apply to existing permitted mine sites. The Regulatory Impact Analysis includes a footnote about this: "[4]For purposes of this analysis these are assumed to be 30 CFR sections 774.15, 800.18, 800.40, 816.35/36, 817.35/36 and 816/817.41." If this assumption is incorrect, then the comment period should be reopened to allow for additional analysis based on the

correct applicability of the proposed rule. The rule should include interim requirements or a schedule for in-process or existing permits to comply with the final rule.

Sampling

The requirements for sampling for additional parameters in groundwater and surface water at 780.19, 780.20, 780.23, 784.19, 784.20, and 784.23 will result in the collection and reporting of extraneous data. The requirement should be revised to focus on local pollutants of concern rather than a nation-wide list as in the proposed rulemaking. One alternative is to require screening for the full parameter list, and then base the baseline data and monitoring requirements on those parameters that the screening data identifies. For example, in Pennsylvania selenium is rarely present in mine effluent. Where the screening indicates that it is present, it is monitored and limited, as required under the NPDES requirements. Where it is not found, monitoring is not required. This approach provides meaningful data and focuses RA attention and resources on credible concerns based on local conditions as anticipated by Section 101(f) of federal SMCRA (P.L. 95-87). This type of screening also jives with the Clean Water Act's reasonable potential analysis requirements. The screening approach is partially developed in the proposed regulation through the use of the phrase "...water quality parameters of local importance as determined by the regulatory authority.." (see proposed §780.20(L))

Definitions

The proposed definition of "Approximate original contour" includes the term "any" to modify "mining". This proposed change may be interpreted in a manner that would discourage remining projects in areas with significant abandoned mine lands. Clarification should be provided to emphasize that approximate original contour is achieved by meeting the three core elements required by SMCRA ((1) resembles the general pre-mining surface configuration, (2) is graded to complement drainage, and (3) does not contain highwalls and spoil piles) regardless of the presence or absence of abandoned mine land features.

The definition of "Cumulative impact area" includes the HUC-12 watershed or watersheds in which the actual or proposed permit is located. In the preamble relating to the definition of "Adjacent area" it is pointed out the HUC-12 watershed was rejected as part of that definition because "HUC boundaries are fixed and do not vary with the location of the mining operation." Also, "HUC–12 watersheds typically contain between 10,000 and 40,000 acres, which is much larger than the area necessary or appropriate to establish baseline conditions for most coal mines." This same logic applies to the cumulative impact area. While it is clear that the cumulative impact area and the adjacent area are distinct, the fact that the cumulative impact area is more extensive does not justify the use of the HUC-12 watershed boundaries. The determination of the cumulative impact area is a specific decision based on a number of dynamic factors, including the density of mining operations, the mining history of the area and potential confounding factors. In addition, in Pennsylvania's Anthracite coal fields, where it is common for mines to contribute to very large mine pools, the cumulative impacts are often evaluated at locations that are quite remote from the location of the mine and the impacts in the immediate vicinity are negligible. The black and white application of the requirement to include the HUC-12 in which the

mine is located does not reflect this scenario. A reasonable alternative would be to include the HUC-12 watershed language along with a second option, such as, " ....an appropriately-sized surface drainage area as determined by the RA."

A definition for "water supply" should be included in the final rule. This definition should include current or planned household, agricultural, commercial, or industrial uses. This is also the appropriate place to clarify that it includes the delivery system.

USFWS Collaboration

The collaborative process with the USFWS results in a potential conflict when an informal conference or public hearing is held. Paragraph 773.7(b) requires action within 60 days of the conference or hearing, but the USFWS process does not include a time limit to assure that this deadline can be met. A time limit for the elevation process in 779.20(d) and 783.203 (d) should be included in order to avoid this internal inconsistency in the rules. In the alternative, a waiver of the requirement in 773.7(b) should be added to the regulations. This would apply in any case where the elevation process is needed.

Findings

773.15(e)(3) requires the regulatory authority to insert "...into the permit criteria defining material damage to the hydrologic balance outside the permit area on a site-specific basis, expressed in numerical terms for each parameter of concern..." This requirement should be removed from the final rule because it is not always possible or appropriate to express criteria numerically. For example, narrative criteria under the Clean Water Act are by their nature expressed qualitatively rather than quantitatively. The determination of an impact is a yes/no question, not one where a specific number can be assigned. Pennsylvania's water quality criteria include the following:

"§ 93.6. General water quality criteria

(b) In addition to other substances listed within or addressed by this chapter, specific substances to be controlled include, but are not limited to, floating materials, oil, grease, scum and substances that produce color, tastes, odors, turbidity or settle to form deposits."

"Floating materials" is an example of a yes/no criteria. Either they are present or they are not. In addition, water supply impacts, particularly diminution, are not well suited to "numerical terms."

