

RULES AND REGULATIONS

Title 40—Protection of the Environment**CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY****SUBCHAPTER N—EFFLUENT GUIDELINES AND STANDARDS****PART 421—NONFERROUS METALS MANUFACTURING POINT SOURCE CATEGORY****Bauxite Refining, Primary Aluminum Smelting, and Secondary Aluminum Smelting Subcategories**

On November 30, 1973, notice was published in the *FEDERAL REGISTER* (38 FR 33170), that the Environmental Protection Agency (EPA or Agency) was proposing effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources within the bauxite refining subcategory, the primary aluminum smelting subcategory, and the secondary aluminum smelting subcategory of the nonferrous metals manufacturing category of point sources.

The purpose of this notice is to establish final effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources in the nonferrous metals manufacturing category of point sources, by amending 40 CFR Ch. I. Subchapter N, to add a new Part 421. This final rulemaking is promulgated pursuant to sections 301, 304(b) and (c), 306(b) and (c) and 307(c) of the Federal Water Pollution Control Act, as amended, (the Act); 33 U.S.C. 1251, 1311, 1314(b) and (c), 1316 (b) and (c) and 1317(c); 86 Stat. 816 et seq.; Pub. L. 92-500. Regulations regarding cooling water intake structures for all categories of point sources under section 316(b) of the Act will be promulgated in 40 CFR Part 402.

In addition, the EPA is simultaneously proposing a separate provision which appears in the proposed rules section at 39 FR 12829 of this issue, stating the application of the limitations and standards set forth below to users of publicly owned treatment works which are subject to pretreatment standards under section 307(b) of the Act. The basis of that proposed regulation is set forth in the associated notice of proposed rulemaking.

The legal basis, methodology and factual conclusions which support promulgation of this regulation were set forth in substantial detail in the notice of public review procedures published August 6, 1973 (38 FR 21202) and in the notice of proposed rulemaking for the bauxite refining subcategory, the primary aluminum smelting subcategory, and the secondary aluminum smelting subcategory. In addition, the regulations as proposed were supported by four other documents: (1) The document entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Bauxite Refining Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category" (October 1973), (2) the document entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the

Primary Aluminum Smelting Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category" (October 1973), (3) the document entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Secondary Aluminum Smelting Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category" (October 1973), and (4) the document entitled "Economic Analysis of Proposed Effluent Guidelines, The Nonferrous Metals Industry (Aluminum)" (September 1973). All of these documents were made available to the public and circulated to interested persons at approximately the time of publication of the notice of proposed rulemaking.

Interested persons were invited to participate in the rulemaking by submitting written comments within 30 days from the date of publication. Prior public participation in the form of solicited comments and responses from the States, Federal agencies, and other interested parties were described in the preamble to the proposed regulation. The EPA has considered carefully all of the comments received and a discussion of these comments with the Agency's response thereto follows.

(a) *Summary of major comments.* The following responded to the request for written comments which was contained in the preamble to the proposed regulation: Consolidated Aluminum Corporation, Reynolds Aluminum, Ormet Corporation, Aluminum Company of America, Kaiser Aluminum and Chemicals Corporation, American Metals Climax, Inc., U.S. Department of Commerce, ESWOIAIC, U.S. Department of the Interior, County Sanitation Districts of Los Angeles County, Aluminum Recycling Association, Colorado Department of Public Health, U.S. Water Resources Council, and U.S. Department of Health, Education and Welfare. Each of the comments received was carefully reviewed and analyzed. The following is a summary of the significant comments and the Agency's response to these comments:

(1) A comment was submitted by Kaiser Aluminum Company raising a question concerning the relationship of the proposed guidelines for bauxite refining to the provisions of a consent decree between EPA and the Company dated October 13, 1972. EPA met with representatives of the Company and reviewed the provisions of the consent decree, as well as additional technical and economic information concerning the treatment for the Kaiser plants.

EPA is generally in agreement that the total impoundment technology that is "best practicable" for the bauxite refining subcategory is not consistent with the sand bed filtration system being installed by the Company pursuant to the consent decree. Technical information indicates that zero discharge of all process waste water pollutants may not be achievable with the sand bed filtration system. How-

ever, the possibility of some discharge of recycled liquids and associated wastes was contemplated in the consent decree, which includes a complete procedure for submission and approval of effluent limits for these waste streams.

