

ENVIRONMENTAL QUALITY BOARD
[25 PA CODE CHS. 87, 88, 90]
Remining Requirements

The Environmental Quality Board (Board) proposes to amend the remining regulations at 25 Pa. Code Chapter 87, Subchapter F (relating to Surface Coal Mines: minimum requirements for remining areas with polluttional discharges), 25 Pa. Code Chapter 88, Subchapter G (relating to Anthracite Surface Mining Activities and Anthracite Bank Removal and Reclamation Activities: minimum requirements for remining areas with polluttional discharges) and 25 Pa. Code Chapter 90, Subchapter F (relating to Coal Refuse Activities on Remining Areas with Polluttional Discharges) to incorporate requirements of the federal remining rules found at 40 C.F.R. Part 434, Subpart G (relating to coal remining) and adopting the statistical methods found at Appendix B to 40 C.F.R. Part 434.

This proposed rulemaking was adopted by the Board at its meeting of May 20, 2015.

A. Effective Date

This proposed rulemaking will be effective upon final-form publication in the *Pennsylvania Bulletin*.

B. Contact Persons

For further information, contact Thomas Callaghan, PG, Director, Bureau of Mining Programs, Rachel Carson State Office Building, 5th Floor, 400 Market Street, P. O. Box 8461, Harrisburg, PA 17105-8461, (717) 787-5015; or Joseph Iole, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-9376. Information regarding submitting comments on this proposed rulemaking appears in Section J of this preamble. Persons with a disability may use the AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposed rulemaking is available on the Department of Environmental Protection's (Department) web site at www.dep.state.pa.us (select: "Public Participation Center," then select "The Environmental Quality Board").

C. Statutory Authority

This proposed rulemaking is authorized under the authority of Section 5 of The Clean Streams Law (35 P.S. § 691.5); Sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and Section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

D. Background and Purpose

The existing Pennsylvania remining program is implemented through 25 Pa. Code Chapter 87, Subchapter F, 25 Pa. Code Chapter 88, Subchapter G, and 25 Pa. Code Chapter 90, Subchapter F, as well as through technical guidance documents and individual permits. The regulations

allow liability protection for remining operations conducted on abandoned mine lands with existing pollutional discharges by enabling the Department to determine the pollution baseline at a site and set effluent limitations accordingly. Currently, the Department determines the pollution baseline using a single statistical method (“Method 1”), explained below, and incorporates the baseline in the individual permit. Likewise, effluent limitations are determined on a case-by-case basis.

Federal remining requirements are codified at 40 C.F.R. Part 434, Subpart G and Appendix B (regarding the procedures for establishing effluent limitations for pre-existing discharges). The federal requirements differ from the Pennsylvania requirements by providing the option of employing an alternative statistical method (“Method 2”) for determining the pollution baseline. The choice of methods depends on which method would more accurately characterize baseline levels due to site-specific factors.

The federal regulations further provide for remining in cases in which the pollution baseline cannot be determined due to infeasibility of sampling and remining would result in significant water quality improvement that would not otherwise occur. Under such circumstances, the federal regulations require an operator to submit a pollution abatement plan based on best management practices without regard for numeric effluent limitations.

The preambles of the federal remining regulations, proposed in the Federal Register on April 11, 2000 (65 Fed. Reg. 19440), and finalized on January 23, 2002 (67 Fed. Reg. 3370), provide extensive additional background references explaining the statistical methods, best management practices, and other requirements. Notably, the federal regulations were informed by the extensive experience with remining in this Commonwealth.

The proposed rulemaking incorporates into the Pennsylvania regulations both statistical methods provided in the federal regulations, eliminating the need to implement the methods through individual permits and providing flexibility regarding the choice of statistical method based on site-specific factors. The proposed rulemaking further provides for remining at sites in which it is infeasible to establish pollution baselines.

The following is a summary of the federal regulations.

Subpart G of 40 C.F.R. Part 434

Subpart G of 40 C.F.R. Part 434 includes specialized definitions, applicability and effluent limitations for remining.

