

**ENVIRONMENTAL PROTECTION  
AGENCY****40 CFR Part 434**

[WH-FRL-2873-2]

**Coal Mining Point Source Category;  
Effluent Limitations Guidelines and  
New Source Performance Standards****AGENCY:** Environmental Protection  
Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** On October 13, 1982, EPA promulgated final effluent guidelines and standards under the Clean Water Act (CWA) to limit the discharge of pollutants into waters of the United States from the Coal Mining Industry (47 FR 45382). That rule amended the previously promulgated effluent limitations guidelines based on "best practicable control technology currently available" (BPT) and "new source performance standards" (NSPS) and established new guidelines based on "best available technology economically achievable" (BAT).

Following the October 13, 1982 promulgation, the National Coal Association (NCA), the Commonwealth of Pennsylvania, and the West Virginia Mountain Streams Monitors, Inc. (MSM) filed petitions for judicial review of the regulation in the United States Court of Appeals for the Fourth Circuit. On August 1, 1983, EPA entered into a Settlement Agreement with the above-mentioned petitioners. Under the terms of that settlement, EPA agreed to propose changes to the October 13, 1982 regulations to reflect the resolution of various issues by the settlement agreement. EPA also agreed to the suspension of several sections of the regulations pending completion of a final rulemaking.

Accordingly, EPA proposed these amendments on May 4, 1984. At the request of all parties, the court suspended portions of the October rule, pending completion of this rulemaking (*NCA, et al. v. EPA* Nos. 82-1939 *et al.*, 4th Cir., August 23, 1983).

EPA received comments from twenty-four organizations in response to the May 4, 1984 proposed amendments. The comments period closed July 6, 1984. After consideration of these comments, EPA has developed a final rule which is being promulgated today.

**DATES:** The effective date of these regulations is November 22, 1985. In accordance with 40 CFR Part 23, the regulations shall be considered issued for purposes of judicial review at 1:00 p.m., Eastern Time on October 23, 1985.

**ADDRESS:** The record of this rulemaking is available for public inspection at EPA's Public Information Reference Unit. Questions regarding this rule should be addressed to Ms. Susan de Nagy, Effluent Guidelines Division (WH-552), Environmental Protection Agency, 401 M. St. SW. Washington, D.C. 20460, Attention: EGD Docket Clerk, Coal Mining.

**FOR FURTHER INFORMATION CONTACT:** Mr. William A. Telliard or Ms. Susan de Nagy, (202) 382-7131.

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**I. Legal Authority**

These regulations are promulgated under the authority of Sections 301, 304, 306, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 *et seq.* as amended by the Clean Water Act of 1977, Pub. L. 95-217, also called the "Act".) These regulations are also promulgated in response to the Settlement Agreement in *National Coal Association et al. v. EPA*, Nos. 82-1939 *et al.* (4th Cir., August 23, 1983).

**II. Background**

On October 13, 1982, EPA published a final rule establishing effluent limitations guidelines and standards for the coal mining industry (47 FR 45382).

Following this promulgation, petitions for reviews of the rule were filed in the United States Court of Appeals for the Fourth Circuit by NCA, the Commonwealth of Pennsylvania, and MSM (*NCA et al. v. Environmental Protection Agency*, Nos. 82-1939 *et al.* (4th Cir.)). The petitioners raised issues concerning acid mine drainage, new source performance standards for preparation plants, the definition of new source coal mines, and post-bond release regulations. After extensive discussions, the petitioners and EPA reached a settlement under which the Agency agreed to propose specified revisions to the regulations.

On May 4, 1984, EPA proposed amendments to the October 13, 1982 regulations which incorporated agreements reached in the settlement discussions (49 FR 19240). EPA also proposed two changes which were not a part of the settlement agreement, involving: (1) Modification of NPDES permits to reflect NSPS, and (2) limitations for settleable solids during reclamation and precipitation.

The Agency received many comments in response to the proposal. For the sake of clarification, EPA has responded to all comments submitted even though several addressed portions of the October 13, 1982 final rule that were not amended in the proposal. A complete listing of the comments and EPA's responses is included in the public record in the EPA library. All of the comments relating to our proposal amendments are addressed in today's preamble.

**III. Modifications to Coal Mining Point  
Source Category Regulation****A. Definitions****(1) Section 434(11)(j)—New Source  
Definition**

Section 434(11)(j) of the regulations contains the definition of a new source coal mine. The first part of this definition (§ 434(11)(j)(1)(i)) defines a new source as any source the construction of which commenced after May 4, 1984, the date this regulation was proposed. The second part of this definition (§ 434(11)(j)(1)(ii)) provides that major alterations occurring at an existing mine may result in that facility being classified as a new source. The October 13, 1982 rule listed seven events to be considered in determining whether such a major alteration exists. During the settlement discussions, NCA pointed out that two of these events (the acquisition of additional land or mineral rights and significant capital investment in additional equipment or facilities) are

not indicative of major alterations at mining operations.

The Agency agrees and, pursuant to the Settlement Agreement, has revised the new source definition to delete these two events.

The definition also makes it clear that reining of an abandoned mine (defined at § 434(11)(j)(1)) triggers requirements applicable to new sources.

(2) Section 434.11(q)—Controlled Surface Mine Drainage.

EPA is today defining a new term: "controlled surface mine drainage."

After considering comments received during the public comment period and prior settlement discussions, the Agency has concluded that acid or ferruginous discharges that are pumped or siphoned from surface mining areas to treatment ponds can be controlled by the mine operator even during periods of heavy precipitation, and thus should not be eligible for the alternate rainfall limitations unless a precipitation event greater than the 10-year, 24-hour event occurs. Controlled surface mine drainage is any surface mine drainage that is pumped or siphoned from the active mining area.

(3) Section 434(11) (p)—Coal Refuse Disposal Piles

EPA is today defining another new term: "coal refuse disposal pile."

As a result of comments received during the settlement discussions and the public comment period, the Agency has determined that acid drainage from coal refuse piles should not be eligible for alternate rainfall limitations unless a sizeable rainfall event (the 1 yr. 24-hour storm event) occurs.

A coal refuse disposal pile is defined as "any coal refuse deposited on the earth and intended as permanent disposal or long-term storage (greater than 180 days) of such material, but does not include coal refuse deposited within the active mining area or coal refuse never removed from the active mining area."

*B. Coal Preparation Plant New Source Performance Standards*

As part of the Settlement Agreement, EPA agreed to propose revisions to NSPS for coal preparation plants. NCA contended that coal slurry ponds, which are part of the preparation plant water circuit, are not always able to achieve the zero discharge standard promulgated on October 13, 1982. In addition, coal waste impoundments, including some slurry ponds, must meet OSM requirements to drain water from the pond during design precipitation events. The revised standards would

allow a discharge of pollutants with limitations on iron, manganese, suspended solids and pH. EPA is also correcting the NSPS limitations for preparation plant associated areas so that, as in the rest of the regulation, limitations on manganese would apply only to acid or ferruginous mine drainage. The alternate rainfall limitations on settleable solids and pH continue to apply to discharges from coal preparation plants and associated areas (except for acid discharges from refuse piles).

*C. Alternate Precipitation Limitations*

The October 13, 1982 regulation provided alternate rainfall limitations for most discharges or increases in discharges caused by precipitation.

Comments raised during settlement discussions and the public comment period indicated that those alternate rainfall limitations could, with respect to acid or ferruginous mine drainage, allow the discharge of large amounts of iron and manganese, and are not necessary in certain cases because the mine operator could control the rate of discharge even during heavy precipitation events. In response to this concern, EPA has reevaluated the alternate rainfall limitations and has now amended them as discussed below. A summary of these amendments is contained in Appendix A to the regulation.

(1) Underground Mines—Not Commingled

As in the October 1982 regulation, discharges from underground mines that are not commingled with surface drainage are not eligible for alternate rainfall limitations.

(2) Underground Mines—Commingled

The October 13, 1982 regulation specified that where underground mine drainage is commingled with surface drainage, the alternate rainfall limitations would apply. During settlement discussions, the concern was raised that by commingling large amounts of acid underground mine drainage with small amounts of surface drainage, a facility would not have to meet limitations on TSS, iron and manganese during rainfall. The Agency believes that area runoff can be diverted from underground drainage by berms, diversion ditches, dikes and similar means, so that sudden influxes of precipitation do not immediately affect treatment facilities for underground mine drainage. In this context, state regulatory agencies and the Office of Surface Mining (OSM) under the Surface Mining Control and Reclamation Act

(SMCRA) have already imposed requirements for such diversion practices in applicable regulations. Implementation of such practices in compliance with SMCRA requirements should assure that commingling is kept to a minimum.

However, if an extremely large rainfall event occurs, it may be impossible to segregate the waste streams. Accordingly, the Agency has revised the regulations to provide that acid underground mine drainage be eligible for alternate limitations if commingled with surface area drainage, but only if a precipitation event greater than the 10-year, 24-hour event occurs.

(3) Controlled Surface Mine Drainage

Much mine drainage is pumped or siphoned from surface areas to treatment facilities. During most precipitation events, the mine operator can temporarily discontinue or otherwise limit pumped discharges from the pit and divert surface runoff and shallow ground water away from the pit and treatment pond by use of diversion dikes, ditches and similar means. Thus (except for steep slope and mountaintop removal situations described below), there is no need to have alternate precipitation limitations for acid or ferruginous discharges that are pumped or siphoned from the active area of a surface mine, except when a precipitation event greater than the 10-year, 24-hour precipitation event occurs. The Agency has revised its regulations to make this change.