Permit Conditions

773.17(e) seems to have a typographical error. The phrase at the end of the paragraph reads, "...noncompliance with any term or condition or the permit,..." and should read "...noncompliance with any term or condition of the permit,..."

773.17 (e)(4) lacks clarity. It is not clear when the notification is required. Nor is it clear what information needs to be in the notice, or how soon after the adverse impact happens, the notice is required. This paragraph should be revised in the final rule to provide clarity.

Technical Data

777.13 (a) requires the submission of metadata. This requirement should be revised to require the applicant to make metadata available to the regulatory authority when they request it, rather than requiring it to be submitted in all cases. The proposed regulation creates an unnecessarily large volume of data for the regulatory authority to manage and sort through. The volume of data will compromise the ability to use it to make sound technical decisions. However, it is reasonable to require metadata when it is truly needed to inform the decision making.

Vegetation Information

779.19 (a)(1) requires the identification, description, and mapping of plants on the proposed permit be adequate to evaluate whether the vegetation provides important habitat for fish and wildlife. It is unclear who makes this evaluation and on what criteria that important habitat is based on?

779.19(b) requires the use of the National Vegetation Classification Standard. The document describing the standard includes this statement: "The standard should be applied at a level of the hierarchy appropriate to the agencies' needs." (See section 1.4). Neither the preamble nor the regulation provides any direction as to what level of the hierarchy is appropriate for applicants. Without clarification, this requirement is ambiguous and will fail to achieve the standardization intended. It is unclear on how OSMRE intends for this standard to be applied. It is also unclear why the use of this standard is needed.

Maps

779.24(a)(2) has an error--"underground" should be "surface."

779.24(a)(27) (and 783.24 (a)(27)) require maps to include gas and oil wells. It specifies three categories, conventional, directional/horizontal and those using hydraulic fracturing methods. Would it not have the same effect to simply require all oil and gas wells? If the categories are necessary, this could be expressed more clearly by requiring the categorization information separately.

Reclamation Plans

780.12(c) (and 784.12(c)) require that the reclamation cost estimate be based upon "current standardized construction cost estimation methods and equipment cost guides." This is overly restrictive. In Pennsylvania, actual contracting costs have been used to generate bond rate guidelines which produce much better estimates of costs to the Commonwealth for reclamation. This section should be revised to allow for the use of actual up-to-date contracting costs to generate reclamation cost estimates.

780.12(d) requires that compaction be minimized except as needed to "reduce infiltration to minimize leaching and discharges of parameters of concern." This is inconsistent with the requirements at 816.38(a) and 817.38(a) which require covering the pit floor and coal seam with compacted material "to minimize contact and interaction with water."

780.12(e)(1)(ii) requires the reclamation plan to include soil handling to restore the pre-mining land use capability, while the success standards are expressed in terms of post-mining land use at 816.111. Similarly, 784.12(e)(1)(ii) requires the reclamation plan to include soil handling to restore the pre-mining land use capability, while the success standards are expressed in terms of post-mining land use at 817.111. This apparent discrepancy (between capability and actual use) should be clarified in the final rule.

780.12(g)(1)(ix) includes a reference to 816.115(b) about normal husbandry practices, which should be 816.115(d). Similarly, 784.12(g)(1)(ix) includes a reference to 817.115(b), which should be 817.115(d).

780.12(g)(6) (and 784.12(g)(6)) require professional forester or ecologist certification of revegetation plans. It is unclear as to what criteria must be met for a "professional forester or ecologist". Pennsylvania does not have a professional registration program for these disciplines, so this requirement should be eliminated. In addition, the Forestry Reclamation Approach Advisories provide the detail for these plans. It shouldn't be necessary to have the plans certified if they comply with these advisories.

Fish and wildlife enhancement

780.16(d)(1) requires the permit application to identify and describe enhancement measures for fish and wildlife. This section appears to mandate this requirement. Section 780.16(d)(2) goes on to qualify that 780.16(d) is only required if the surface mining activities result in a long-term loss of native forest or a stream segment. It is unclear as to what is long-term loss. The language in paragraph (d)(2) should appear before paragraph (d)(1). The "when is required" should be listed first if there is an option to avoid a requirement.

780.16 (d)(3) (and 784.16(d)(3)) require that enhancement measures involving more than a de minimis disturbance to the land outside the area to be mined be within the proposed permit area. This absolute requirement will not always be possible to meet. For example, one of the listed enhancement options is reclaiming "previously mined areas located outside the area that you propose to disturb." First, there is an inconsistency as to whether the enhancement is intended to be a mining activity (Is it "outside the area you intend to disturb" or is it to be included within the proposed permit area?). Also, the reclamation opportunity may not be immediately adjacent to the area to be mined, resulting in a discontinuity in the permit area. In other cases, for example where the enhancement measures include the abatement or treatment of a pre-existing discharge, the opportunity may also be remote from the proposed permit area. Other permitting requirements may be applicable to authorize this activity which would obviate the need for the disturbance to be included in the permit area.