Five terms are included in the definitions: “coal remining operation,” “pollution abatement area,” “pre-existing discharge,” “steep slope,” and “new source remining operation.” (40 C.F.R. § 434.70)

The applicability section includes a description of mine sites to which the regulations apply, requirements for water that is intercepted by remining activities, a grandfather clause for existing

approved reming authorizations and a description of the time period during which the regulations apply. (40 C.F.R. § 434.71)

The effluent limitations are established in four categories: best practicable control technology currently available (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT) and new source performance standards (NSPS).

The BPT limitations are the most commonly applicable. The federal BPT regulations require a site-specific pollution abatement plan, designed to reduce the pollution load. They also establish numerical effluent limitations for pre-existing discharges for total iron, total manganese, net acidity and total suspended solids. These effluent limitations may not exceed the baseline pollution load, as defined under the methods described in Appendix B of 40 C.F.R. Part 434. The BPT limitations also allow for circumstances under which the numerical limitations are not applicable, specifically in cases in which it is infeasible to collect samples in order to establish the baseline pollution load. (40 C.F.R. § 434.72)

The BAT limitations require a pollution abatement plan and compliance with the baseline pollution load for net acidity, iron and manganese. (40 C.F.R. § 434.73)

The BCT limitations require a pollution abatement plan and compliance with the baseline pollution load for total suspended solids. (40 C.F.R. § 434.74)

The NSPS limitations require a pollution abatement plan and compliance with the baseline pollution load for acidity, iron, manganese and total suspended solids. (40 C.F.R. § 434.75)

Appendix B of 40 C.F.R. Part 434

Appendix B of 40 C.F.R. Part 434 includes the statistical methods for establishing the baseline pollution load and determining compliance with the numerical effluent limitations. There are two methods (“Method 1” and “Method 2”) to establish the baseline provided in Appendix B. There are also two time frames to determine compliance, one on a monthly basis (single-observation) and the second on an annual basis. The thresholds to determine compliance are referred to as triggers.

Method 1 for the single-observation trigger uses a statistical method that determines the tolerance interval of the 95th percentile above the median and compares that value with the sample being evaluated. Method 2 for the single-observation trigger is a nonparametric estimate of the 99th percentile of loadings. Method 1 for the annual trigger compares the baseline with a year’s monitoring data for loading using the 95th percentile confidence interval for the median of each data set. Method 2 for the annual trigger uses the Wilcoxon-Mann-Whitney test to compare the baseline and monitoring year being evaluated. The Wilcoxon-Mann-Whitney test is a ranking test.

When the single-observation trigger is exceeded in two consecutive months, accelerated (weekly, for four weeks) monitoring is required. If the accelerated sampling confirms the exceedance,

then treatment of the discharge is required. If the accelerated sampling does not confirm the exceedance, then the accelerated sampling may be reduced to a monthly basis.

When the annual trigger is exceeded, treatment of the discharge is required.

Project XL

In April 2000, EPA Region III and the Department entered into an agreement under EPA's Project XL program which allowed for a modified approach to remining permits. Under this program, the water quality performance for eight pilot study remining sites was evaluated based on stream water quality rather than discharge pollutant loading. Under this project, the basis for water quality evaluation was bi-monthly receiving stream concentration data. The triggers were based on concentrations rather than loading.

The conclusion of the pilot study was that remining with in-stream monitoring was just as effective as the traditional discharge-based remining approach. Another conclusion was that the Project XL approach will encourage additional remining since it can be more cost-effective.

The proposed regulations deviate from the federal regulations by requiring, in appropriate circumstances, in-stream baseline determinations and monitoring.

Mining and Reclamation Advisory Board Collaboration

The Department collaborated with the Mining and Reclamation Advisory Board's (MRAB) Regulation, Legislation and Technical committee to develop this proposed rulemaking. At its October 23, 2014 meeting, the MRAB voted for the proposed rulemaking to move forward in the regulatory process.

E. Summary of Proposed Regulatory Requirements

In drafting the proposed rulemaking, the federal rulemaking language was edited and inserted to fit the context of the Commonwealth's regulations. The edits include renumbering, formatting, and substitutions of more specific references. For example, where the federal regulations use the term "permitting authority," "Department" was substituted.

Some other proposed revisions are included to reflect current requirements that are included as permit conditions but will now be addressed in this regulation, instead.