(4) Non-Controlled Surface Mine Drainage

SMCRA permit-issuing authorities require, to the maximum extent feasible, the minimization of non-pumped discharges within an active mining area. However, the Agency recognizes that non-controlled discharges do occur even where steep slope or mountaintop removal operations are not involved. As a result of settlement discussions, EPA has revised its regulations to provide that non-controlled acid surface mine drainage, which includes surface runoff and gravity flow drainage other than steep slope drainage described below in section (6), must meet alternate precipitation limitations on total iron, settleable solids and pH for precipitation events less than or equal to the 2-year, 24-hour event. Limitations only on settleable solids and pH would apply for events greater than a 2-yr. 24-hour event but less than or equal to a 10-yr. 24-hour event. If a precipitation event greater than the 10-year, 24-hour event occurs, only pH limitations would apply.

Of course, for discharges not directly affected by precipitation, limitations on iron, manganese, pH, and TSS must be met.

#### (5) Coal Refuse Disposal Piles

Pennsylvania was concerned that acid or ferruginous drainage from coal refuse disposal piles is a serious problem and should not be controlled by the same rainfall limitations that generally apply to coal preparation plant associated areas. Pennsylvania argued that by using diversion and other techniques, the amount of runoff from coal refuse piles during most precipitation events can be controlled. EPA agrees and has revised its regulations to limit the alternate rainfall exemption for drainage from such piles to situations where precipitation greater than the 1-year, 24-hour event occurs. Hence, TSS, pH, iron and manganese limitations apply during all precipitation up to and including a 1-year, 24-hour event; pH and settleable solids limitations apply for precipitation events greater than a 1-year, 24-hour event up to a 10-year, 24-hour event; and pH limitations only apply during all precipitation greater than a 10-year, 24-hour event. "Coal refuse disposal pile" is defined in § 434.11(p).

#### (6) Steep Slope/Mountaintop Removal Mining Operations

The Agency is not changing the alternate rainfall limitations applicable to surface coal mines in steep slope areas (as defined in section 515(d)(4) of SMCRA) or for discharges from operations involving mountaintop removal (pursuant to section 515(c) of SMCRA). In such operations, the operator may be unable during precipitation events to contain or control the drainage from the active mining area so as to meet the effluent limitations on TSS, iron and manganese.

#### (7) Discharges From Preparation Plants and Their Associated Areas (Excluding Coal Refuse Piles)

The Agency is not changing the alternate rainfall limitations applicable to preparation plants and their associated areas, except that the alternate rainfall limitations for BAT and BPT will now apply to NSPS.

#### (8) Discharges From Reclamation Areas

The Agency is not changing the alternate rainfall limitations applicable to reclamation areas.

If mining operations combine drainage from one or more of these eight categories, the most stringent of the applicable alternate storm limitations should apply.

#### D. Settleable Solids Limitations

Settleable solids is a parameter limited in coal mining discharges both during precipitation events and during reclamation. EPA's original intent was to promulgate this limit as an "instantaneous maximum" not to be exceeded.

EPA's permit regulations (40 CFR 122.2) define the term "maximum daily discharge" as the highest allowable "daily discharge". This regulation further provides that, with respect to pollutants whose limitations are expressed in terms of concentration (as is the case for settleable solids), the "daily discharge" is to be calculated as "the average measurement of the pollutant over the day".

However, EPA developed the 0.5 ml/l limitation based on data for single grab samples with the intent of developing an instantaneous maximum standard. Accordingly, we believe this limit is more appropriately presented as a value never to be exceeded rather than as an average. This is particularly true because an instantaneous maximum is a much more practical standard to apply and enforce. Thus, EPA has amended the settleable solids limitation to be a maximum not to be exceeded at any time. This amendment is not a part of the settlement agreement discussed above.

#### E. Section 434.65—Modification of Permits for New Sources

The preamble to the October 13, 1982 regulation stated that coal-mines with permits incorporating previous new source performance standards could apply to have those permits modified according to 40 CFR 122.62(a). However, that section did not authorize the modification of permits to reflect subsequently promulgated new source performance standards. EPA generally believes that new sources should adhere to permit conditions based on the NSPS in existence when those permits were issued. However, in the case of coal mining operations that construct new treatment ponds, it seems equitable to allow those ponds to be constructed in accordance with the new performance-based new source performance standards, even if the permit contains design standards based on the previously promulgated new source performance standards. Coal mining is a transient operation, and NPDES permits often regulate discharges from treatment ponds which are constructed after permit issuance as mining progresses along a coal seam. Since the Agency has already found that the previous design standards are not always appropriate,

we have added § 434.65 to allow, at the discretion of the permit writer, the modification of coal mining NPDES permits to reflect the new NSPS. Where ponds have been constructed to meet the design criteria according to permit conditions incorporating previous NSPS, the discharge should continue to meet those requirements. However, a coal mine operator who intends to construct a new pond under the requirements of the same permit may apply for a permit modification to incorporate the new performance based rainfall limitations, rather than the design criteria. The reasons for the deletion of the design criteria are discussed fully in the preamble to the October 13, 1982 regulation.

Similarly, in light of NCA's concern that coal slurry ponds cannot always achieve zero discharge, § 434.65 would also allow permit modification for coal preparation plants subject to zero discharge requirements based on the NSPS promulgated in October 1982.

#### F. Post-Mining Discharges

EPA's coal mining effluent limitations apply until release of the reclamation bond required by SMCRA. Today's regulation will not change that requirement. However, in response to a concern expressed by one of the petitioners, the Agency wishes to reemphasize that post-bond release discharges are subject to regulation under the Clean Water Act. If a point source discharge occurs after bond release, then it must be regulated through an NPDES permit under sections 301(a) and 402 of the Clean Water Act. If the responsible party does not obtain a permit, then it is subject to enforcement action by EPA under section 309 of the Act and by citizens under section 505(a)(1) of the Act. Appropriate case-by-case effluent limitations would be established in the NPDES permit for such a discharge.

### IV. Response to Comments

#### A. Remining

Several commenters were concerned with effluent limitations applicable to discharges where new mining activities occur in previously mined areas. These commenters stated that the present technology-based requirements often serve as a deterrent to the remining of abandoned mine lands, since the operator must be responsible for treating an effluent which may be highly degraded due to earlier operations. Some commenters suggested that EPA should promulgate separate guidelines for the remining category.

The question of the appropriate effluent limitations for remining operations was not a subject of the May 4, 1984 proposed rulemaking, and the Agency will therefore not discuss the subject in detail in today's final rule. Generally, EPA effluent limitations guidelines and standards are applicable to point source discharges even if those discharges pre-dated the remining operation.

EPA is presently working with the Pennsylvania Department of Environmental Resources (PADER) and the Office of Surface Mining (OSM) to address the remining issue. In addition, some legislative proposals under consideration would modify the requirements of the CWA applicable to remining operations.

Another commenter suggested that remining operations should not be classified as new sources under the definition at § 434(11)(j). However, the commenter offered no reason of this assertion, and the Agency believes that the re-opening of an abandoned mine logically falls within the scope of the new source definition. Furthermore, the only difference between NSPS and BAT for coal mines is the iron limits, which are slightly more stringent for NSPS. It is true that classification as a new source subjects a facility to the requirements of the National Environmental Protection Act (NEPA) in areas where EPA is the permit-issuing authority. However, since most coal mines are located in states with approved NPDES programs, the NEPA requirements will not apply to the great majority of facilities.

#### *B. Instantaneous Maximum Limitations for TSS, Iron, and Manganese*

One commenter suggested that limits for TSS, Fe, and Mn should be instantaneous maximums instead of a 24-hour average.

The data base for the TSS, Fe, and Mn limitations are published in the 1976 Coal Mining Development Document (EPA 440/1-76/057a). Although the commenter is correct that the data base consists of a collection of both composite samples (14 sites) and grab samples (6 sites), it must be noted that the effluent guideline limitations for TSS, Fe, and Mn are based upon the composite samples.

In addition, an instantaneous maximum standard is more suited to parameters, such as settleable solids, that can be analyzed on-site. Enforcement of TSS, Fe, and Mn would not be made much easier by grab sampling because these parameters must in any case be sent off-site to laboratories for analyses.

#### *C. Instantaneous Maximum Limitations for Settleable Solids*

The settleable solids limitation, while not a subject of the above-mentioned settlement agreement, is being changed from a 24-hour average to an instantaneous maximum, for reasons discussed in Section III. D. of this preamble.

Some commenters supported the settleable solids limitation based on an instantaneous maximum because:

(1) The data base consisted of grab samples which support an instantaneous limit instead of an average.

(2) An average limit for precipitation events is unenforceable. Sampling over a 24-hour period during rain is impractical for both operator and inspector. Additionally, the opportunity for operators to take advantage of an average *measurement* limit is too great. Discharges greatly in excess of the 0.5 ml/l limit could be released at certain times and averaged with little or no discharge toward the end of a rainfall. The time and additional monitoring involved in preparing an enforceable case against an operator violating the 24-hour average would make enforcement of this standard an impossibility.