Consent decrees and permits negotiated in good faith prior to the passage of the Act and issuance of effluent guidelines continue in effect without regard to the limitations in the guidelines, except where exceptional circumstances have been presented to warrant amendment of a decree or permit. It is the opinion of EPA that no exceptional circumstances have been presented to warrant amendment of this decree through the effluent guidelines process. It has been determined therefore that the guidelines and standards will not apply to the Kaiser plants for the discharges covered by the consent decree.

Since the provisions of the consent decree will govern the establishment of limitations of the effluent discharges from these two plants, it is the determination of the Agency that there is no need to modify the industry-wide guidelines to include effluent limitations data regarding these two plants.

(2) One commenter suggested that the allowable discharges resulting from excess rainfall as provided under §§ 421.12, 421.13 and 421.14 of the proposed guidelines for the bauxite refining subcategory should be limited solely to supernatant water so that the discharge of suspended red mud and other pollutants will be minimal.

The three sections presented in the proposed regulations for this subcategory should have stated that the allowable discharge would be the overflow from the impoundment facility. The proposed regulations will be changed to read "... * there may be discharged from the overflow of a process waste water impoundment * * *."

(3) Two commenters considered the storm water discharge provisions of §§ 421.12, 421.13 and 421.14 of the proposed regulations for the bauxite refining subcategory to be unreasonable and not amenable to implementation and management.

The three sections presented in the proposed regulations were not intended to allow the discharge of excess rainfall at the end of a calendar month. Discharge can occur from the impoundment area at any time during the calendar month, but records of process waste water effluent volumes, discharge volumes, and net precipitation data kept during the calendar month must justify the total excess rain water discharge at the end of that month. Thus, the management and implementation of such an allowable discharge program is not unreasonable.

(4) One commenter stated that storm water runoff should not be considered as a process waste water source, as listed in the proposed effluent guidelines for the bauxite refining subcategory.

As defined by § 421.11(b), as proposed, "process waste water" means any water which, during the refining process, comes

into direct contact with any raw material, intermediate by-product, or product used in or resulting from the manufacture of alumina from bauxite. That segment of storm water runoff which cannot be segregated from process waste waters becomes, by combination therewith, a process waste water. Obviously, the remaining storm water runoff, because it does not meet the definition of § 421.11(b), is not considered as a process waste water source. Maximization of storm water runoff segregation will minimize the total process waste water volume.

(5) A comment was received that the entire concept of evaporators to meet the proposed effluent limitations for the bauxite refining subcategory should be deleted. Evaporators are not cost effective, consume precious energy, and produce solid wastes.

Evaporators are currently being used by several domestic bauxite refineries for maintaining acceptable salt levels in spent liquor returning to the digesters from the precipitators. The use of salting-out evaporators is specifically for process purposes. The guidelines as proposed could require evaporators to maintain salt levels low enough to permit reuse of process water by evaporation of purge streams.

Chloride salts are formed from chloride values introduced at the chlor-alkali facility producing the caustic; sulfate salts are formed from sulfur added to bauxite for zinc precipitation. Methods to minimize chloride introduction and other methods for zinc precipitation should be available shortly. These changes should preclude or minimize the use of salting-out evaporators for pollution control.

(6) One commenter felt that the effluent limitations for the bauxite refining subcategory should allow the discharge of barometric condenser water after reducing the pH to 9, if necessary.

On a volumetric basis, barometric condenser water is the largest process waste water source at a bauxite refinery. River or pond water at a neutral pH is introduced into the condensers. If either no demisting devices are used or they are used but are not properly operated, caustic values will be entrained into the condenser water. These entrained caustic values alter both the pH and the alkalinity content of the receiving water. Reducing the pH of this water back to within the 6.0 to 9.0 range will precipitate high values of total suspended solids which itself is a process waste water pollutant.

(7) One commenter suggested that cyanide not be selected as a significant pollutant for the primary aluminum smelting subcategory.

Cyanide was found in the effluents from some primary aluminum smelters in low concentrations. Treatment technology for effective cyanide removal is currently available at reasonable cost. However, further data have shown that typical concentrations of cyanide found in these same effluents are too small in magnitude to be significantly reduced by current

technology. Therefore, cyanide will be deleted from the list of significant pollutants for this subcategory.