Sections 87.202, 88.502, and 90.302 Definitions

The proposed rulemaking includes the addition of definitions of "coal remining operation," "encountered discharge," "pollution abatement plan," "pre-existing discharge" and "steep slope." The term "abatement plan" and its definition are being deleted since this term is replaced by "pollution abatement plan." The definitions of "coal remining operation," "pollution abatement plan," "pre-existing discharge" and "steep slope" are based on the definitions at 40 C.F.R. §

434.70. The term “encountered discharge” was added since it is included in each remining permit issued.

[The replacement of the term “abatement plan” with “pollution abatement plan” in the definitions necessitates revisions throughout the proposed rulemaking to substitute the new term for the old one.](#)

Sections 87.203, 88.503, and 90.303 Applicability

The proposed rulemaking adds subsections (c) and (d) in Section 87.203 and in Section 90.303. Subsection (c) is based on 40 C.F.R. § 434.71(a). Subsection (d) is based on 40 C.F.R. § 434.71(c). Regarding Section 88.503, the proposed rulemaking amends subsection (a) to apply the requirements to anthracite coal refuse disposal activities and adds subsections (d) and (e). Subsection (e) is based on 40 C.F.R. § 434.71(c). These additional subsections establish the circumstances in which this rulemaking applies.

Sections 87.204, 88.504, and 90.304 Application for authorization

The proposed rulemaking amends subsections 87.204(a)(2)(ii), 88.504(a)(2)(ii), and 90.304(a)(2)(ii) to add flow as a required monitoring parameter because flow data is required to calculate loading, and also to insert “total” as a modifier of aluminum, since the water quality criterion for aluminum is expressed as a total.

The proposed rulemaking amends subsections 87.204(a)(3), 88.504(a)(3), and 90.304(a)(3) to reflect the regulatory requirements for a pollution abatement plan found at 40 C.F.R. § 434.72(a). The existing requirements in subsections 87.204(a)(3), 88.504(a)(3), and 90.304(a)(3) are being retained to provide more detail of what needs to be in a pollution abatement plan. Requirements in subsections 87.204(a)(3) and 88.504(a)(3) have been in place since 1985, and requirements in 90.304(a)(3) have been in place since 2001, and each have proven effective.

The proposed rulemaking adds subsections 87.204(a)(4), 87.204(a)(5), 88.504(a)(4), 88.504(a)(5), 90.304(a)(4) and 90.304(a)(5) to clarify that the pollution abatement plan must include a calculation of the pollution baseline and the data used in its determination. This is currently required through the remining module of the application form for a coal mining permit.

The proposed rulemaking revises subsections 87.204(b), 88.504(b), and 90.304(b) to allow, but not require, applicants to continue water monitoring after the baseline is established, but before the permit is issued. This approach was suggested by the MRAB Regulation, Legislation and Technical committee. The federal regulations are silent regarding this period of sampling.

Sections 87.206, 88.506, and 90.306 Operational Requirements

The proposed rulemaking revises subsections 87.206(1), 88.506(1), and 90.306(a)(1) to add more specific requirements for the monitoring program. These requirements are currently included in remining permits. The proposed rulemaking also deletes subsection 88.506(3) which includes the requirement to notify the Department as steps of the abatement plan are initiated and

completed. In addition, these sections are being revised to include notification requirements when accelerated sampling is required and to establish the triggers for when this accelerated sampling must begin and when it may end. These triggers relating to accelerated sampling are consistent with the requirements in paragraphs II.A.5 and II.B.5 of Appendix B of 40 C.F.R. Part 434.

Sections 87.207, 88.507, and 90.307 Treatment of discharges

The proposed rulemaking revises subsections 87.207(b), 88.507(b), and 90.307(b) to allow for an exception from the requirement to treat individual discharges on sites where it is not feasible to collect samples to establish the baseline pollution load and to include a reference to Section 88.292. The proposed rulemaking also adds subsections 87.207, 88.507, and 90.307 (g) through (j). The proposed rulemaking revises subsection 88.507(a) to add a reference to Section 88.292 to clarify that these requirements apply to anthracite coal refuse disposal activities. The proposed rulemaking revises subsection 88.507(c) to include a reference to subsection 88.295(b). Subsection (g) requires a permittee to notify the Department if the treatment obligation is triggered subsequent to accelerated sampling. Subsection (h) provides that the Department will notify the permittee if it has determined that the pollution baseline has been exceeded and that treatment must begin within 30 days of this notice. Subsection (i) requires that encountered discharges be treated to meet the effluent limitations in the permit. Subsection (j) provides clarification as to when the treatment of an encountered discharge may cease.