(3) Experience with sedimentation ponds shows the limits can be met.

Other commenters were opposed to the instantaneous maximum limit because:

(1) The data base consisted of grab samples randomly obtained, which did not necessarily include peak flows. Instantaneous maximum limits should be based on data obtained from peak sediment flows.

(2) An average limit is more reflective of changes in effluent quality.

(3) The limit cannot be measured either instantaneously or continuously.

(4) 0.5 ml/l is not high enough over the detection limit of 0.4 ml/l because of sampling and analytical error.

The Agency appreciates the comments submitted in favor of the 0.5 ml/l instantaneous maximum limit. EPA responds to opposing comments as follows:

(1) The Agency does not believe it necessary to obtain a data base consisting purely of samples taken during peak flow periods. As the commenter stated, peak sediment outflow occurs only 2.3% of the time during rainfall. It would be impractical for EPA to base a data collection program purely around an occurrence so infrequent and unpredictable, when basing it around rainfall events across the country is already sufficiently difficult. Furthermore, a sample program

must also take compliance monitoring into account. Because the timing of peak outflows cannot be determined in advance, sample collection for purposes of such monitoring cannot be planned around this 2.3% timeframe. Rather, samples will be taken randomly, just as was the case for the purposes of developing the limit.

However, because data was taken randomly during rainfall, one can assume that peak flow concentrations were included in the data base. In fact, EPA's Office of Analysis and Evaluation performed a statistical analysis (included in the Public Docket) showing that the probability of excluding peak period samples is extremely low.

(2) EPA believes that the instantaneous maximum limit is indicative of changes in effluent quality because of the very nature of the sampling collection program used to develop this limit. Samples were taken randomly at various times throughout rainfall events and then statistically analyzed to determine a representative standard.

(3) The commenter seems to misunderstand the concept behind measuring samples taken from wastewater effluents. Under the proposed regulation, settleable solids samples should be taken via grab sample and analyzed to determine its concentration. That settleable solids level is in compliance if it is less than or equal to the 0.5 ml/l standard, which was also developed on the basis of grab samples.

(4) The procedure used to develop the method detection limit (MDL) is a highly sophisticated statistical analysis that takes into account sampling and analytical differences. Furthermore, it has been EPA's experience that 0.5 ml/l is a highly visible level to read on an Imhoff cone. Pictures of Imhoff cone settleable solids levels (included in the public record) show this to be so. Also, permit authorities currently enforcing this standard have not reported a problem in reading to this level.

#### *D. Alternate Storm Limitations*

One commenter stated that EPA's choice of the 1-yr, 24-hr storm event for coal refuse piles appeared arbitrary and unsupported by the record, and furthermore is an insignificant amount of rainfall compared with average storm events in Appalachia.

The Agency does not agree that the 1-yr, 24-hr storm is an insignificant storm event. For example, the amount of rainfall equal to a 1-yr, 24-hr event in the Appalachian states (Pennsylvania, West Virginia, Virginia, Kentucky, and

Tennessee) averages 2.55 inches.<sup>1</sup> The average rainfall amount for the wettest month of the year (June) in this region is 4.06 inches.<sup>2</sup> When these two values are compared, one can see that a 1-yr, 24-hr rainfall event averages over half of the wettest month of the year, which shows that a 1-yr, 24-hr storm is indeed significant. Furthermore, requiring coal refuse piles to meet TSS and iron limits up until a 1-yr, 24-hr storm provides more environmental benefit than the previous regulation, which regulated only pH and settleable solids during any size storm.

Some commenters stated that the revised alternate storm limitations would complicate compliance and enforcement procedures.

By classifying the proposed alternate storm limits into eight specified categories, the amendment gives both the operators and the permit authority a clear understanding of which limits apply in particular situations. For example, for mining in predominantly mountainous regions, such as many eastern states, the alternate storm limits for steep slope and mountaintop removal areas would apply for all active surface mining activities. For surface mining in the midwestern states, where gently rolling slopes or flat terrain exists, alternate storm limits for controlled surface mine drainage apply to pit pumpage, while limits for noncontrolled surface mine drainage apply to general area runoff. Rarely will more than two sets of alternate storm limits apply to one mining operation.

Nevertheless, even if the new alternate storm limits do add some additional burden to either the operator or the permit authority, EPA believes that the added burden is outweighed by the increased environmental protection afforded by the revised limitations.

In addition, we note that the alternate storm limits are designed to afford relief only when necessary. Operators should endeavor to meet dry weather standards whenever possible.

One commenter suggested that although operators should be required to treat their acidic drainage, maintaining TSS limits until the 1-yr, 24-hr storm event does not provide sufficient relief for the operator.

The limitations on TSS during rainfall apply only to controlled surface mine drainage and coal refuse piles. In such cases, NCA confirmed that diversion practices should make it possible for

these areas to maintain TSS limits up until the applicable size storm events.

Some commenters said that the alternate storm limitations for preparation plants and their associated areas are too lax. Suggestions for changes were:

(A) Preparation plants and their associated areas should be divided into the following two groups:

(1) Catch ponds and settling basins should be treated like the "controlled surface mine drainage", and

(2) ponds receiving surface runoff should be treated like the non-controlled drainage.

(B) Preparation plants and their associated areas should be allowed no alternate limits until a sizable rainfall event has occurred (e.g., 1.5 inches of rainfall within any 24-hr period).

(C) Preparation plants should be grouped with underground mines because the water circuit can be separated from runoff using berms, dikes and diversion ditches, and associated areas should be treated like non-controlled drainage because the drainage is the same.

EPA does not agree with these suggested changes because some preparation plants and their associated areas do not separate their settling basins. Thus two different alternate storm limits for each system would not always be appropriate. Additionally, as discussed below, slurry ponds in preparation plants cannot always meet zero discharge, especially during rainfall. This is because slurry ponds, especially in certain mountainous areas, can be so large that total runoff diversion cannot always be achieved—even for storms smaller than a 10-yr, 24-hr event. Thus, to put preparation plants under either the underground mine or controlled surface mine drainage category would be inappropriate.

Another commenter stated that underground mines are susceptible to rainwater infiltration from precipitation and therefore should be allowed the alternate storm limitations, especially where pumping from underground mines exists.

While all mine drainages ultimately result from some sort of precipitation, EPA's data base has shown that on a national basis, discharges from underground mines do not drastically increase due to precipitation. Percolation is long term and does not cause immediate overflow in sedimentation ponds. Sedimentation ponds should be sized to handle increased pumping rates. However, if an underground mine is close enough to the surface so that a discharge is immediately affected by percolation due

to precipitation, the facility may apply for EPA's "fundamentally different factors" variance.

Two commenters said that the Agency had not considered operating conditions at Midwest surface mines, where pits are very large and collect large amounts of rainwater. These commenters stated that continuous pumping is often necessary to control flooding in a pit, and that alternate storm limitations should be afforded in these situations.

The National Coal Association, which represents coal companies from all over the United States, including the Midwest, agreed with EPA that pumping from pits, wherever located, could be controlled to the extent that alternate storm limitations would not be necessary. Runoff from around the pits can be diverted such that the only water coming into the pits is that which falls directly into it. (This should be standard practice where acidic water is formed in pits and alkaline runoff exists elsewhere.) This amount should not be unmanageable for an operation which has designed an effective treatment facility.

Another commenter suggested that controlled drainage which is diverted through (i.e., commingled with) existing surface drainage control structures should be allowed alternate storm limitations in order to meet costs and eliminate the necessity for building additional ponds.

As stated in the preamble to the May 4, 1984 proposal, the Agency believes that limitations for commingled discharges from different alternate storm limit categories should be those that are the most stringent. Any other approach would allow streams of greater environmental concern to be regulated less stringently as a result of commingling. In addition, the costs to meet the more stringent alternate storm limits are still less than the costs incurred by the previous requirement to construct and maintain a 10-year, 24-hour pond.

One commenter stated that iron and manganese should be limited for non-controlled surface drainage, coal refuse piles, and steep slope and mountaintop removal areas up until a 2-yr., 24-hour storm, since these effluents are similar and so is the required treatment.

Although treatment for discharges from the alternate storm limit categories is generally the same, the effluents may vary in pollutant loadings. In addition, significant variations exist in collection of the drainages for treatment and their susceptibility to run-off from precipitation. For example, mining operations in steep slope and

<sup>1</sup> Climatic Atlas of the U.S., U.S. Dept. of Commerce, 1979.

<sup>2</sup> Rainfall Frequency Atlas of the U.S., Technical Paper No. 40, U.S. Dept. of Commerce, 1961.

mountaintop removal areas have difficulty controlling run-off because of topography. Allowing alternate storm limits only upon the occurrence of a 2-yr., 24-hr. (or greater) storm would not provide sufficient relief to such operators. On the other hand, drainage from coal refuse piles can be diverted more easily and often contains higher pollutant loadings than drainage from other areas. Therefore, more stringent alternate storm limits are appropriate for refuse piles. Other surface runoff and gravity feed situations classified as "noncontrolled surface mine drainage" generally occur in gently rolling or flat terrain where runoff can be better controlled to a certain extent. Hence the enforcement of iron limits up until a 2-yr., 24-hr event.