(8) Two commenters stated that dumping or land filling sludges produced as a result of some liquid effluent treatment processes may not be an adequate solution if these sludges contain soluble solid fluorides, such as CaF_2 or cryolite.

The removal of metals from waste water by chemical precipitation methods produces a sludge which requires adequate precautions to prevent contamination of subsurface waters. It is expected that the guidelines will focus attention on the problem of solids disposal so that satisfactory solutions will be found. Chemical precipitation with solids separation is accepted as the best practicable control technology for this industry. Soluble metal salts produced by concentration or recovery techniques such as evaporation pose a greater environmental hazard than the metallic hydroxides resulting from chemical treatment. An environmentally acceptable solution to this problem, which is not peculiar to this industry, is expected prior to the deadline for application of the best available technology economically achievable in 1983.

(9) One responder to the FEDERAL REGISTER request for comments felt that the proposed single day maximum effluent limitations guidelines for the primary aluminum subcategory were improperly developed. The commenter argued that limits are arbitrary and do not allow for process upsets, runoff effects, and operational flexibility. It was also contended that the limitations are not supported by field data at even exemplary plants.

Data from nine plants indicate that the ratio of maximum discharge to average discharge for fluoride, suspended solids, and oil and grease is less than 2. The effluent limitations conservatively establish the ratio of single day maximum to 30-day maximum at 2. EPA believes this ratio allows flexibility to account for conditions such as process upsets. Runoff is not considered a process waste water.

(10) Two commenters felt that the proposed new source performance standards for the primary aluminum smelting subcategory do not take into account either the need for secondary scrubbing to meet stringent air pollution standards or the climatic conditions existing in certain localities which would be a limiting factor to total impoundment.

New technologies which are being used or are planned for use at new primary aluminum smelters include dry primary and secondary scrubbing; air-cooled, solid state rectifiers; and nonwater molten metal degassing. Low fluoride concentrations in cell rooms can be maintained by the installation of highly efficient hooding, by operating with computer head-off and crust-breaking techniques, and by employing well-designed damper and draft systems. These new technologies have indicated, by means of current atmospheric emission test data, that the application of secondary scrubbing will not be necessary for new sources to meet stringent air pollution regula-

tions. Also, the new technologies will preclude the use of water polluting processes and techniques, and therefore, because of limited water use, total impoundment will not be necessary.

(11) One comment received was that the proposed new source performance standards for the primary aluminum smelting subcategory provide tighter restrictions on fluorides and suspended solids than are required by the 1983 proposed best available technology economically achievable guidelines. It was argued that the new source performance standards should be the same as the proposed 1983 guidelines.

As stated on page 134 of the Development Document for the primary aluminum smelting subcategory, the new source performance standards are lower for fluoride and suspended solids than those applicable to existing sources by 1983 because of the availability to new sources of dry scrubbing for potline air. Basically, a new source has complete freedom to select unit processes which minimize the use of water.

(12) Another commenter stated that there is no current trend toward dry scrubbing at existing primary aluminum facilities.

The opposite of this statement is true. Numerous primary aluminum smelters, of all three types of cells, have reported the use or probable use of dry scrubbing systems.

(13) One commenter felt that the use of air cooling or totally consumptive cooling of cast primary aluminum would not be feasible when direct chill or horizontal direct chill casting is practiced. Zero discharge of process pollutants from the cast house would be an unrealistic goal.

Zero discharge from the cast house is not required by the guidelines. Some plants may choose to pursue zero discharge of cast house water as the means to achieve no discharge of process waste water pollutants. The guidelines do not require process modifications that would be technically impractical.

(14) One commenter requested clarification as to the applicability of the primary aluminum smelting subcategory effluent limitations. This commenter felt that additional discharges of process pollutants should be allowed for such operations as cryolite recovery from used potlining, hydrofluoric acid production, and the production of on-site power, when such operations are conducted at the primary aluminum smelter solely for the purpose of producing an end product to be used in the manufacture of aluminum at the same plant. Also, since some smelters cast other than primary metal produced directly from alumina, an additional pollution allowance was suggested, based upon actual casting rate.

The effluent limitations apply to process waste water streams as defined in the proposed regulations. Ancillary operations not defined in § 421.20 are not covered by these guidelines.

