

**FINAL-FORM RULEMAKING  
ENVIRONMENTAL QUALITY BOARD  
[ 25 PA. CODE CHS. 87, 88 AND 90 ]  
Remining Requirements**

The Environmental Quality Board (Board) amends the remining regulations in Chapter 87, Subchapter F, Chapter 88, Subchapter G and Chapter 90, Subchapter F (relating to surface coal mines: minimum requirements for remining areas with polluttional discharges; anthracite surface mining activities and anthracite bank removal and reclamation activities: minimum requirements for remining areas with polluttional discharges; and coal refuse disposal activities on areas with pre-existing polluttional discharges) to read as set forth in Annex A. This final-form rulemaking incorporates requirements of the Federal remining rules in 40 CFR Part 434, Subpart G (relating to coal remining) and the statistical methods in 40 CFR Part 434, Appendix B (relating to baseline determination and compliance monitoring for pre-existing discharges at remining operations).

This final-form rulemaking was adopted by the Board at its meeting of \_\_\_\_\_.

*A. Effective Date*

This final-form rulemaking will be effective upon 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) 787-7060. Persons with a disability may use the AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This final-form rulemaking is available on the Department of Environmental Protection's (Department) web site at [www.dep.pa.gov](http://www.dep.pa.gov) (select "Public Participation", then select "Environmental Quality Board (EQB)").

*C. Statutory Authority*

This final-form 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 Commonwealth's remining program is implemented through Chapter 87, Subchapter F, Chapter 88, Subchapter G and Chapter 90, Subchapter F, as well as through technical guidance documents and individual permits. This program allows for 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 as follows, and incorporates the baseline in the individual permit.

Federal remining requirements are found in 40 CFR Part 434, Subpart G and Appendix B. 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 these circumstances, the Federal regulations require an operator to submit a pollution abatement plan based on best management practices (BMP) without regard for numeric effluent limitations.

The preambles of the Federal remining regulations, proposed at 65 FR 19440 (April 11, 2000) and adopted at 67 FR 3370 (January 23, 2002), provide extensive additional background references explaining the statistical methods, BMPs and other requirements. Notably, the Federal regulations were informed by the extensive experience with remining in this Commonwealth.

The final-form rulemaking incorporates into the Commonwealth's 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 final-form rulemaking further provides for remining at sites in which it is infeasible to establish pollution baselines.

### *Summary of the Federal regulations*

#### *40 CFR Part 434, Subpart G*

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

The following definitions are included in 40 CFR 434.70 (relating to specialized definitions): "coal remining operation," "pollution abatement area," "pre-existing discharge," "steep slope" and "new source remining operation."

Section 434.71 of 40 CFR (relating to applicability) 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 remining authorizations and a description of the time period during which the regulations apply.

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 in 40 CFR 434.72 (relating to effluent limitations attainable by the application of the best practicable control technology currently available (BPT)) 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 40 CFR Part 434, Appendix B. 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 to establish the baseline pollution load.

The BAT limitations in 40 CFR 434.73 (relating to effluent limitations attainable by application of the best available technology economically achievable (BAT)) require a pollution abatement plan and compliance with the baseline pollution load for net acidity, iron and manganese.

The BCT limitations in 40 CFR 437.74 (relating to effluent limitations attainable by application of the best conventional pollutant control technology (BCT)) require a pollution abatement plan and compliance with the baseline pollution load for total suspended solids.

The NSPS limitations in 40 CFR 434.75 (relating to new source performance standards (NSPS)) require a pollution abatement plan and compliance with the baseline pollution load for acidity, iron, manganese and total suspended solids.

#### *40 CFR Part 434, Appendix B*

Appendix B of 40 CFR 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 1 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 2 consecutive months, accelerated (weekly, for 4 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, the United States Environmental Protection Agency (EPA) Region III and the Department entered into an agreement under the EPA's Project XL program which allowed for a modified approach to reminging permits. Under this program, the water quality performance for eight pilot study reminging sites was evaluated based on stream water quality rather than discharge pollutant loading. Under this project, the basis for water quality evaluation was bimonthly receiving stream concentration data. The triggers were based on concentrations rather than loading.