Baseline Data/Monitoring

780.19 (a)(6)(A) (and 784.19(a)(6)(A) and (B)) require upgradient monitoring points for groundwater. Similarly, 780.19(c)(4)(A) (and 784.19(c)(4)(A)) require upgradient monitoring points on perennial and intermittent streams. It is not feasible to establish upgradient locations when mining will occur at the highest gradient position. An exclusion should be provided for these situations.

780.19(b)(4) (and 780.23(a)(2)(ii)(I), 784.19(b)(4), 784.23(a)(2)(ii)(I)) require information for nitrogen. Nitrogen in water is characterized by a number of possible test methods (e.g., Kjeldahl, nitrate-nitrite), including ammonia, which is another required parameter. If nitrogen is to be included in the final rule, more specificity on what test method(s) are appropriate is necessary.

These sections also prescribe many other additional parameters. This approach results in tests that are unnecessary. Pennsylvania conducted a sampling study with the USGS in 2011 to quantify more than 70 inorganic constituents; including 35 potentially toxic or hazardous constituents, in both treated and untreated mine drainage at 42 sites in Pennsylvania. The sites which included surface, underground, and refuse piles, were selected based on the worst-case in terms of mine drainage. The results of this study should be used to determine an appropriate list of parameters that should be sampled for at a particular site. For instance, the results of this study have shown that ammonia is less than 1 mg/l for all treated mine drainage at surface mines and nitrite concentrations are below detection in 96% of the sample results. This study also supported the hypothesis that if the pH is greater than 6, then the priority pollutant metals and other toxic or hazardous constituents are not present in concentrations that would impact aquatic life. It is also not clear why some of the more indicative mine drainage parameters were omitted (e.g. aluminum, lead, nickel) in favor of such parameters as arsenic and cadmium. It is recommended this section undergo substantial revision to address state-specific parameters of concern rather than an all-encompassing national approach. This will allow the collection and evaluation of meaningful data based upon science.

780.19(b)(6)(iv) (and 780.19 (c)(4)(B)(iv) and 784.19(b)(6)(iv)) require that the baseline data include "12 consecutive months without severe drought or abnormally high precipitation." This requirement should be revised so that the Palmer index data informs, rather than nullifies, a baseline groundwater dataset. The proposed approach also ignores the time lag inherent in groundwater response to extreme precipitation patterns. It also sets up a scenario where no permit applications could be submitted for an indefinite period of time. Once there would be 12 consecutive months of "normal" conditions, the RA will be faced with an onslaught of applications.

780.19(c)(2)(iii) (and 784.19(c)(2)(iii)) require the cation-anion balance. Reviewers currently review pre-mining and post-mining stream flow data, chemical characteristics, and biology parameters to determine, if any, the effects of a proposed mining operation. The hydrogeologists rely on these required parameters, rather than determining and comparing the cation-anion balance. Unless there is reason to believe the lab results are not accurate, calculating of the cation-anion balance is unnecessary and should be eliminated in the final rule. If the requirement to report the cation-anion balance is retained in the final rule, then a description of how this data is expected to be reported and used should be included in the preamble for the final rule.

780.19(c)(2)(xix) requires baseline information on "any other parameter for which effluent limit guidelines have been established under 40 CFR part 434." The only additional pollutant that is included in 40 CFR part 434 at this time is settleable solids. The effluent limit guideline is contingent upon precipitation conditions. Is this section intended to include settleable solids?

780.19(c)(5) (and 780.23(b)(1)(ii), 784.19(c)(5) and 784.23(b)(1)(ii)) require site-specific precipitation data from self-recording devices for all mine sites. While this data may be necessary in case a particular model is used, it is not needed for all mine sites, all of the time. This will create extraneous data for a reviewer to sort through. In addition, extensive precipitation data is readily available from other sources (e.g. radar derived data and cooperators). In Pennsylvania, operating and maintaining these self-recording devices in remote locations creates issues, particularly for snowfall events. For example, heaters are required to melt the frozen precipitation. Also, with snow, it isn't as important when the precipitation falls, but when it melts when evaluating the relationship of the precipitation to surface water and groundwater resources. The statutory language in SMCRA provides clear direction as to the applicability of climatological data at section 507(b)(12). The proposed rule unnecessarily exceeds the statutory requirement. Therefore, this requirement should be deleted.

780.19(d) (and 784.19(d)) require sampling of discharges from previous mining during the low-flow condition of the receiving stream. In many cases in Pennsylvania, under this condition the discharges from previous mining will not be flowing. This will result in limiting the meaningful data to be provided by the applicant. "No flow" should be allowed as a data point if this condition manifests.