Two commenters stated that EPA failed to clarify in the regulation that the 0.5 ml/l settleable solids limit is an instantaneous maximum not to be exceeded rather than an average. They also suggested that the regulation should include a discussion of the relationship between an instantaneous measurement and the language in 40 CFR 122.3.

EPA believes that the regulation is clear in specifying that the 0.5 ml/l settleable solids measurement is an instantaneous maximum value not to be exceeded: the 0.5 ml/l standard is included in the regulation under the new title of "maximum not to be exceeded" instead of the term "maximum for any one day" previously published in the October 1982 rule (see § 434.63). EPA believes that this change, together with the explanatory language in the May 4, 1984 Federal Register preamble, adequately clarifies the meaning of the standard.

Regarding the new standard's relationship to EPA's permit regulations at 40 CFR 122.3, this is also discussed in that same preamble and EPA does not believe it necessary to include it in the regulation.

However, as was pointed out by the commenters, the 0.5 ml/l standard appeared under two slightly different titles: (1) "Maximum at all times", and (2) "maximum not to be exceeded". For the sake of clarity, EPA is changing the title "maximum at all times" to "maximum not to be exceeded" wherever it appears in this rule.

One commenter said that limits for controlled surface mine drainage should apply to steep slope pits, since this drainage can also be controlled during precipitation events.

The Agency does not agree with this assertion. Runoff in steep slope areas is much more difficult to control than in areas where terrain is relatively flat. The flow of water to a pond is much

faster because of the steep slopes. Because of the increased and sudden influx of water to a pond, greater turbulence and mixing of pollutants occurs, making effluent limits more difficult to meet. In flat terrain, runoff from nondisturbed areas can be diverted from pits so that the rainwater collected in the pits is largely that which falls directly on top of it. Thus, the amounts of rainwater being pumped out of the pit can be more easily controlled.

In steep slope areas, pumping from the pits is still possible (although there is often gravity drainage instead), but controlling the runoff going into the pits from precipitation is much more difficult. This is because run-off has a higher velocity due to the steepness of the terrain, as well as a higher volume due to less permeation to the soil. Thus, alternate storm limits have been afforded this category.

Another commenter suggested that drainage from mountaintop, steep slope, non-steep slopes, preparation plant associated areas and refuse piles should all fall under the non-controlled surface mine drainage category because differences among discharges from these operations are not sufficient to warrant different limits.

EPA does not agree with this suggestion. Non-controlled surface mine drainage differs from steep slope and mountaintop removal areas because of the terrain involved. In steep slope areas, runoff is more difficult to control and thus is afforded alternate storm limits if needed when a discharge is caused by any size storm. Non-controlled runoff, i.e. surface runoff or gravity flows in flatter terrain, can be influenced to a greater extent. For this reason, iron discharges in such runoff are controlled up until and including a 2-yr., 24-hr event. Refuse piles not associated with the active mining area can be a greater pollutant problem than area runoff because rainwater comes in direct contact with spoil material. Thus the more stringent alternate limits for this category. These are the differences among the drainage categories which EPA believes warrant different alternate storm limitations.

Another commenter said that TSS should not be limited for coal refuse piles for any size precipitation event (even for one less than a 1-yr., 24-hr storm) because concentrations from a 1-yr., 24-hr storm pond designed to meet the 0.5 ml/l settleable solids standard would not meet the TSS limits according to the Sediment II Model (a computer model used to simulate pond performance).

It was not the Agency's intent to suggest that operators design their

ponds according to the applicable size storm. The operator should, through whatever means available (whether it be a model such as Sediment II or other design methods), design a pond to ensure that these limits will be met. Thus, if TSS cannot be met for a 1-yr., 24-hr storm with a 1-yr., 24-hr storm pond, (which is a very small pond), then a bigger pond must be built. In any event, the BAT effluent limitations are based on a 10-yr., 24-hr pond.

One commenter said that the new alternate storm limitations will have no greater effect on water quality improvement than those promulgated in the October rule. However, the commenter provided no data to support this statement.

The Agency believes that the generally more stringent alternate storm limitations for acid mine drainage will help ensure that metals and TSS are controlled to a greater extent and will decrease pollutant loadings in the receiving stream. We also note that the Clean Water Act requires use of the best available technology, regardless of the water quality of the receiving stream.

Another commenter requested that EPA issue guidance concerning time frames and monitoring for the alternate storm limitations.

EPA agrees with this suggestion and plans to hold workshops for permit writers on setting limits for the alternate storm categories and on enforcing these limits. Following these workshops, we will develop a final guidance package for issuance to the EPA regions and States.

One commenter said that the difference between a 1-yr., 24-hr storm and a 2-yr., 24-hr storm can be so minimal that one or the other should be used but not both.

The difference between a 1-yr., and 2-yr 24-hr storm is not necessarily insignificant. On the average across the U.S., there is 0.5" difference between these two size storms.<sup>3</sup> This, in large drainage areas, may result in enough runoff to raise the level of water in a pond one foot or more.<sup>4</sup>

One commenter suggested that rainfall amount should not be the only variable characterizing a precipitation event. Precipitation and runoff duration and intensities should be included also.

EPA believes that regulations with different criteria for different storm durations and intensities would make

<sup>3</sup> *Rainfall Frequency Atlas of the U.S.*, Technical Paper No. 40, Department of Commerce, 1961.

<sup>4</sup> January, 1985 conversation with an Emergency Warning Meteorologist at the National Weather Service.

enforcement and compliance monitoring an impossibility. Furthermore, runoff intensities are not only a function of the weather, but of the drainage area as well. Thus, runoff intensities should be considered when designing a treatment facility but not when developing effluent limitations.

Therefore, if the amount of rainfall for a 10-yr storm occurs over a shorter period than 24 hours (thus being more intense), the same alternate storm limits still apply.

#### E. Coal Refuse Disposal Piles

Two commenters stated that the alternate storm limits for coal refuse piles should apply to all refuse piles regardless of where they are located.

The specific alternate storm limits for coal refuse piles were developed because coal refuse piles not located on an active mining site (i.e. associated with a preparation plant) can cause more severe pollution problems. This is because refuse from a mining site (usually called spoil) consists mainly of unuseable materials such as rocks, clay, and overburden. Refuse associated with coal processing consists of unusable coal fines and other impurities that were separated from the coal during processing. The latter kind of refuse presents special problems of combustibility and toxicity when disposed of in a fill or pile. Overburden materials when removed do not generally present such problems.<sup>5</sup> Thus the pollution potential of the waste, rather than its location, dictated EPA's definition.

Two other commenters said that where coal refuse disposal is associated with a coal preparation plant that is independent of any permitted underground mine site, the disposal area would be considered a "preparation plant associated area" and be exempt from requirements.

Coal refuse disposal piles are defined in this rule as those created from refuse associated with a coal preparation plant. While the refuse pile may be located on a preparation plant associated area, regulations for the refuse pile are separate from those for the associated areas. The regulations for the refuse pile are listed in Appendix A under "Discharge from Coal Refuse Disposal Piles". Whether a preparation plant associated area is independent of an underground mine site is irrelevant.

One commenter stated that discharges of TSS from refuse piles cannot always be controlled during flash floods, and

that settleable solids instead of TSS should therefore be controlled for anything less than or equal a 1-yr, 24-hr storm.

As stated in the preamble to the May 4, 1984 rule, diversion and other runoff control techniques can be used to control runoff from coal refuse piles during most precipitation events. In fact, OSM's 1983 *Engineering and Design Manual for Refuse Disposal* suggests that runoff around a pile should be diverted to:

- Reduce size and cost of a sediment basin used to treat wastewater downstream of the pile,
- Prevent saturation.
- Maintain stability, and
- Reduce erosion of the pile.

EPA believes that with proper hydraulic control, treatment, and system design, the control of TSS for any storm less than a 1-yr, 24-hr event should be achievable.

Another commenter said that TSS limits as well as iron and manganese should be regulated up to a 10-yr, 24-hr event for coal refuse piles, because OSM requires that all drainage from refuse piles be controlled to properly and safely divert drainage from a 100-yr, 6-hr event.

The Agency agrees that drainage from around a refuse pile should be diverted. However, many refuse piles can collect large amounts of rainfall that fall directly on the pile. That rainfall, as it percolates through the pile, eventually enters a treatment facility via a drainage system built into the pile.

This water can pick up enough TSS and iron while in contact with the refuse to make alternate storm limits necessary for storms greater than a 1-yr, 24-hr event.

Also, one commenter suggested that the proposed definition of coal refuse pile would allow coal refuse to be deposited on an active strip bench where less stringent limits for steep slopes would apply.

This situation could in fact occur. However, EPA does not believe that it will occur very often for the following reasons:

- Preparation plants are not always located near enough to a mine site to make disposal of preparation plant waste on a mine site feasible.
- Preparation plants are not always located in steep slope areas.
- Regardless of the location of a refuse pile, SMCRA regulations require diversion on and around all refuse piles. Diversion is practiced both to reduce the amount of contaminated water to treat, and to maintain stability of the refuse pile.