(15) A comment was received stating that the effluent limitations for the secondary aluminum smelting subcategory

RULES AND REGULATIONS

should allow a discharge of a bleed stream from the metal cooling water recirculation system. The commenter supported his position by referring to a statement made in the Development Document for this subcategory.

Alternatives, other than the discharge of a salt bleed stream, are available. If a bleed stream exists, this effluent can be used to flash cool hot ingots. During flashing, the contained salts will be deposited as a very thin layer on the ingot surface and will not alter the quality of this product. This procedure is practiced by several existing facilities within this subcategory. Another alternative is air cooling. Evaporation is a third, and least likely, alternative. The statement made in the Development Document for this subcategory will be corrected.

(16) One responding party suggested that COD be deleted from the proposed list of significant pollutants for the secondary aluminum smelting subcategory.

Sufficient COD to require limitation was found in the effluents from chlorine fume scrubbing operations. Data indicate that treatment reduces COD to the levels proposed in the regulations.

(17) Several commenters questioned the designation of the Derham, Alcoa, and Teller processes as "currently available" for the secondary aluminum smelting subcategory.

All three of these processes are demonstrated to varying degrees. Any one of these systems could, if necessary, be employed by the industry to meet the effluent limitations based on the best practicable control technology currently available.

(18) One commenter felt that evaporation of the bleeds from recirculation systems to achieve compliance with the "no discharge" secondary aluminum smelting effluent guideline is neither a cost nor an energy effective solution.

Evaporation of the bleeds from recirculation systems to achieve no discharge of process waste water pollutants is not required. It is one method to achieve the effluent limitations. The guidelines are developed to allow maximum flexibility to the smelter. Impoundment also may be feasible for some smelters.

(19) One secondary aluminum smelting subcategory comment was received that stated that the variability of aluminum scrap used, type of smelter operations (differing furnaces), products produced (from specific alloys to nonalloys), and plant sizes make the use of discharge limits based on the waste of magnesium produced in wet scrubbing operations for chlorine demagging impossible to enforce.

Section 308 of the Act authorizes the Administrator to require dischargers to maintain records for the purpose of determining compliance with the effluent limitations. Data collected during the study to develop the guidelines indicate that information on recovered magnesium is readily available and routinely recorded by most plants in this subcategory.

(20) Two commenters stated that the cost figures and the economic impact conclusions reported in the proposed rules for the secondary aluminum smelting subcategory cannot be confirmed.

The cost and economic impact conclusions were based on the best data available at the time of this study. Additional data were solicited from the industry in the preamble to the proposed regulations.

(21) Two commenters felt that the intention of the proposed guidelines to prohibit the discharge of only specified pollutants without regard to the discharge of other unspecified pollutants is not clear.

The pollutants subject to effluent limitations are those contained in the process waste waters which were identified as "significant." The significant pollutants and the corresponding effluent limitations appear in the appropriate sections of the regulation. If a pollutant does not appear with a corresponding effluent limitation, the pollutant is not subject to control by the regulations.

(22) Several commenters stated that the data establishing effluent limitations are in some cases on a gross basis and in others on a net basis.

The resultant limitations are presented on an absolute basis. The use of such limitations is appropriate since the concentration of a pollutant remaining after a given treatment is relatively independent of the concentration in the waste or the source of the pollutant.

(b) *Revision of the proposed regulation prior to promulgation.* As a result of public comments and continuing review and evaluation of the proposed regulation by the EPA, the following significant changes have been made in the regulation:

(1) Paragraph (b) of §§ 421.12, 421.13, and 421.14 has been modified by adding "the overflow of" to "there may be discharged from such impoundment." The modified phrase "there may be discharged from the overflow of a process waste water impoundment" now stipulates that the allowable discharge resulting from excess rainfall is limited solely to supernatant water.

(2) Cyanide as well as oil and grease have been deleted from the proposed list of significant pollutants for the primary aluminum smelting subcategory. Oil and grease has been deleted from the proposed list of significant pollutants for the secondary aluminum smelting subcategory. These deletions were made since data have shown that typical concentrations of both cyanide and oil and grease found in the effluents of these subcategories are too small in magnitude to be significantly reduced by current technology.