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

This final-form rulemaking deviates from the Federal regulations by requiring, in appropriate circumstances, in-stream baseline determinations and monitoring.

### *Current Pennsylvania Reminging Program*

The existing reminging program in Pennsylvania is implemented through the regulations at 25 Pa. Code Chapter 87, Subchapter F, 25 Pa. Code Chapter 88, Subchapter G and 25 Pa. Code Chapter 90, Subchapter F, technical guidance documents and individual permit documents. Effluent limitations are determined on a case-by-case basis using best professional judgment.

Monitoring requirements and the pollution baseline are specified in each permit. The statistical method used is the same as Method 1 in Appendix B to 40 CFR 434, including the single-observation and the annual triggers.

The existing reminging regulations require an applicant to continue the water quality and quantity monitoring program after submitting the permit application, at least until the permitting decision is made. The proposed rulemaking included a change to this approach making the sampling optional rather than mandatory. The Independent Regulatory Review Commission (IRRC) observed that the preamble for the proposed rulemaking did not explain this sufficiently.

During the development of the proposed revisions, the fact that the post-submission monitoring is not required under the federal regulations presented the Department with the opportunity to re-evaluate the need for the additional data. Since an application is required to have sufficient data to establish the baseline and that this baseline is enforceable, it was concluded that it is no longer necessary to require this post-submission data. This issue was

raised with the Mining and Reclamation Advisory Board's (MRAB) Regulation, Legislation and Technical Committee. Their recommendation was to allow for, but not require, the additional data collection. As an alternative to the requirement in the proposed regulations, the elimination of any reference to the continuation of sampling (in order to be exactly consistent with the federal requirements) was considered. This was dismissed because in many cases (for example, where there is a large time delay or where other influences on the water quality have occurred) it may make sense to recalculate the baseline after the permit has been submitted, but before any mining occurs. The final-form rulemaking allows flexibility, letting the applicant decide whether they should spend money on additional sampling.

#### *Mining and Reclamation Advisory Board collaboration*

The Department collaborated with the 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. The final-form rulemaking was reviewed with the MRAB at their January 21, 2016 meeting. The MRAB recommended that the Board proceed as quickly as possible with the final-form rulemaking.

#### *E. Summary of Changes to the Proposed Rulemaking*

##### *§§ 87.210(d)(1), 88.510(d)(1) and 90.310(d)(1). Effluent Limitations*

The Board has revised these subsections to include reference to the specific subsection (d)(4). In addition, these subsections have been revised to specify that “the permit applicant shall establish an in-stream baseline concentration at a suitable point downstream from the remaining operation, unless the Department waives the sampling requirement under subsection (d)(5) and the numeric effluent limitations in subsection (c)(1) do not apply.”

##### *§§ 87.212(b)(4). Procedure for calculating and applying a single-observation (monthly) trigger.*

A commentator pointed out that in subsection 87.212(b)(4), the subscript to the term “x” in the statement “If n is odd, then M equals x” was omitted. The Board has inserted the correct subscript in the final-form rulemaking to properly identify the value of M if n is odd.

##### *§§ 87.213(c)(7)(ii), 88.513(c)(7)(ii) and 90.313(c)(7)(ii). Procedure for calculating and applying an annual trigger.*

IRRC commented that in sections 87.213, 88.513 and 90.313 the calculations do not match the federal regulations. Specifically, subsection (c)(7)(ii) includes a capital “M” rather than a small “m.” In response, the Board has corrected the “M” in subsection (c)(7)(ii) to be “m.”

#### *F. Summary of Comments and Responses on the Proposed Rulemaking*

Comments were received from one public commentator and from IRRC.

The public comment relates to subsection 87.212(b)(4). It points out that the subscript to the term “x” in the statement “If n is odd, then M equals x” was omitted. In response, the Board has inserted the correct subscript to properly identify the value of M if n is odd.

IRRC indicated that the regulatory analysis form (RAF) was incomplete because there was no information provided in the response to question 23. In response, the Board has corrected this omission in the final-form rulemaking package.