#### F. Iron Limitations

Several commenters pointed out that with the more complex and stringent effluent limitations for acid or ferruginous mine drainage, the method of measuring pollutant levels becomes more important. For total iron analysis, the sample preservation requirement is to dissolve all forms of iron. The measurement therefore counts both inert (iron adjoined to the fine clay silt particles which do not react) and reactive iron (dissolved or ferrous). Thus, the commenters assert that the chances are that a sediment-bearing influent (even with a pH >6) would have a total iron concentration greater than or equal to 10 mg/l. The commenters suggested that the Agency distinguish between benign and environmentally harmful iron particles by modifying its definition of acid or ferruginous mine drainage to refer to dissolved rather than total iron. Alternatively, they suggested that the definition of "acid or ferruginous mine drainage" should be clarified to exclude raw alkaline drainage that has iron concentrations of greater than 10 mg/l.

EPA has found the existence of alkaline yet ferruginous coal mine wastewaters to be minimal in the United States.<sup>6</sup> Nevertheless, this type of discharge can occur, and the Agency is concerned that iron in alkaline discharges, even if contained in an undissolved form, can cause a yellowboy problem downstream if not controlled.<sup>7</sup>

Two commenters asked EPA to justify the more stringent total iron concentration limitations for new source coal mines.

As stated in the regulation published in the *Federal Register* on October 13, 1982, the more stringent NSPS iron limits reflect those promulgated January 12, 1979 (44 FR 2586). The limit of 3.0 mg/l 30-day average and 6.0 mg/l daily maximum reflect the new source data base for the regulation. The limits of 3.5 mg/l 30-day average and 7.0 mg/l daily maximum reflect the existing source data base developed for the BPT regulations (and later transferred to the BAT regulations) of April 1977 (FR 21380).

One commenter suggested that the same iron limits should be imposed on

<sup>5</sup> Telephone Survey of Eleven States and Region VIII Regarding Definition of "Acid or Ferruginous Mine Drainage" (memorandum from Allison Phillips to the File.)

<sup>7</sup> Yellowboy is defined in the October, 1982 Coal Mining Development Document as "salt of iron and sulfate formed by treating acid mine drainage (AMD) with lime; FeSO<sub>4</sub>."

<sup>5</sup> Draft Surface Coal Mining and Reclamation Operations, Permanent Regulatory Program; Coal Mine Waste, July 25, 1983.

alkaline as well as acid discharges because there is no real difference in treatment methods.

The treatment methods used to treat acid and alkaline wastewaters can be very different. Generally, alkaline wastewaters are treated by neutralization and settling, while acid wastewaters require neutralization, followed by aeration and settling. The difference in treatment methods reflects the difference in wastewater characteristics (alkaline wastewaters by definition are low in iron and high in pH) which created concern over environmental effects during precipitation. During precipitation, wastewater treatment may not be as effective due to heavy and sometimes uncontrollable loads of influent wastewaters. The alternate storm limits for acid wastewaters were in many cases made more stringent because of concern that iron from these discharges needed to be and could be controlled to a greater extent during rain.

Two commenters stated that in view of the new alternate storm limits for acid mine drainage, it was critical to determine the meaning of "treatment" in the definition of acid mine drainage as listed in the regulation. The concern is that if "treatment" includes sedimentation ponds, then all coal mine drainage could be classified as acid.

As defined in the regulations, the terms "treatment facility" and "treatment system" mean all structures which contain, convey, and as necessary, chemically or physically treat coal mine drainage and which remove pollutants limited by this regulation. This includes all pipes, channels, ponds and all other wastewater treatment equipment. Sedimentation ponds even for alkaline wastewaters are considered by EPA to be a treatment method because they physically remove suspended solids and metals. EPA has not found that alkaline wastewaters which are high in iron content occur frequently in the U.S. However, if the raw alkaline wastewater (as it exists prior to treatment, including sedimentation) has an iron content above 10 mg/l it should be classified as acidic or ferruginous and be regulated as such.

#### G. Definitions

One commenter said that the terms "active mining area", "coal preparation plant associated areas", and "coal refuse piles" appeared to overlap in scope, and that EPA should define a refuse pile as disposal above natural surface contours.

The term coal refuse disposal pile as used in this rule generally refers to

refuse associated with preparation plants. And while such a refuse pile might be located on a preparation plant associated area, wastewaters from each source can be segregated. Thus, there are different alternate storm limits for each. A coal refuse pile as defined in this regulation does not include refuse (usually spoil consisting of rock and clay disposed of during actual mining) of an active mining area. The definition of active mining area excludes preparation plants and their associated areas.

In addition, refuse piles may often be placed on old inclines from previously mined sites, which might not be considered "disposal above natural surface contours".

Another commenter stated that the definition of a coal refuse pile should be revised because the proposed definition would allow coal refuse to be deposited anywhere for 179 days without being subject to the more stringent alternate storm limits that apply to coal refuse piles.

EPA does not believe it likely that operators will dispose of refuse in temporary sites, because the planning, construction and costs for preparation plant waste disposal are far too expensive for operators to deposit wastes temporarily.

One commenter requested clarification on whether coal refuse piles included slurry impoundments as well as dry refuse.

Coal refuse disposal pile, as defined in EPA's regulation, is intended to cover dry refuse from a preparation plant. Slurry impoundments are considered part of a preparation plant's water circuit and thus are regulated under limitations for coal preparation plants.

With respect to the new source definition, one commenter expressed confusion about the proper date for classification of a new source, since NSPS have been proposed and promulgated several times.

In general, NSPS in the coal mining category apply to facilities constructed after the date the standards were proposed. See *Pennsylvania Environmental Coalition v. Costle*, 14 ERC 1545 (3d Cir. 1980). Therefore any facility constructed after September 19, 1977 (the date of the first NSPS proposal for coal mines) is a new source rather than an existing source and must meet the NSPS reflected in its permit. The appropriate NSPS for facilities constructed at various times are as follows:

(1) Constructed between September 19, 1977 and May 29, 1981: must meet the NSPS proposed on September 19, 1977 and promulgated on August 13, 1979.

(2) Constructed between May 29, 1981, and May 4, 1984: Must meet NSPS proposed on May 29, 1981 and promulgated on October 13, 1982.

(3) Constructed after May 4, 1984: Must meet NSPS promulgated in today's rule.

(4) Facility which should have been classified as a new source, but has never received an NPDES permit: Such a facility is subject to NSPS depending on the date of construction, as discussed above.

The same commenter requested clarification about the distinction between a new source coal mine and a "new discharger".

The NPDES regulations at § 122.2 provide that a "new discharger" is a facility that commenced discharging after August 13, 1979, is not a new source, and has never received a finally effective NPDES permit. Since any coal facility which commenced discharging after August 13, 1979 would be a new source (for the reasons discussed above) there are no "new discharger" coal mines.

Several commenters pointed out the discrepancy between the preamble and the regulation concerning the date for a new source coal mine determination.

We have corrected the regulation to reflect the preamble language. A new source coal mine for purposes of compliance with the NSPS promulgated in today's rule is a coal mine, the construction of which is commenced after the date of proposal which is May 4, 1984. As stated in the preamble, operations which were considered "new sources" under previous regulations do not lose that status. However, they may apply to have their permits modified to reflect the new NSPS.

One commenter asked whether the term "acid mine drainage" as defined in § 434.11 means the same as "acid or ferruginous mine drainage".

The commenter's assumption is correct. For the sake of clarity, wherever "acid mine drainage" was used in the proposal, "acid or ferruginous mine drainage" has been substituted in the final rule.

Another commenter requested that we clarify the term "dry weather flow".

Dry weather flow is the normal "base flow" coming from an area or treatment facility which is not immediately affected by runoff caused by rainfall. This flow is a result of groundwater interference or a build-up of rainwater over a long period of time. Alternate limitations apply when this dry weather flow increases due to a precipitation event and continues until the flow again returns to the dry weather rate, which is

generally no more than 24 hours after the rain stops.

#### H. Post-Mining Discharges

One commenter suggested that the Agency undertake a study of post-mining discharges to establish technology-based effluent guidelines for this category.

Post-mining regulations which apply prior to the SMCRA bond release are included in EPA's effluent limitations. EPA initiated a study on post-bond release discharges to ascertain the need for post-bond release regulations.<sup>8</sup> This study was not completed because there are not enough reclaimed mines that have obtained bond release under the current SMCRA regulations to conduct a water discharge characterization sampling program. What data EPA has reviewed does not indicate a problem warranting the promulgation of nationally applicable regulations.

These results, coupled with the fact that the release of bond by SMCRA authorities signifies their determination that post-mining pollution problems are abated and can be reasonably expected not to recur, indicate that a need for nationally applicable regulations for discharges after bond release currently does not exist. However, any point source discharge after bond release does require a permit, the limits for which will be established by the permit writer on a case-by-case basis.

Another commenter suggested that post-bond release discharges should not be required to have an NPDES permit if influent to an impoundment meets effluent or background water quality.

All point source dischargers are required by law to have an NPDES permit. Limits set forth in an NPDES permit in the absence of EPA effluent limitations must still be based on the Best Available Technology Economically Achievable (or, for conventional pollutants, best conventional control technology (BCT)), plus any limitations needed to meet state water quality standards. In the absence of nationally applicable effluent limitations guidelines and standards, these limitations are set according to the permit authority's Best Professional Judgment (BPJ). There are no exceptions in the Clean Water Act from these requirements based on the quality of the influent.

One commenter asked EPA to clarify that SMCRA regulatory authorities need not necessarily take EPA effluent limits

into account when deciding whether to release a SMCRA bond.