(3) Section 304(b)(1)(B) of the Act provides for "guidelines" to implement the uniform national standards of section 301(b)(1)(A). Thus Congress recognized that some flexibility was necessary in order to take into account the complexity of the industrial world with

respect to the practicability of pollution control technology. In conformity with the Congressional intent and in recognition of the possible failure of these regulations to account for all factors bearing on the practicability of control technology, it was concluded that some provision was needed to authorize flexibility in the strict application of the limitations contained in the regulation where required by special circumstances applicable to individual dischargers. Accordingly, a provision allowing flexibility in the application of the limitations representing best practicable control technology currently available has been added to each subpart, to account for special circumstances that may not have been adequately accounted for when these regulations were developed.

(c) *Economic impact.* The effluent limitation guidelines now being promulgated are expected to have only minimal effects on the aluminum industry. In the primary sector, no price increases are expected and no plant closings or employment impacts are anticipated in 1977 or 1983. Plant closings in the secondary sector are expected only in 1983 and only in the case of wet dross milling operations. These plants make up about 1 percent of total aluminum production capacity and represent about 160 employees. In the remaining secondary operations no closings are anticipated and price increases are expected to be less than 1 percent.

For seven of the industry's nine bauxite refining plants, the majority of the costs for meeting the 1977 guidelines has already been incurred. Any additional costs are expected to range from zero to less than 1.6 percent of the sale value of alumina (0.2 percent of the sale value of aluminum). For the remaining two plants, both technical and economic analysis have indicated that a requirement of no discharge of process waste water pollutants may not be practicable. At these two plants, the 1977 requirements of no discharge of process waste water pollutants is to be applied to only those process waste water streams not covered by a consent decree, which was agreed upon for these two plants in October of 1972. The consent decree contemplates the possible need for a discharge and includes a complete procedure for establishing effluent limitations for these plants.

The 1983 requirement for these plants is still no discharge of process waste water pollutants; however, the additional time is expected to be sufficient to allow the technical and economic problems associated with no discharge to be solved.

(d) *Cost-benefit analysis.* The detrimental effects of the constituents of waste waters now discharged by point sources within the aluminum segment of the nonferrous metals manufacturing point source category are discussed in section VI of each respective report entitled "Development Document for Effluent Limitations Guidelines for the Bauxite Refining Subcategory of the Alumini-

num Segment of the Nonferrous Metals Manufacturing Point Source Category," "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Primary Aluminum Smelting Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category," and "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Secondary Aluminum Smelting Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category." It is not feasible to quantify in economic terms, particularly on a national basis, the costs resulting from the discharge of these pollutants to our Nation's waterways. Nevertheless, as indicated in section VI, the pollutants discharged have substantial and damaging impacts on the quality of water and therefore on its capacity to support healthy populations of wildlife, fish and other aquatic wildlife and on its suitability for industrial, recreational and drinking water supply uses.

The total cost of implementing the effluent limitations guidelines includes the direct capital and operating costs of the pollution control technology employed to achieve compliance and the indirect economic and environmental costs identified in section VIII and in the supplementary report entitled "Economic Analysis of Proposed Effluent Guidelines, the NONFERROUS METALS INDUSTRY (Aluminum)" (September 1973). Implementing the effluent limitations guidelines will substantially reduce the environmental harm which would otherwise be attributable to the continued discharge of polluted waste waters from existing and newly constructed plants in the nonferrous metals industry. The Agency believes that the benefits of thus reducing the pollutants discharged justify the associated costs which, though substantial in absolute terms, represent a relatively small percentage of the total capital investment in the industry.

(e) *Solid waste control.* Solid waste control must be considered. The water-borne wastes from the nonferrous metals industry may contain a considerable volume of metals in various forms as a part of the suspended solids pollutant. Best practicable control technology and best available control technology as they are known today, require disposal of the pollutants removed from waste waters in this industry in the form of solid wastes and liquid concentrates. In some cases these are nonhazardous substances requiring only minimal custodial care. However, some constituents may be hazardous and may require special consideration. In order to ensure long term protection of the environment from these hazardous or harmful constituents, special consideration of disposal sites must be made. All landfill sites where such hazardous wastes are disposed should be selected so as to prevent horizontal and vertical migration of these contaminants to ground or surface waters. In cases where geologic conditions

may not reasonably ensure this, adequate precautions (e.g., impervious liners) should be taken to ensure long term protection to the environment from hazardous materials. Where appropriate the location of solid hazardous materials disposal sites should be permanently recorded in the appropriate office of the legal jurisdiction in which the site is located.