780.19 (e) requires biological condition information. Pennsylvania has appropriate assessment protocols for perennial streams. There are no similar protocols for intermittent streams since macroinvertebrate assessments are not appropriate because these streams have limited diversity due to small size, shallow depth, and lack of continuous flow. The limited population will be more temporally and spatially variable in comparison to perennial streams since the shallow flows are easily affected by air temperature, precipitation, and shading. They alternate between wet and dry and after dry spells most of the biota must recolonize. These factors result in large shifts in the populations of the few animal taxa that can inhabit intermittent streams (small tolerant fish, amphibians, and tolerant macroinvertebrates) making any quantitative biological indexes used to characterize the populations highly variable or not applicable. This extreme natural biological variability precludes the distinction of natural effects from potential mining effects when the pre-mining and post-mining comparisons are made. A better approach would be to use standardized qualitative assessments for intermittent streams. A pre-mining qualitative assessment can be made at the appropriate time when there is flow in the channel to determine if and where macroinvertbrates, fish, or amphibians are present. Habitat would also be evaluated. Post-mining qualitative assessments can then be made at the appropriate time to determine if similar types of organisms remain and that the habitat is able to support them. This would be a qualitative not quantitative comparison.

In Pennsylvania, ephemeral streams lack aquatic habitat and are not of special value to any wildlife or plants. Ephemeral streams should not be included in the biological monitoring plan. For perennial streams, Pennsylvania has the appropriate protocols and methods as required under section 305(b) of the Clean Water Act. This quantitative approach is not suitable for ephemeral streams. A standardized qualitative approach needs to be used.

780.19(e)(1) (iii) (and 784.19(e)(1)(iii)) require a representative sample of ephemeral streams within the permit and adjacent areas that would receive discharges. The nature of ephemeral streams limits them

generally to storm events. What constitutes a representative sample: multiple storm events, one-time storm event?

780.19(h) (and 784.19 (h)) include an exception from the biological stream sampling for operations that avoid streams, one category of which is those that do not create a point source discharge to any stream. Does "point source discharge" used in this context include discharges comprised entirely of stormwater? This exception should be deleted in the final rule because it is unnecessary. Retaining the two other exemptions will provide the appropriate level of protection, since point source discharges are regulated under the NPDES program.

780.19(j) (and 784.19(j)) require the corroboration of a sample of the baseline data by the regulatory authority or a third party. This section is ambiguous because it fails to indicate the scope of the required sampling to be corroborated. With a mandate such as this, it is necessary to provide more detail as to this scope. It may be of value to revise the regulation to include the goal of the corroboration, which is presumably to assure accurate baseline information. The definition of the scope of the corroboration is important in light of the option to require third party to do it at the applicant's expense. This has the potential to be contentious without clarification. In Pennsylvania, when an application is received, a field review is done which includes sampling of proposed monitoring points and identification of omissions. It is unclear whether this approach achieves compliance with the new requirement.

780.19(k) (and 784.19(k)) require permit nullification for inaccurate information. This paragraph should be deleted in the final rulemaking. In its place, the sanction for falsified information should be to follow the process for improvidently issued permits under 773.21-773.23. These sections should be revised to add falsified information submission as a trigger for initiating the improvidently issued permit process. This alternative provides due process for the review of cases where falsified information comes to light after a permit is issued.

PHC determination

780.20 (and 784.20) relate to the PHC determination. Predicting concentrations of pollutants that would result from mining requires a leaching test. The proposed regulations should be modified to identify the type of leaching test that has been shown to accurately depict actual site concentrations. Several members from Pennsylvania's Mining Program helped develop the EPA Method 1627, Kinetic Test Method for the Prediction of Mine Drainage Quality, with the overall goal of developing a standardized leaching test which isn't cost-prohibitive and reliably predicts actual concentrations in the field. One of the recommendations of this method is that after collecting acid-base accounting data for a site, only the stratigraphic intervals that are uncertain should then be subjected to a leach test method. Several other issues became apparent during the study: (1) different rock types weather at different rates; (2) correlation between lab leach tests and field leach tests are also dependent on the rock type; (3) the particle sizes used in the lab are not characteristic of actual site conditions. This section should be revised to address these issues.

The proposed revisions to the PHC include an assessment of the biological conditions of the stream. It is not necessary to complete a new assessment for every mine site. Available data from stream

assessments can be used to determine the need for further characterization and monitoring of the biological condition of the streams near a mine site. The regulations should be revised to clarify that a qualitative evaluation of streams is sufficient in certain cases to establish findings on the biological condition of streams.

How does OSM propose that the regulatory authority would determine the accuracy of this information? Additional staff will be needed at the regulatory authorities in order to review the biological information. The proposed revisions to this section regarding existing biological conditions should be eliminated for surface mining operations.