Permits issued under SMCRA are required to include the effluent limitations and standards promulgated by EPA. See 30 CFR 816.42, 817.42. OSM regulations preclude the release of the reclamation bond until all permit requirements are met. See 30 CFR 800.13, 800.40(c).

#### I. New Source Permit Modification

One commenter asked EPA to clarify that applying to have an NPDES permit modified according to new NSPS is at the option of the operator.

EPA believes that § 434.65 clearly indicates that application for a permit modification is optional because it states that "any coal mine or coal preparation . . . may . . . apply to have its NPDES permit. . .".

#### J. New Source Preparation Plants and Associated Areas

Several comments were received in favor of removal of the zero discharge requirement for new source preparation plants. The commenters cited the following reasons:

- Slurry ponds (being part of the preparation plant's water circuit) cannot always meet zero discharge, especially during rainfall.
- The zero discharge requirement would conflict with OSM requirements that coal waste impoundments, including some slurry ponds, be drained of water from the ponds during precipitation events.

- Total recycle cannot be achieved because the quality of the recycled water deteriorates and must be regularly discharged to prevent the build-up of solids which would cause scaling of pipes and plugging of nozzles.

EPA appreciates the support for this amendment. We note, however, that State permitting authorities have the authority to require more stringent limitations (including zero discharge) on a case-by-case basis if necessary to meet state water quality standards.

Several other commenters supported removal of the manganese limitation for new source coal preparation plant associated areas.

#### K. Major Alterations

One commenter requested that EPA clarify whether an alkaline discharge which later becomes acidic would classify the mining operation as a new source.

This occurrence is not specifically listed in factors A-D of the major alteration definition. However, the permitting authority has the discretion to decide if such a change in pollutant

loading warrants a new source determination.

Another commenter asked whether, if a major alteration has taken place, the entire mining operation becomes a new source or only the new stream created by the major alteration. Only the new outfall would be subject to NSPS. We note that the only difference between BAT and NSPS is a slightly more stringent NSPS for iron.

#### L. Commingling

One commenter asked which limitations would apply to commingled acid and alkaline drainage that combined become alkaline.

Where discharges are commingled, the most stringent limitations applicable to the drainages prior to commingling should apply.

Another commenter stated that the removal of alternate limitations for underground discharges commingled with surface mine discharges will cause the operator to suffer an unnecessary economic hardship because additional sediment ponds will be required.

State regulatory agencies and the Office of Surface Mining have imposed design requirements to divert sudden influxes of precipitation to facilities treating underground mine drainages. Because diversion practices are already required by SMCRA, EPA does not believe that the alternate storm limits, which could require additional diversion systems to avoid commingling, will add significant additional costs. Operators still may combine wastewaters, although relief would not be afforded until a 10-yr, 24-hr precipitation event occurs. However, good mining practice would not combine acidic wastewaters with less contaminated runoff.

#### V. Impacts

##### A. Alternate Precipitation Limitations

In 1977, BPT for coal mine discharges was promulgated which included an exemption from meeting effluent limitations during precipitation events, provided a 10-year, 24-hour pond was constructed. This pond design requirement was costed and the economic analysis determined it to be achievable. The same precipitation exemption was proposed for BAT and NSPS in January 1981, with the additional requirement that levels of settleable solids and pH be maintained. The October 13, 1982 promulgated version of these regulations, however, deleted the pond design requirement in exchange for the requirement that discharges due to precipitation must meet limits on pH and settleable solids.

<sup>8</sup> See "Investigation of Post-Mining Wastewater Discharges after SMCRA Bond Release" in Appendix C of the Final Development Document for Coal Mining.

These limitations were based on the performance of a 10-year, 24-hour pond, but it was noted that smaller ponds or alternative technologies could achieve the limitations. Because construction of a 10-yr, 24-hour pond had been required by previous regulations, EPA determined that costs to meet the promulgated alternate storm limits promulgated on October 13, 1982 were not significant. While today's amendments to the alternate storm limitations (for some discharge categories) are more stringent than the promulgated October 13, 1982 requirements, they are still less costly to achieve than the 10-year, 24-hour pond design requirement originally promulgated for BPT in 1977 and proposed for BAT in 1981.

Additional costs may be incurred for discharges from coal refuse disposal piles (from the preparation plant associated area only) because they may have to be segregated from other drainage sources. This may require dikes and diversion ditches around the pile. However, EPA does not consider the cost of diking to be significant when compared with the total capital and annual costs of treatment facilities for the preparation plant and associated area subcategory. Thus, EPA has determined that no significant economic impacts will result from this revision.

These new alternate limits will have beneficial impact on the environment because the total amount of pollutants allowed to be discharged will be reduced. The magnitude of this reduction will depend on the type of discharge and size of the precipitation event. The pollutants whose discharges will be reduced are TSS, iron and manganese.

#### *B. New Source Coal Preparation Plants*

For new source coal preparation plants, a cost savings will result by the elimination of the zero discharge requirement. Savings on incremental requirements and annual costs above BPT/BAT technology for a typical new source coal preparation facility are projected to be as high as \$1.77 million and \$419 thousand respectively (1985 dollars).

With regard to toxic pollutants, allowing a discharge from new source preparation plants will have a minimal adverse impact on the environment because the standards will result in removal of significant amounts of these pollutants from the raw wastewater. This discharge allowance will, however, result in an increase in mass loading of certain nonconventional and conventional pollutants discharged to the environment (primarily TSS, iron,

manganese, and pH). If this increased pollutant loading would result in localized water quality problems, then these can be handled on a case-by-case basis through the NPDES permitting process.

#### **VI. Executive Order 12291**

Executive Order 12291 requires EPA and other agencies to perform regulatory impact analyses on "major rules". Major rules are those that impose an annual cost to the economy of \$100 million or more, or meet other economic impact criteria. This proposed regulation is not a major rule because it would not result in such economic impacts. It therefore does not require a formal regulatory impact analysis. This proposed rulemaking satisfies the requirement of the Executive Order for a non-major rule.

This notice was submitted to the Office of Management and Budget for review as also required by Executive Order 12291.

#### **VII. Regulatory Flexibility Analysis**

Pub. L. 96-354 requires EPA to prepare an Initial Regulatory Flexibility analysis for all proposed regulations that have a significant impact on a substantial number of small entities. The analysis may be conducted in conjunction with or as part of other Agency analyses. EPA has determined that this regulation will not, for the reasons stated above, have a significant impact on a substantial number of small entities. Therefore, a formal Regulatory Flexibility analysis is not required.

#### **List of Subjects in 40 CFR Part 434**

Mines, Water pollution control, Waste treatment and disposal.

Dated: September 25, 1985.

Lee M. Thomas,  
*Administrator.*

Part 434 of Title 40 is revised to read as follows:

#### **PART 434—COAL MINING POINT SOURCE CATEGORY BPT, BAT, BCT LIMITATIONS AND NEW SOURCE PERFORMANCE STANDARDS**

##### **Subpart A—General Provisions**

- Sec.  
434.10 Applicability  
434.11 General Definitions

##### **Subpart B—Coal Preparation Plants and Coal Preparation Plant Associated Areas**

- 434.20 Applicability  
434.21 [Reserved]  
434.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available [BPT].

434.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable [BAT]

434.24 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology [BCT] [Reserved]

434.25 New Source Performance Standard [NSPS]

##### **Subpart C—Acid or Ferruginous Mine Drainage**

434.30 Applicability; description of the acid or ferruginous mine drainage subcategory.

434.31 [Reserved]

434.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

434.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

434.34 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

434.35 New Source Performance Standards (NSPS).

##### **Subpart D—Alkaline Mine Drainage**

434.40 Applicability; description of the alkaline mine drainage subcategory

434.41 [Reserved]

434.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

434.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

434.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

434.45 New Source Performance Standards (NSPS).

##### **Subpart E—Post-Mining Areas**

434.50 Applicability.

434.51 [Reserved]

434.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

434.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

- 434.54 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT) [Reserved]
- 434.55 New Source Performance Standards (NSPS).

#### Subpart F—Miscellaneous Provisions

- 434.60 Applicability
- 434.61 Commingling of Waste Streams
- 434.62 Alternate Effluent Limitations for pH
- 434.63 Effluent Limitations for Precipitation Events
- 434.64 Procedure and Method Detection Limit for Measurement of Settleable Solids
- 434.65 Modifications of NPDES Permits for New Sources
- Appendix A—Alternate Storm Limitations for Acid or Ferruginous Mine Drainage

Authority: 33 U.S.C. 1311 1314(b), (c), (e), and (g), 1316(b) and (c), 1317(b) and (c), and 1361.

#### Subpart A—General Provisions

##### § 434.10 Applicability

This part applies to discharges from any coal mine at which the extraction of coal is taking place or is planned to be undertaken and to coal preparation plants and associated areas.

##### § 434.11 General definitions.

(a) The term "acid or ferruginous mine drainage" means mine drainage which, before any treatment, either has a pH of less than 6.0 or a total iron concentration equal to or greater than 10 mg/l.

(b) The term "active mining area" means the area, on and beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas and post-mining areas.

(c) The term "alkaline, mine drainage" means mine drainage which, before any treatment, has a pH equal to or greater than 6.0 and total iron concentration of less than 10 mg/l.