(f) Publication of information on processes, procedures, or operating methods which result in the elimination or reduction of the discharge of pollutants.

In conformance with the requirements of section 304(c) of the Act, three manuals entitled, "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Bauxite Refining Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category," "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Primary Aluminum Smelting Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category," and "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Secondary Aluminum Smelting Subcategory of the Aluminum Segment of the Nonferrous Metals Manufacturing Point Source Category," are being published and will be available in approximately ten weeks.

(g) *Final rulemaking.* In consideration of the foregoing, 40 CFR Ch. I, Subchapter N is hereby amended by adding a new Part 421, Nonferrous Metals Manufacturing Point Source Category, to read as set forth below. This final regulation is promulgated as set forth below and shall be effective June 3, 1974.

Dated: March 26, 1974.

JOHN QUARLES,
Acting Administrator.

Subpart A—Bauxite Refining Subcategory

See—

- 421.10 Applicability; description of the bauxite refining subcategory.
- 421.11 Specialized definitions.
- 421.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 421.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 421.14 [Reserved.]
- 421.15 Standards of performance for new sources.
- 421.16 Pretreatment standards for new sources.

Subpart B—Primary Aluminum Smelting Subcategory

- 421.20 Applicability; description of the primary aluminum smelting subcategory.
- 421.21 Specialized definitions.
- 421.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practical control technology currently available.

Sec.

- 421.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
 - 421.24 [Reserved.]
 - 421.25 Standards of performance for new sources.
 - 421.26 Pretreatment standards for new sources.
- Subpart C—Secondary Aluminum Smelting Subcategory**
- 421.30 Applicability; description of the secondary aluminum smelting subcategory.
 - 421.31 Specialized definitions.
 - 421.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
 - 421.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
 - 421.34 [Reserved.]
 - 421.35 Standards of performance for new sources.
 - 421.36 Pretreatment standards for new sources.

AUTHORITY. Secs. 301, 304(b) and (c), 306 (b) and (c) add 307(c) of the Federal Water Pollution Control Act as amended, (the Act); 33 U.S.C. 1251, 1311, 1314(b) and (c), 1316 (b) and (c) and 1317(c); 86 Stat. 816 et seq.; Pub. L. 92-500.

Subpart A—Bauxite Refining Subcategory

§ 421.10 Applicability; description of the bauxite refining subcategory.

The provisions of this subpart are applicable to discharges resulting from the refining of bauxite to alumina by the Bayer process or by the combination process.

§ 421.11 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "bauxite" shall mean ore containing alumina monohydrate or alumina trihydrate which serves as the principal raw material for the production of alumina by the Bayer process or by the combination process.

(c) The term "product" shall mean alumina.

§ 421.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been

RULES AND REGULATIONS

available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) Subject to the provisions of paragraph (b) of this section, the following limitations establish the quantity or quality of pollutants or pollutant properties 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: There shall be no discharge of process waste water pollutants to navigable waters.

(b) During any calendar month there may be discharged from the overflow of a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and the evaporation within the impoundment for that month, or, if greater, a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center).

§ 421.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) Subject to the provisions of paragraph (b) of this section, the following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the

best available technology economically achievable: There shall be no discharge of process waste water pollutants to navigable waters.

(b) During any calendar month there may be discharged from the overflow of a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and the evaporation within the impoundment for that month, or, if greater, a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center).

§ 421.14 [Reserved]

§ 421.15 Standards of performance for new sources.

(a) Subject to the provisions of paragraph (b) of this section, the following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

(b) During any calendar month there may be discharged from the overflow of a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and the evaporation within the impoundment for that month, or, if greater, a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center).

§ 421.16 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the bauxite refining subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, § 128.133 of this chapter shall be amended to read as follows:

In addition to the prohibitions set forth in § 128.131 of this chapter the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 421.15: *Provided*, That,

if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

Subpart B—Primary Aluminum Smelting Subcategory

§ 421.20 Applicability; description of the primary aluminum smelting subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of aluminum from alumina by the Hall-Heroult process.