IRRC also indicated that the RAF should have referenced sections 88.510 and 90.310 in the response to question 11. In response, the Board has corrected this omission in the final-form rulemaking package.

IRRC additionally noted that further explanation is needed to clarify the need for the change in the existing regulations found in subsection 87.204(b) relating to the continuation of sampling after the baseline is established. In the existing regulations, the continuation of sampling is mandatory, where under the proposed revision, it is optional. This change also applies to sections 88.504 and 90.304. In response, the Board has provided an explanation in this preamble and in response to the questions on the RAF. The rationale for this change is as follows: the federal regulations do not require the continuation of sampling; the established baseline is enforceable without any additional data; a cost could be incurred by operators for unnecessary data collection; and the Mining and Reclamation Advisory Board recommended said change. Further explanation has been provided that the alternative to the requirement in the proposed regulations was the elimination of any reference to the continuation of sampling in order to be consistent with the federal requirements.

IRRC commented that sections 87.210, 88.510 and 90.310 are ambiguous because the reference in subsection (d)(1) includes the phrases, “...establishing the baseline pollution levels under this subsection...” and “...the permit applicant may establish and in-stream baseline concentration...” In response the Board has revised the wording to include reference to the specific subsection (d)(4). In addition these subsections have been revised to specify that “the permit applicant shall establish an in-stream baseline concentration at a suitable point downstream from the remaining operation, unless the Department waives the sampling requirement under subsection (d)(5) and the numeric effluent limitations in subsection (c)(1) do not apply.”

IRRC further commented that sections 87.213, 88.513 and 90.313 include calculations from the federal regulations, but do not match the federal regulations. Specifically, the calculations in subsections (b)(4), (b)(6) and (c)(7)(iii) are missing additional sets of parentheses and subsection (c)(7)(ii) includes a capital “M” rather than a small “m.” In response, the Board has corrected

the “M” in subsection (c)(7)(ii) to be “m.” The additional parentheses are not needed due to the rules about order of operations for arithmetic. The Board has concluded that including unnecessary parentheses would result in less clarity and more ambiguity, so the final-form rulemaking does not revise the calculations to exactly match the federal calculations. However, the calculations in the final-form rulemaking provide the same results as the federal calculations.

### *G. Benefits, Costs and Compliance*

#### *Benefits*

This final-form rulemaking will allow for additional reclamation of abandoned mine lands by providing protection to mine operators from long-term treatment liability. The amendments 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 BMPs 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 final-form rulemaking will provide for protection from long-term treatment liability.

#### *Compliance Assistance Plan*

Compliance assistance for this final-form 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 this Commonwealth, most of which are small businesses that will be subject to the regulations.

#### *Paperwork requirements*

This final-form 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.

### *H. 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 BMPs that result in pollution prevention.

#### I. *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.

#### J. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on \_\_\_\_\_, the Department submitted a copy of this proposed rulemaking, published at 45 Pa.B. 5920 (October 3, 2015), to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees, for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the House and Senate Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final rulemaking, the Department has considered all comments from IRRC and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P. S. § 745.5a(j.2)), on \_\_\_\_\_, the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on \_\_\_\_\_, and approved the final-form rulemaking.

#### K. *Findings of the Board*

The Board finds that:

- (1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at *1 Pennsylvania Code* §§ 7.1 and 7.2.
- (2) A public comment period was provided as required by law, and all comments were considered.
- (3) These regulations do not enlarge the purpose of the proposal published at 45 *Pennsylvania Bulletin* 5920 (October 3, 2015).
- (4) These regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this order.

*L. Order of the Board*

The Board, acting under the authorizing statutes, orders that:

- (1) The regulations of the Department of Environmental Protection, *25 Pennsylvania Code*, Chapters 87, 88, and 90, are amended by amending Chapters 87, 88, and 90 to read as set forth in Annex A, with ellipses referring to the existing text of the regulations.
- (2) The Chairman of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.
- (3) The Chairman shall submit this order and Annex A to the Independent Regulatory Review Commission and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.
- (4) The Chairman of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.
- (5) This order shall take effect immediately.

JOHN QUIGLEY,  
Chairperson