Sections 87.210, 88.510, and 90.310 Effluent limitations

The proposed regulations add Sections 87.210, 88.510, and 90.310, with parallel subsections. Subsection (a) requires a pollution abatement plan, which must be approved by the Department and incorporated into the permit as an effluent limitation. Subsection (b) requires that the best management practices included in the pollution abatement plan be implemented. These subsections are based on the federal requirements at 40 C.F.R. § 434.72(a).

The effluent limitations included in subsection (c)(1) are based on the requirements at 40 C.F.R. § 434.72(b)(1). Subsection (c)(2) includes the exemption from the total suspended solids and settleable solids effluent limitations which are in the footnote to 40 C.F.R. § 434(b)(1)(iv).

Subsection (d) provides requirements for discharges for which it is not possible to establish the baseline pollutant levels. Subsection (d)(1) is based on 40 C.F.R. § 434(b)(2). The proposed requirements deviate from the federal requirements in that they require the establishment of an in-stream baseline under some circumstances, while the federal requirements do not require in-stream baseline determination under any circumstances. Subsection (d)(2) establishes the bimonthly stream sampling frequency in order to establish an in-stream pollution concentration baseline. Subsection (d)(3) establishes the monitoring and performance requirements for in-stream comparison with the baseline concentration. Subsection (d)(4) identifies the discharges for which it is not feasible to establish a pollutant baseline. This subsection lists the four categories explicitly identified under 40 C.F.R. § 434.72(b)(2). Both subsection (d)(4) and 40 C.F.R. § 434.72(b)(2) allow for other categories. Subsection (d)(5) specifies the circumstances where in-stream monitoring is not indicative of the impact of remining. These circumstances

were based on the experience from many years of observations of the in-stream impacts of remining and Project XL.

Subsection (e) provides for the possibility that pollutants other than iron, manganese, acidity or suspended solids may be eligible for effluent limitations using the approach established by subchapter F for Chapters 87 and 90 and Subchapter G for Chapter 88.

Subsection (f) identifies the discharges that are subject to the usual effluent limitations and not eligible for the limits established under the remining approach.

Subsection (g) describes when the limitations in subsection (f) are no longer applicable.

Subsection (h) states that the remining effluent limitations apply to eligible discharges until final bond release.

Sections 87.211, 88.511, and 90.311 Baseline determination and compliance monitoring for pre-existing discharges at remining operations

The proposed rulemaking adds Sections 87.211-87.213, 88.511-88.513, and 90.311-90.313, with parallel subsections. Sections 87.211-87.213, 88.511-88.513, and 90.311-90.313 incorporate the statistical methods for determining baseline and compliance monitoring from Appendix B to 40 C.F.R. Part 434.

Sections 87.211, 88.511, and 90.311 include procedures to be used for determining site-specific baseline pollutant loadings and for determining whether discharge loadings during coal remining operations have exceeded the baseline loading.

Subsection (a) requires that both monthly and annual compliance monitoring be done. This is based on the requirement in paragraph I.a of Appendix B of 40 C.F.R. Part 434. Subsection (b) requires at least one sample per month for determining the baseline and the annual compliance monitoring period. This is based on the requirement in paragraph I.b of Appendix B of 40 C.F.R. Part 434. Subsection (c) requires the evaluation to be done of the load of the pollutant. This is based on the requirement in paragraph I.c of Appendix B of 40 C.F.R. Part 434. Subsection (d) describes how the load is to be calculated. Subsection (e) allows for the substitution of values when the baseline concentration values are lower than the applicable technology-based effluent limitation guideline. Subsection (f) provides for the exceptions from the substitution of values allowed under subsection (e). Subsection (g) describes how the interquartile range is to be calculated. Subsections (e), (f) and (g) are based on paragraph I.d of Appendix B of 40 C.F.R. Part 434.