§ 421.21 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter, shall apply to this subpart.

(b) The term "product" shall mean hot aluminum metal.

§ 421.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations,

specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Metric units (kilograms per 1,000 kg of product)		
Fluoride.....	2.0	1.0
TSS.....	3.0	1.5
pH.....	Within the range 6.0 to 9.0.	
English units (pounds per 1,000 lb of product)		
Fluoride.....	2.0	1.0
TSS.....	3.0	1.5
pH.....	Within the range 6.0 to 9.0.	

§ 421.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Metric units (kilograms per 1,000 kg of product)		
Fluoride.....	0.1	0.05
TSS.....	.2	.1
pH.....	Within the range 6.0 to 9.0.	
English units (pounds per 1,000 lb of product)		
Fluoride.....	0.1	0.05
TSS.....	.2	.1
pH.....	Within the range 6.0 to 9.0.	

§ 421.24 [Reserved]

§ 421.25 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Metric units (kilograms per 1,000 kg of product)		
Fluoride.....	0.05	0.025
TSS.....	.1	.05
pH.....	Within the range 6.0 to 9.0.	
English units (pounds per 1,000 lb of product)		
Fluoride.....	0.05	0.025
TSS.....	.1	.05
pH.....	Within the range 6.0 to 9.0.	

§ 421.26 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the primary aluminum smelting subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128, of this chapter, except that, for the purpose of this section, § 128.133 of this chapter shall be amended to read as follows:

In addition to the prohibitions set forth in § 128.131 of this chapter, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 421.25: Provided, That if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

Subpart C—Secondary Aluminum Smelting Subcategory

§ 421.30 Applicability; description of the secondary aluminum smelting subcategory.

The provisions of this subpart are applicable to discharges resulting from the recovery, processing, and remelting of aluminum scrap to produce metallic aluminum alloys.

§ 421.31 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "product" shall mean hot aluminum recovered.

§ 421.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all

information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, which may be discharged by a point source subject to the provisions of this subpart and which uses water for metal cooling, after application of the best practicable control technology currently available: There shall be no discharge of process waste water pollutants to navigable waters.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart and which uses aluminum fluoride in its magnesium removal process ("demagging process"), after application of the best practicable control technology currently available: There shall be no discharge of process waste water pollutants to navigable waters.

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart and which uses chlorine in its magnesium removal process, after ap-

RULES AND REGULATIONS

plication of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations
	Average of daily values for 30 consecutive days shall not exceed
	Metric units (kilograms per 1,000 kg magnesium removed)
TSS.....	175
COD.....	6.5
pH.....	Within the range of 7.5 to 9.0.
	English units (pounds per 1,000 lb magnesium removed)
TSS.....	175
COD.....	6.5
pH.....	Within the range of 7.5 to 9.0.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart and which processes residues by wet methods, after application of the best practical control technology currently available.

Effluent characteristic	Effluent limitations
	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg of product)
TSS.....	.15
Fluoride.....	.4
Ammonia (as N)....	.01
Aluminum.....	1.0
Copper.....	.003
COD.....	1.0
pH.....	Within the range of 7.5 to 9.0.
	English units (pounds per 1,000 lb of product)
TSS.....	1.5
Fluoride.....	.4
Ammonia (as N)....	.01
Aluminum.....	1.0
Copper.....	.003
COD.....	1.0
pH.....	Within the range of 7.5 to 9.0.

§ 421.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable: There shall be

no discharge of process waste water pollutants to navigable waters.

§ 421.34 [Reserved]

§ 421.35 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

(b) Application of the factors listed in section 306(b) of the Act may require variation from the standard of performance set forth in this section for any point source subject to such standard of performance and which uses chlorine in the magnesium removal process ("demagging" process). If variation is determined to be necessary for any such source, the discharge of process waste water pollutants shall be allowed from the magnesium removal process only, and such source shall be subject to effluent limitations no less stringent than those required by paragraph (c), § 421.32.

§ 421.36 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the secondary aluminum smelting subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in part 128 of this chapter, except that, for the purpose of this section, § 128.133 of this chapter shall be amended to read as follows:

In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 421.35: *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant.

[FR Doc.74-7621 Filed 4-5-74;8:45 am]