(d) The term "bond release" means the time at which the appropriate regulatory authority returns a reclamation or performance bond based upon its determination that reclamation work (including, in the case of underground mines, mine sealing and abandonment procedures) has been satisfactorily completed.

(e) The term "coal preparation plant" means a facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then is loaded for transit to a consuming facility.

(f) The term "coal preparation plant associated areas" means the coal preparation plant yards, immediate access roads, coal refuse piles and coal storage piles and facilities.

(g) The term "coal preparation plant water circuit" means all pipes, channels, basins, tanks, and all other structures and equipment that convey, contain, treat, or process any water that is used in coal preparation processes within a coal preparation plant.

(h) The term "mine drainage" means any drainage, and any water pumped or siphoned, from an active mining area or a post-mining area.

(i) The abbreviation "ml/l" means milliliters per liter.

(j)(1) Notwithstanding any other provision of this Chapter, subject to paragraph (j)(2) of this section the term "new source coal mine" means a coal mine (excluding coal preparation plants and coal preparation plant associated areas) including an abandoned mine which is being re-mined.

(i) The construction of which is commenced after May 4, 1984; or

(ii) Which is determined by the EPA Regional Administrator to constitute a "major alteration". In making this determination, the Regional Administrator shall take into account whether one or more of the following events resulting in a new, altered or increased discharge of pollutants has occurred after May 4, 1984 in connection with the mine for which the NPDES permit is being considered:

- (A) Extraction of a coal seam not previously extracted by that mine;
- (B) Discharge into a drainage area not previously affected by wastewater discharge from the mine;
- (C) Extensive new surface disruption at the mining operation;
- (D) A construction of a new shaft, slope, or drift; and
- (E) Such other factors as the Regional Administrator deems relevant.

(2) No provision in this part shall be deemed to affect the classification as a new source of a facility which was classified as a new source coal mine under previous EPA regulations, but would not be classified as a new source under this section, as modified. Nor shall any provision in this part be deemed to affect the standards applicable to such facilities, except as provided in Section 434.65 of this Chapter.

(k) The term "post-mining area" means: (1) A reclamation area or (2) the underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

(l) The term "reclamation area" means the surface area of a coal mine which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced.

(m) The term "settleable solids" is that matter measured by the volumetric method specified in Section 434.64.

(n) The terms "1-year, 2-year, and 10-year, 24-hour precipitation events" means the maximum 24-hour precipitation event with a probable recurrence interval of once in one, two, and ten years respectively as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

(o) The terms "treatment facility" and "treatment system" mean all structures which contain, convey, and as necessary, chemically or physically treat coal mine drainage, coal preparation plant process wastewater, or drainage from coal preparation plant associated areas, which remove pollutants regulated by this Part from such waters. This includes all pipes, channels, ponds, basins, tanks and all other equipment serving such structures.

(p) The term "coal refuse disposal pile" means any coal refuse deposited on the earth and intended as permanent disposal or long-term storage (greater than 180 days) of such material, but does not include coal refuse deposited within the active mining area or coal refuse never removed from the active mining area.

(q) The term "controlled surface mine drainage" means any surface mine drainage that is pumped or siphoned from the active mining area.

(r) The term "abandoned mine" means a mine where mining operations have occurred in the past and

(1) The applicable reclamation bond or financial assurance has been released or forfeited or

(2) If no reclamation bond or other financial assurance has been posted, no mining operations have occurred for five years or more.

(s) The term "1-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

(t) The Term "2-year, 24-hour precipitation event" means the

maximum 24-hour precipitation event with a probable recurrence interval of once in two years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S., "May 1961, or equivalent regional or rainfall probability information developed therefrom.

**Subpart B—Coal Preparation Plants and Coal Preparation Plant Associated Areas**

**§ 434.20 Applicability**

The provisions of this subpart are applicable to discharges from coal preparation plants and coal preparation plant association areas, as indicated, including discharges which are pumped, siphoned, or drained from the coal preparation plant water circuit and coal storage, refuse storage, and ancillary areas related to the cleaning or beneficiation of coal of any rank including, but not limited to, bituminous, lignite, and anthracite.

**§ 434.21 [Reserved]**

**§ 434.22 Effluent limitation guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).**

(a) Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best practicable control technology currently available if discharges from such point sources normally exhibit a pH of less than 6.0 prior to treatment:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5
Manganese, total.....	4.0	2.0
TSS.....	70	35
pH.....	1	1

<sup>1</sup> Within the range of 6.0 to 9.0 at all times.

(b) Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17 and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal

preparation plant associated areas subject to the provisions of this subpart after application of the best practicable control technology currently available if discharges from such point sources normally exhibit a pH equal to or greater than 6.0 prior to treatment:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5
TSS.....	70	35
pH.....	1	1

<sup>1</sup> Within the range of 6.0 to 9.0 at all times.

**§ 434.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by application of the best available technology economically achievable (BAT).**

(a) Except as provided in 40 CFR 125.30–125.32, and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best available technology economically achievable if discharges from such point sources normally exhibit a pH of less than 6.0 prior to treatment:

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5
Manganese, total.....	4.0	2.0

(b) Except as provided in 40 CFR 125.30–125.32, and §§ 434.61 and 434.63 of this Part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best available technology economically achievable if discharges from such point sources normally exhibit a pH equal to or greater than 6.0 prior to treatment:

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5

**§ 434.24 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]**

**§ 434.25 New Source Performance Standards (NSPS).**

The following new source performance standards (NSPS) shall be achieved by any new source coal preparation plant and coal preparation plant associated areas, as indicated:

(a) Except as provided in 40 CFR 401.17 and §§ 434.61, 434.62 and 434.63 of this part, the following new source performance standards shall apply to discharges from new source coal preparation plants and new source coal preparation plant associated areas, if such discharges normally exhibit a pH of less than 6.0 prior to treatment:

**NSPS EFFLUENT LIMITATIONS (MG/L)**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	6.0	3.0
Manganese, total.....	4.0	2.0
TSS.....	70	35
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> 6.0–9.0 at all times.

(b) Except as provided in 40 CFR 401.17 and §§ 434.61, 434.62 and 434.63 of this Part, the following new source performance standards shall apply to discharges from new source coal preparation plants and new source coal preparation plant associated areas, if such discharges normally exhibit a pH equal to or greater than 6.0 prior to treatment:

**NSPS EFFLUENT LIMITATIONS (MG/L)**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	6.0	3.0
TSS.....	70	35
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> 6.0–9.0 at all times.

**Subpart C—Acid or Ferruginous Mine Drainage**

**§ 434.30 Applicability; description of the acid or ferruginous mine drainage subcategory.**

The provisions of this subpart are applicable to acid or ferruginous mine drainage from an active mining area resulting from the mining of coal of any rank including, but not limited to, bituminous, lignite, and anthracite.

**§ 434.31 [Reserved]**

**§ 434.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).**

Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61, 434.62 and 434.63 of this Part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Concentration in mg/l		
Iron, total.....	7.0	3.5
Manganese, total.....	4.0	2.0
TSS.....	70.0	35.0
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

**§ 434.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).**

Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and Sections 434.61, 434.62 and 434.63 of this Part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Concentration in mg/l		
Iron, total.....	7.0	3.5
Manganese, total.....	4.0	2.0

**§ 434.34 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]**

**§ 434.35 New Source Performance Standards (NSPS).**

Except as provided in 40 CFR 401.17, and Sections 434.61, 434.62 and 434.63 of this Part, the following new source performance standards shall be achieved for any discharge from a new source subject to this subpart:

**NSPS EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Concentration in mg/l		
Iron, total.....	6.0	3.0
Manganese, total.....	4.0	2.0
TSS.....	70.0	35.0
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

**Subpart D—Alkaline Mine Drainage**

**§ 434.40 Applicability; description of the alkaline mine drainage subcategory.**

The provisions of this subpart are applicable to alkaline mine drainage from an active mining area resulting from the mining of coal of any rank including, but not limited to, bituminous, lignite, and anthracite.

**§ 434.41 [Reserved]**

**§ 434.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).**

Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Concentration in mg/l		
Iron, total.....	7.0	3.5
TSS.....	70.0	35.0
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

**§ 434.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by application of the best available technology economically achievable (BAT).**

Except as provided in 40 CFR 125.30–125.32, and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Concentration in mg/l		
Iron, total.....	7.0	3.5

**§ 434.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]**

**§ 434.45 New Source Performance Standards (NSPS).**

Except as provided in 40 CFR 401.17 and §§ 434.61 and 434.63 of this part, the following new source performance standards shall be achieved for any discharge from a new source subject to this subpart:

**NSPS EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Concentration in mg/l		
Iron, total.....	6.0	3.0
TSS.....	70.0	35.0
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

**Subpart E—Post-Mining Areas**

**§ 434.50 Applicability. The provisions of this subpart are applicable to discharges from post-mining areas.**

**§ 434.51 [Reserved]**

**§ 434.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).**

(a) *Reclamation Areas.* The limitations in this subsection apply to discharges from reclamation areas until the performance bond issued to the

facility by the appropriate SMCRA authority has been released.