Sections 87.212, 88.512, and 90.312 Procedure for Calculating and Applying a Single-Observation (Monthly) Trigger

Sections 87.212, 88.512, and 90.312 provide two methods for calculating and applying the monthly trigger for compliance monitoring. Subsection (a) lists the steps for Method 1 for calculating the monthly trigger. This method is the same as the method used by the Department.

Subsection (a) is based on paragraph II.A of Appendix B of 40 C.F.R. Part 434. Subsection (b) lists the steps in applying the Method 1 monthly trigger. Subsection (c) lists the steps for Method 2 for calculating and applying the monthly trigger. This is based on paragraph II.B of Appendix B of 40 CFR 434.

Section 87.213, 88.513, and 90.313 Procedure for Calculating and Applying an Annual Trigger

Sections 87.213, 88.513, and 90.313 provide the two methods for calculating and applying the annual trigger specified in Section III of Appendix B of 40 C.F.R. Part 434. Subsection (a) lists the steps for Method 1 for calculating and applying the annual trigger. This is the same as the method used by the Department. It is based on paragraph III.A of Appendix B of 40 C.F.R. Part 434. Subsection (b) lists the steps for Method 2 for calculating and applying the annual trigger. Method 2 for the annual trigger is a statistical test which uses ranking of the data. It is based on paragraph III.B of Appendix B of 40 C.F.R. Part 434.

Section 88.509 Criteria and schedule for release of bonds on pollution abatement areas

The proposed rulemaking amends subsection 88.509(b)(1) to include a reference to Section 88.287, which is applicable to anthracite coal refuse disposal activities. The proposed rulemaking amends subsection 88.509(c)(1) to include a reference to Section 88.133 which is applicable to anthracite surface mines. This is a correction of an omission from the original regulation.

F. Benefits, Costs and Compliance

Benefits

This rulemaking will allow for additional reclamation of abandoned mine lands by providing protection to mine operators from long-term treatment liability. The provisions of the rulemaking that allow for remining in circumstances in which calculating the baseline pollution load of discharges is not feasible have the potential to open up areas to remining where it was not previously possible. Remining typically results in substantial improvements in water quality.

Compliance costs

The primary compliance costs are related to water sampling and analysis and implementation of best management practices for the abatement of abandoned mine drainage. However, these costs are part of the planning process for a mine operator when they decide if an area is economically mineable. Overall, compliance costs for a mine operator are reduced since the rulemaking will provide for protection from long-term treatment liability.

Compliance Assistance Plan

Compliance assistance for this rulemaking will be provided through the Department's routine interaction with trade groups and individual applicants. There are about 500 licensed surface

coal mining operators in Pennsylvania, most of which are small businesses that will be subject to this regulation.

Paperwork requirements

This rulemaking requires additional information as part of a permit application in the form of a robust pollution abatement plan. Current applicants for remining are required to provide an abatement plan with a remining application. The additional requirements are more focused and may make it simpler to provide the required plans.

G. Pollution Prevention

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. Remining operations implement best management practices that result in pollution prevention.

H. Sunset Review

These regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on _____, 2015, the Department submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the Senate and House Environmental Resources and Energy Committees. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act (71 P.S. § 745.5(g)), the Commission may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria which have not been met. The Regulatory Review Act specifies detailed procedures for review of comments, recommendations or objections raised, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor.

J. Public Comments

Interested persons are invited to submit written comments, suggestions or objections regarding the proposed rulemaking to the Environmental Quality Board. Comments, suggestions or objections must be received by the Board by _____. In addition to the submission of comments, interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by the Board by _____. The one-page summary will be distributed to the Board and available publicly prior to the meeting when the final rulemaking will be considered.

Comments including the submission of a one-page summary of comments may be submitted to the Board online, by e-mail, by mail or express mail as follows. If an acknowledgement of comments submitted online or by e-mail is not received by the sender within 2 working days, the comments should be retransmitted to the Board to ensure receipt. Comments submitted by facsimile will not be accepted.

Comments may be submitted to the Board by accessing the Board's online comment system at <http://www.ahs.dep.pa.gov/RegComments>. Comments may also be submitted to the Board by e-mail at RegComments@pa.gov. A subject heading of the proposed rulemaking and a return name and address must be included in each transmission.

Written comments should be mailed to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477. Express mail should be sent to the Environmental Quality Board, Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301.

John Quigley
Acting Chairman
Environmental Quality Board