The addition of the list of specific parameters to evaluate in 780.20 (a)(5)(ii) (and 784.20(a)(5)(ii)) should be removed in the final rule. The current rule which requires an evaluation of "...important water quality parameters of local impact..." is a much better approach because it allows the regulatory authority to obtain and evaluate pertinent data. For example, in Pennsylvania, aluminum will be evaluated based on the decades of experience as a primacy state.

780.20(b) should be revised to require the applicant to submit the information rather than having the regulatory authority require the applicant to submit the information. Under the proposed approach, this required information is not "supplemental." It should be included in the initial application as part of the applicant's analysis of the PHC because it is an essential part of the initial data and evaluation of the PHC by the applicant. Some of the requirements in 780.20(b)(2) are redundant. For example, the chemical analysis of overburden is required under the baseline data requirements in 780.19(f)(3)(iii), so the "geochemical analyses of overburden materials" is duplicative. Also, "analysis of flood flows" is an example of the "supplemental" information. It is not clear how this is distinguished from the "baseline information on peak-flow magnitude and frequency" required under the baseline data at 780.19(c)(3)(i)(A). It appears that the enhancements to the requirements for baseline data were not reflected in the PHC requirements. As an alternative, with the enhanced baseline data requirements, it may no longer be necessary to require "supplemental" information.

CHIA

780.21(b)(6)(i) (and 784.21(b)(6)(i)) require that the criteria defining material damage "be expressed in numerical terms for each parameter of concern." This requirement is unnecessary and will not be possible to achieve. Water quality standards include narrative standards that are qualitative rather that quantitative. Because of this, implementation of these standards typically includes the evaluation of a number of related factors weighed together to reach a conclusion, not simply one number for each pollutant. For example, for suspended solids, Pennsylvania has a BAT-based effluent standard along with a narrative water quality standard which is expressed in terms of controlling substances that produce "turbidity or settle to form deposits." The implementation of this requirement involves observations of the receiving water for which no numerical term is applicable. Requiring numerical standards for each parameter also fails to recognize that there are often interactions among pollutants that produce adverse effects beyond the effects of each parameter. This requirement is also unnecessary in light of the NPDES requirements which effectively address pollutants of concern. This

requirement for numerical standards for each parameter of concern should be eliminated. One alternative is to cross reference the NPDES requirements and the implementation of the applicable water quality standards.

780.21(b)(8)(i)(B) (and 784.21(b)(8)(i)(B)) should be revised to replace "Result in an..." with "Cause or contribute to..." This is consistent with the NPDES requirements.

Post-mining land use

780.24(a)(2) (and 784.24(a)(2)) require a description of the land uses that the land was capable of supporting before any mining, regardless of the post-mining land use. For most properties, this is likely to be an extensive list of potential current uses. This is described in the preamble by reference to section 508 (a)(2)(B) of SMCRA. The difference is that the statute is focused on "capability of the land" while the proposed regulation has changed the emphasis to "the uses that the land was capable of supporting." This change in emphasis is unnecessary and will not result in any useful information being provided by the applicant. Based on the legislative intent described in the preamble, the approach that focuses on capability achieves the intent of SMCRA.

780.24(a)(6)(ii) (and 784.24(a)(6)(ii)) require disclosure of "monetary compensation, item of value, or other consideration that you or your agent provided or expect to provide to the landowner in exchange for the landowner's agreement to a post-mining land use that differs from the pre-mining use." This information is not relevant to whether the proposed post-mining land use is likely to be achieved, so this requirement should be deleted.

780.24(e) (and 784.24(e)) make reference to subsection "(b)(1)(iv) of this section," which doesn't exist. This reference should be corrected or eliminated.

Activities in, through or near streams

780.28(c)(2)(iv)(B) (and 784.28(c)(2)(iv)(B)) require a "separate bond calculation for the cost of restoring the ecological function of the affected stream segment." Should this include "form" so it would read, "the cost of restoring the form and ecological function..." since form and function are included in the bond release criteria described in 800.42? It is also unclear whether this "ecological stream restoration" bond must be a separate bond from the land reclamation bond or if the two liabilities be combined under one bond agreement.

Roads

780.37(c) —the reference should be to 816.151(c), rather than 816.151(b) and in 784.37 (c)—the reference should be to 817.151(c), rather than 817.151(b).

Underground mine baseline data

784.19(b)(6)(C) requires monitoring points to be located "in a representative number of ephemeral streams within the proposed permit and adjacent areas." Since this section of the regulations relates to

groundwater information, it seems that this requirement is misplaced. The monitoring data from ephemeral streams will not provide any information relating to groundwater. This paragraph should be deleted.

784.19(c)(3)(i)(D) requires "seepage-run sampling determinations" when a full-extraction mining method is proposed beneath a perennial or intermittent stream. The proposed regulation leaves a number of unanswered questions. Where does the seepage-run sampling determination have to be done? Is there a standard format for reporting seepage-run sampling determination data? In order for the seepage-run sampling determination data to be useful these questions need to be answered. It appears from reading this paragraph in conjunction with the other requirements, that this baseline seepage run is intended to identify the appropriate monitoring points for the permit. A statement in the preamble for the final rule clarifying this would be helpful.