Except as provided in 40 CFR 125.30-125.32, 40 CFR 401.17 and section 434.61 and 434.63(d)(2) of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subsection after application of the best practicable control technology currently available:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Limitations
Settleable Solids.....	0.5 ml/l maximum not to be exceeded.
pH.....	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

(b) *Underground Mine Drainage.* The limitations in this subsection apply to discharges from the underground workings of underground mines until SMCRA bond release.

(1) Except as provided in 40 CFR 125.30-125.32, 40 CFR 401.17 and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants in acid or ferruginous mine drainage subject to the provisions of this subsection after application of the best practicable control technology currently available:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5
Manganese, total.....	4.0	2.0
TSS.....	70.0	35.0
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

(2) Except as provided in 40 CFR 125.30-125.32, 40 CFR 401.17, and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants in alkaline mine drainage subject to the provisions of this subsection after application of the best practicable control technology currently available:

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5
TSS.....	70.0	35.0

**BPT EFFLUENT LIMITATIONS—Continued**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

**§ 434.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by application of the best available technology economically achievable (BAT).**

(a) *Reclamation Areas.* The limitations of this subsection apply to discharges from reclamation areas until SMCRA bond release.

Except as provided in 40 CFR 125.30-125.32, and §§ 434.61 and 434.63(d)(2) of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subsection after application of the best available technology economically achievable:

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Limitations
Settleable solids.....	0.5 ml/l maximum not to be exceeded.

(b) *Underground Mine Drainage.* The limitations in this subsection apply to discharges from the underground workings of underground mines until SMCRA bond release.

(1) Except as provided in 40 CFR 125.30-125.32, and §§ 434.61, 434.62, and 434.63 of this part, the following limitations establish the concentration or quality of pollutants in acid or ferruginous mine drainage subject to the provisions of this subsection after application of the best available technology economically achievable:

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5
Manganese, total.....	4.0	2.0

(2) Except as provided in 40 CFR 125.30-125.32, and §§ 434.61, and 434.63 of this part, the following limitations establish the concentration or quality of pollutants in alkaline mine drainage subject to the provisions of this subsection after application of the best available technology economically achievable:

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	7.0	3.5

**§ 434.54 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]**

**§ 434.55 New Source Performance Standards (NSPS).**

The following new source performance standards shall apply to the post-mining areas of all new source coal mines:

(a) *Reclamation Areas.* The standards of this subsection apply to discharges from reclamation areas at new source coal mines until SMCRA bond release.

Except as provided in 40 CFR 401.17 and §§ 434.61 and 434.63 (d)(2) of this part, the following new source performance standards shall be achieved for a discharge subject to the provisions of this subsection:

**NSPS EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Limitations
Settleable Solids.....	0.5 ml/l maximum not to be exceeded.
pH.....	( <sup>1</sup> )

(<sup>1</sup>) Within the range 6.0 to 9.0 at all times.

(b) *Underground Mine Drainage.* The standards in this subsection apply to discharges from the underground workings of new source underground mines until bond release.

(1) Except as provided in 40 CFR 401.17 and §§ 434.61, 434.62, and 434.63 of this part, the following new source performance standards shall be achieved for the discharge of any acid or ferruginous mine drainage subject to this subsection:

**NSPS EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total.....	6.0	3.0
Manganese, total.....	4.0	2.0
TSS.....	70.0	35.0
pH.....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

(2) Except as provided in 40 CFR 401.17 §§ 434.61 and 434.63 of this part, the following new source performance

standards shall be achieved for the discharge of any alkaline mine drainage subject to this subsection:

**NSPS EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total	6.0	3.0
TSS	70.0	35.0
pH	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range 6.0 to 9.0 at all times.

**Subpart F—Miscellaneous Provisions**

**§ 434.60 Applicability.**

The provisions of this Subpart F apply to this Part 434 as specified in Subparts B, C, D and E.

**§ 434.61 Commingling of Waste Streams.**

Where waste streams from any facility covered by this part are combined for treatment or discharge with waste streams from another facility covered by this part, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component waste stream of the discharge.

**§ 434.62 Alternate effluent limitation for pH.**

Where the application of neutralization and sedimentation treatment technology results in inability to comply with the otherwise applicable manganese limitations, the permit issuer may allow the pH level in the final effluent to exceed 9.0 to a small extent in order that the manganese limitations can be achieved.

**§ 434.63 Effluent limitations for precipitation events.**

(a)(1) The alternate limitations specified in paragraph (a)(2) of this section apply with respect to:

(i) All discharges of alkaline mine drainage except discharges from underground workings of underground mines that are not commingled with other discharges eligible for these alternate limitations;

(ii) All discharges from steep slope areas, (as defined in section 515(d)(4) of the Surface Mining Control and Reclamation Act of 1977, as amended (SMCRA)), and from mountaintop removal operations (conducted pursuant to section 515(c) of SMCRA);

(iii) Discharges from coal preparation plants and preparation plant associated areas (excluding acid or ferruginous mine drainage from coal refuse disposal piles).

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

**EFFLUENT LIMITATIONS DURING PRECIPITATION**

Pollutant or pollutant property	Effluent limitations
Settleable solids	0.5 ml/l maximum not to be exceeded.
pH	6.0-9.0 at all times.

(b) The following alternate limitations apply with respect to acid or ferruginous drainage from coal refuse disposal piles:

Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 1-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

**EFFLUENT LIMITATIONS DURING PRECIPITATION**

Pollutant or pollutant property	Effluent limitations
Settleable solids	0.5 ml/l maximum not to be exceeded.
pH	6.0-9.0 at all times.

(c) The following alternate limitations apply with respect to acid or ferruginous mine drainage, except for discharges addressed in paragraphs (a) (mountaintop removal and steep slope areas), (d) (controlled surface mine discharges) and (f) (discharges from underground workings of underground mines) of this section:

(1) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period less than or equal to the 2-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

**EFFLUENT LIMITATIONS DURING PRECIPITATION**

Pollutant or pollutant property	Effluent limitations
Iron, total	7.0 mg/l maximum for any 1 day.
Settleable solids	0.5 ml/l maximum not to be exceeded.
pH	6.0-9.0 at all times.

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 2-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of

equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

**EFFLUENT LIMITATIONS DURING PRECIPITATION**

Pollutant or pollutant property	Effluent limitations
Settleable solids	0.5 ml/l maximum not to be exceeded.
pH	6.0-9.0 at all times.

(d)(1) The alternate limitations specified in paragraph (d)(2) of this section apply with respect to all discharges described in paragraphs (a), (b) and (c) of this section and to:

(i) Discharges of acid or ferruginous mine drainage from underground workings of underground mines which are commingled with other discharges eligible for these alternate limitations; and

(ii) Controlled acid or ferruginous surface mine discharges; and

(iii) Discharges from reclamation areas.

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

**EFFLUENT LIMITATIONS DURING PRECIPITATION**

Pollutant or pollutant property	Effluent limitations
pH	6.0-9.0 at all times.

(e) The operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event described in paragraphs (a), (b), (c), and (d) of this section.

(f) Discharges of mine drainage from underground workings of underground mines which are not commingled with discharges eligible for alternate limitations set forth in this section shall in no event be eligible for the alternate limitations set forth in this section.

**§ 434.64 Procedure and method detection limit for measurement of settleable solids.**

For the purposes of this part, the following procedure shall be used to determine settleable solids: Fill an Imhoff cone to the one-liter mark with a thoroughly mixed sample. Allow to settle undisturbed for 45 minutes. Gently stir along the inside surface of the cone with a stirring rod. Allow to settle undisturbed for 15 minutes longer. Record the volume of settled material in the cone as milliliters per liter. Where a separation of settleable and floating

materials occurs, do not include the floating material in the reading. Notwithstanding any provision of 40 CFR Part 136, the method detection limit for measuring settleable solids under this part shall be 0.4 ml/l.

**§ 434.65 Modification of NPDES Permits for New Sources.**

Any coal mine or coal preparation plant which was considered a new source under previous EPA regulations may, notwithstanding § 122.62 of this chapter, apply to have its NPDES permit modified to incorporate the revised new source performance standards.

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APPENDIX A  
ALTERNATE STORM LIMITATIONS  
FOR ACID OR FERRUGINOUS MINE DRAINAGE

	Precipitation Event			
	Dry Weather **	1-yr, 24-hr	2-yr, 24-hr	10-yr, 24-hr
1. Discharges from underground workings of underground mines - not commingled +	TSS, pH, Iron Manganese	(NO ALTERNATE LIMITATIONS)		
2. Discharges from underground workings of underground mines - commingled	TSS, pH, Iron, Manganese	pH		
3. Controlled surface mine drainage	TSS, pH, Iron, Manganese	pH		
4. Non-controlled surface mine drainage (except steep slope and mountaintop removal)	TSS, pH, Iron Manganese	SS*, pH, Iron	SS, pH	pH
5. Discharges from coal refuse disposal piles	TSS, pH, Iron, Manganese	SS, pH		
6. Discharges from steep slope and mountaintop removal areas +	TSS, pH, Iron Manganese	SS, pH		
7. Discharges from preparation plant associated areas (excluding coal refuse piles) and preparation plants +	TSS, pH, Iron Manganese	SS, pH		
8. Discharges from Reclamation Areas +	SS, pH			

\* SS = Settleable Solids

\*\* Discharge caused by precipitation

+ These categories do not differ from the Oct. 13, 1982 regulation.