784.19(4)(iii) requires that the measurements described in subsection (c)(3) be done at the locations identified in paragraph (c)(4)(i). Since seepage runs are required under section (c)(3), when longwall mining is proposed beneath a stream, but the requirement refers to the locations in (c)(4)(i), and a seepage run inherently will have other locations than described in (c)(4)(i), it is unclear whether the monthly baseline sampling requirement applies to these seepage runs. This must be clarified. The value of this baseline data is limited if there isn't a monitoring requirement. Since seepage runs are required for baseline data and longwall mines are typically long-term operations, the required seepage run data may be stale when the mining occurs.

Subsidence control plan

784.30 requires that an applicant "must pay for any technical assessment or engineering evaluation used to determine the premining quantity and quality of drinking, domestic, or residential water supplies." There may be cases where there are publically available assessments (e.g. conducted for research purposes by a university or by a government agency) which will be useful. Precluding the use because the applicant did not pay for these assessments is inappropriate.

AOC variance

785.16(a)(13) requires additional bond to cover the area approved for a variance from approximate original contour. Post-mining land use must be implemented before this bond can be released. This will result in extended delays for bond release. Criteria for bond release should be whether the reclamation meets the capability for the post-mining land use rather than if the post-mining land use is implemented. The permittee has no control over the implementation of the post-mining land use.

Alternative bonding systems

800.9(d)(2) As written, subsections (i) and (ii) are inconsistent with their descriptions in the preamble. The discrepancy relates to the duration for which costs must be covered ("in perpetuity" vs. "as long as treatment is required to meet Clean Water Act standards or water quality standards of this chapter."). The intent behind these clauses does not make the distinction immediately apparent. The preamble

also obfuscates the purpose of subsection (ii). Subsection (ii) allows long-term discharges that came into existence before the effective date of paragraph (d) to continue to be covered by any applicable state alternative bonding system, but then continues to require the same components required in subsection (i), e.g., duration of cost calculation and placement of funds in a separate discharge-specific account. In addition, the requirement that "an alternate bonding system must place the amount for treatment in a separate account available only for treatment of the discharge for which the contribution is made" is not clear from the rule or explained in the preamble. The confusion arises in light of the practice familiar to financial assurances such as long-term treatment trusts, which involve an account that is site-specific or operator-specific (encompassing more than one site). Section 800.18 regarding financial assurances does not include such a requirement. Accordingly, subsection (d)(2) must be clarified.

800.9 (d)(2)(ii) includes a reference to itself. This citation should be corrected.

Form of bonds

800.12 (d) and 800.18 (b) require either a financial assurance or a collateral bond to cover treatment of a long-term discharge. A surety bond should also be allowed. Pennsylvania has successfully used surety bonds to provide this coverage by accounting for the entire permit term and an additional period of time to allow for the forfeiture in determining the bond amount. In most cases, where a surety bond is posted and then forfeited on a permit with long-term discharge treatment liability, the surety has established a fully-funded trust instead of paying the bond amount to PA DEP. This approach has advantages over collateral bonds, where the only option is to collect the proceeds of the forfeited bond. Currently in Pennsylvania, about $230 million of long-term discharge treatment liability is secured with surety bonds.

Financial guarantees for treatment obligations

In Pennsylvania, long-term treatment trusts that would qualify as financial assurances under proposed Section 800.18 are currently a part of the state's approved alternative bonding system program. The proposed rule here does not advert to any obligation on behalf of such a regulatory authority to modify its approved plan to account for a reclassification of these trusts as approved under proposed Section 800.18, as opposed to part of its alternative bonding system. OSM should clarify the consequences of such an obligation, and whether such a re-classification will be deemed complete upon publication of the rule. This comment also relates other currently-approved components of a regulatory agency's alternate bonding system.

800.18(d)(7) requires that a financial institution or company serving as a trustee or issuing an annuity must be: a national bank, a subsidiary of a national bank, a bank or trust company chartered by the state, a licensed insurance company, or any other financial institution or company with trust powers and with offices located in the state in which the operation is located. This language seems to exclude not-for-profit organizations such as the Clean Streams Foundation, Inc. which is trustee of several treatment trusts currently in place in Pennsylvania.

Collateral bonds

800.21(b)(2) requires that a letter of credit be forfeited and collected if it is not replaced 30 days prior to its expiration. Forfeiture is not necessary. The letter of credit can be drawn upon and converted to cash to assure continuous bond coverage without forfeiting the bond. This section should be revised to eliminate the requirement to forfeit the bond.

800.21(e)(1) requires that a collateral bond be subject to a margin expressed as a ratio of bond value to market value. This margin is not a ratio, but rather a premium or additional amount required. It is intended to cover the costs to liquidate the collateral. This should be reworded to eliminate the reference to a ratio. It is acknowledged that this is from the existing regulation and was not changed, but in the interest of plain English and clarity, this revision is justified.

Bond release

800.40(b)(2)(vi) requires the newspaper notice of a bond release application to include "a description of results you have achieved under the approved reclamation plan, including an analysis of the results of the monitoring..." It is inappropriate and unnecessary for this information to be included in a public notice so this paragraph should be deleted. While this level of analysis is appropriate to be included in the application for bond release, the purpose of the notice is to assure public participation, not to provide detailed information from the application. It is more appropriate to include the requirement of this paragraph as an additional item under paragraph (b) to be included with the application for bond release rather than including it in the newspaper notice section under (b)(2).

800.42(a)(2) prohibits any bond release if, based an evaluation of the monitoring data, the regulatory authority "determines that adverse trends exist that may result in material damage to the hydrologic balance outside the permit area." The term "adverse trends" is vague. This will result in challenges to bond release denials based upon this standard. Decisions by regulatory authorities must be based upon known conditions rather than something that might happen in order to be defended. This paragraph should be revised to eliminate this requirement. As an alternative, a reference can be made to statistically significant degradation as shown by the monitoring data.

800.42(a)(3) prohibits any bond release if a long-term discharge treatment obligation is incurred. This absolute prohibition fails to recognize the possibility that more than sufficient bond may be in place even in cases where long-term treatment liability has been incurred. On a large mine site, with a minimal impact discharge, once the land reclamation is completed, it is likely that much more bond is in place than is required to complete the remaining reclamation and provide funds for the treatment of the discharge. This prohibition should be revised to allow for releases as long as the total remaining liability is included in the remaining bond amount.

800.42(c)(1) requires the regulatory authority to "establish standards defining successful establishment of vegetation..." This is unnecessary since 816.116 and 817.116 require the same with more specificity. This requirement should be deleted and cross-references to 816.116 and 817.116 should be added to this paragraph.

Topsoil

816.22(e)(2) (and 817.22(e)(2)) require "a statistically valid sampling technique to document that soil materials have been redistributed in the locations and depths required by the soil handling plan..." OSM invited comment on whether the rule should adopt the EPA method. The method of compliance with this requirement should be left to the regulatory authority.

816.22(f) (and 817.22(f)) require salvage of duff, organic litter, and vegetative materials and redistribution of these materials across the regraded surface or incorporation into the soil. The preamble indicates this recommendation was a part of Forest Reclamation Advisory #8 and was a part of Forestry Reclamation Approach studies. Therefore, this requirement should only apply to those sites that have a post-mining land use with planting of trees using the Forestry Reclamation Approach.

Protection of the hydrologic balance

816.34(d) (and 817.34(d)) require examination, certification and reporting for "hydraulic structures identified under 780.29" after 2-year storm events. Section 780.29 does not include the term "hydraulic structures" so this requirement is unclear. The reference to "runoff-control structures" in 780.29(c) suggests that these may be what the requirement applies to. If this is the case, the requirement is unnecessary since these structures are subject to certification under 816.46 upon completion and they are designed for capacities greater than the 2-year storm. In addition, under the NPDES program these facilities are subject to inspection more frequently.

Water monitoring

816.35 (and 816.36, 816.37, 817.35, 817.36 and 817.37) require the regulatory authority to issue an order when additional monitoring data is necessary. There are other means to get data so this mandate is not necessary. By all means an order should be written when it is necessary, but in most cases the data can be obtained through a simple request. This often occurs during the review of a permit modification application.

Acid or toxic materials

816.38(a) and 817.38(a) require covering the pit floor and the coal seams with material compacted to two orders of magnitude lower hydraulic conductivity, in addition to identifying potential acid-forming or toxic-forming materials in the overburden. First, these sections are poorly written because they combine two separate unrelated actions--(1) identifying materials in the overburden and (2) covering the pit floor and coal seams with compacted material. These two concepts should be included in separate paragraphs in a final rule if both are retained. The compaction requirement is problematic on a number of levels. It isn't apparent how the permittee can demonstrate compliance or how the regulatory authority can confirm compliance with the requirement. It also is not apparent what remedies are available if compliance can't be verified. With respect to covering the coal seam, the regulation lacks specificity on how to achieve this. In the waste industry a rule of thumb is two-foot compacted caps. Does it require the compacted material covering the exposed coal seam to run from

the coal seam to the outslope? As a prescriptive design standard for reclamation, this requirement fails to reflect that many coal seams act as aquifers and that attempts to "seal" the coal seam with compacted material will not succeed in preventing water movement. Covering the coal seam will only restrict vertical flow and does not account for the amount of lateral flow that can be expected. As written, this regulation cannot be practically implemented. We recommend that OSMRE revisit this proposed requirement. The technical literature regarding water flow in mine spoil is comprehensively reviewed and evaluated in Chapter 3: Hydrogeologic Characteristics of Surface-Mine Spoil of the publication titled *Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania (1998).* The publication emphasizes the difficulty in performing field testing of mine spoil hydraulic conductivity, the wide range of hydraulic conductivity values within mine spoil even on individual mine sites, and the significance of lateral flow as a recharge component at backfilled mine sites.

816.38(c)(3) should be revised to delete the second sentence about using it in combination with the techniques listed in paragraphs (1) and (2). This is redundant because the introductory language includes "you must use one or more of the following techniques..." This section should also be revised to allow for other techniques that accomplish the same goals as the listed techniques-as it is written the rule is overly restrictive. For example, it may be possible to effectively prevent pollution by handling acid or toxic-forming material by placement in a position that is "high and dry."

Siltation structures

816.46 (and 817.46) in the proposed regulations eliminate the requirement to retain siltation structures for at least two years after augmented seeding. Pennsylvania supports this revision because it provides the regulatory authority with discretion that protects the environment and minimizes potential reclamation liability.

Impoundments

816.49(a)(3) (and 817.49(a)(3)) have a typographical error-"that" is repeated.

Temporary structures

816.56 requires that temporary structures are removed and reclaimed prior to "seeking bond release." This should be clarified to specify if it applies to any request for bond release or final bond release. It is acknowledged that this is from the existing regulation and was not changed, but in the interest of plain English and clarity, this revision is justified.

Performance standards in, through or near streams

816.57(b)(2)(iii)(C) and 817.57(b)(2)(iii)(c) require a demonstration of full restoration of the hydrological form of the stream segment before qualification of Phase I Bond release. It is unclear if this pertains to the bond covering the stream restoration or the land reclamation bond as well. Bond calculation for streams restoration should be adequate to determine the bond needed for stream restoration without the additional land reclamation bond.

816.57(b)(2)(iii)(D) and 817.57(b)(2)(iii)(D) require a demonstration of full restoration of the ecological function of the stream segment before qualification for final bond release. It is unclear if this pertains to the bond covering the stream restoration or the land reclamation bond as well. This requirement would cause unnecessary delays in final bond release for the site. Bond calculation for stream restoration should be adequate to determine the bond needed for stream restoration without the additional land reclamation bond.

816.57(c)(3) and 817.57(c)(3) has a typographical error--"situation" should be changed to "section."

Use of explosives

816.67(b) and 817.67(b) were revised to delete the air blast levels from the table. This is an error and should be corrected in the final rule by restoring the limits. While it is beyond the scope of this rulemaking, the requirements included in the table are no longer needed due to standardization of microphones. OSM should consider replacing the table with a 133 dBL maximum limit.

Standards for revegetation

816.116(b) and 817.116(b) include a reference to pre-mining land use capability in the first paragraph and a reference to post-mining land use in subsection (4). It is not clear how the concepts of pre-mining land use capability and post-mining land use are to be reconciled.

Water supply replacement

817.40(c)(3) requires a permanent replacement water supply to be provided within 2 years of the notice of an unanticipated water loss or damage. While this is a reasonable standard, water supply replacement cases, particularly where underground mining is occurring, may take more time than this to fully resolve. The regulation should be revised to include an exception from the requirement if the permittee can show a good faith effort to resolve the matter, but has been unable to do so due to circumstances beyond their control.

817.40(d) "Basis for determination of adverse impact." should be italicized.

Subsidence damage

817.121(d) In the phrase "occupied residential dwelling or structure related thereto" "or" should be "and" if the intent is to use the defined term in 701.5.

817.121(j) is poorly worded with too many verbs. "...if it finds that the mining activities pose an imminent danger is found to inhabitants..." Delete "is found."

Draft Regulatory Impact Analysis (DRIA) Comments

The proposed rulemaking at 816.46 and 817.46 changes the requirement for retention of siltation structures, eliminating the requirement that they be in place for at least two years after augmented seeding. Pennsylvania is subject to a required program amendment (938.16(rrr)), relating to this. The

DRIA fails to address how a required program amendment which is obviated by the proposed rule will be resolved.

The proposed rule creates the concept of financial assurance, which includes trust funds. Pennsylvania's approved program includes trust funds which were approved on August 10, 2010 (75 FR 48534) as alternate bonding mechanisms. The regulatory impact analysis fails to address the re-characterization of trust funds under the proposed rule.

The cost estimates for the RAs in the DRIA is based upon a 1.5 multiplier of salaries to determine wage costs. Under the Title V grant, benefits add 69% and indirect costs add 25% of the salary costs to the total wage costs. The cost calculations in the DRIA are not reflective of actual costs.