

Title 40—Protection of the Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER N—EFFLUENT GUIDELINES AND STANDARDS

PART 424—FERROALLOY MANUFACTURING POINT SOURCE CATEGORY

Subpart A—Open Electric Furnaces With Wet Air Pollution Control Devices Subcategory

Subpart B—Covered Electric Furnaces and Other Smelting Operations With Wet Air Pollution Control Devices Subcategory

Subpart C—Slag Processing Subcategory

On October 18, 1973 notice was published in the FEDERAL REGISTER, (38 FR 29008), 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 open electric furnaces with wet air pollution control devices subcategory, the covered electric furnaces and other smelting operations with wet air pollution control devices subcategory and the slag processing subcategory of the ferroalloy 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 ferroalloy manufacturing category of point sources, by amending 40 CFR Chapter I, Subchapter N, to add a new Part 424. 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 402.

In addition, the EPA is simultaneously proposing a separate provision which also appears in Part II of today's FEDERAL REGISTER, 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 open electric furnaces with wet air pollution control devices subcategory, the covered electric furnaces and other smelting operations with wet air pollution control devices subcategory and the slag processing subcategory. In addition, the regulations as proposed were supported by two other documents; (1) The document entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Stand-

ards for the Smelting and Slag Processing Segments of the Ferroalloy Manufacturing Point Source Category" (August 1973) and (2) the document entitled "Economic Analysis of Proposed Effluent Guidelines, The Ferroalloys Industry" (August, 1973). Both 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 in this document.

It should be noted that the production of calcium carbide (although similar to that for ferroalloys and often conducted in the same plants) is not included in these regulations for ferroalloys. Calcium carbide is included in the regulations to be promulgated under Part 415, Inorganic Chemicals Manufacturing Industry.

(a) *Summary of comments.* The following responded to the request for written comments contained in the preamble to the proposed regulation: Union Carbide Corporation; Airco, Inc.; Ohio Ferro-Alloy Corporation; Foote Mineral Company; The Ferroalloys Association; Chromium Mining and Smelting Corporation; Aronetics, Inc.; Colorado Department of Public Health; United States Water Resources Council; U.S. Atomic Energy Commission; U.S. Department of the Interior; U.S. Department of Commerce 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 them.

(1) The commentors noted that the treatment system for scrubber wastewater was not demonstrated in its entirety in any one plant, and that therefore one cannot assign costs to it. Additionally, the comment was made that the concentrations upon which the proposed guidelines were based were lower than those found in the plants observed during the survey.

Although the treatment systems proposed for best practicable control technology currently available, best available technology economically achievable and new sources is not presently in use in any one plant, the various modules of which they are comprised are in use in this industry, or in similar industries. As the industry's trade association pointed out in its comments, "Little information is available on water pollution from ferroalloy plants and on treatment of waste water from them * * *. Minimal effort has been directed toward * * * perfecting control technology for those pollutants that are

generated." Because of this background (or lack thereof), it was necessary to synthesize a treatment system which would work for this industry, from technologies utilized in this and similar industries. Because the treatment modules are in use, a cost estimate can be made for the total system which is reasonably accurate. Additionally, in the Development Document, examples of such modules or systems in similar industries are discussed in further detail than previously.

Definition of what constitutes "best practicable" technology for many industries involves, at first, a general review of the industry to determine the best technologies being practiced in the industry. Then, after closer review and investigation of these technologies, the "best practicable" technology would be assessed as the average of the best, though not necessarily the best technology, after taking into account information relating to other factors spelled out in the Act. In those industries where present treatment is uniformly inadequate, a higher degree of treatment than is presently practiced may be required, based on a comparison with existing treatments for similar wastes in other industries. Factors for determining the "best available" technology are similar, except that rather than assessing the average of the best, the focus would be on the very best technology currently in use or demonstrably achievable.

Under this analysis of the statutory standard, it is the opinion of the Agency that it is not necessary that "best practicable" technology be currently in use as a single treatment. As applied to the ferroalloy industry, the methodology employed resulted in sufficient data to support the resulting limitations, and is completely consistent with the statutory requirements.

(2) The relationship between the 30 day average limitations and the 24 hour maximum limitations was questioned.

The 30 day average limitations are by no means the absolute lowest values attainable by the indicated technology, but represent values which can be readily controlled around on a day to day basis. The 24 hour maximum limitation was established so as not to exceed these 30 day values by more than a factor of two. In the absence of sufficient performance data from the industry to establish a factor between the two limitations on a statistical basis, a factor of two was chosen after taking into consideration the operational variability involved. This factor of two is considered to be generous.

(3) It was remarked that some plants might be forced to lower their production rates, since recirculated non-contact-cooling water would be of higher temperature than once-through. It was also remarked that data to permit determination of heat content (as described in the proposed regulation) was not obtained during plant sampling.

In the interests of uniformity with the guidelines for other industries, no regulation for the control of non-contact cooling water will be promulgated at this

time. However, non-contact cooling water for all industries will be studied in the future and standards for non-contact cooling water will then be established.

(4) The costs of treatment and facilities were thought by some commentators to be low, particularly when a plant might have to retrofit such facilities. They were also thought to be low because the costs might be "book value", or a percentage of the total facility, rather than actual costs. It was also noted that the costs are not those which would actually be incurred by a plant presently requiring such installations, since the costs are given in August, 1971 dollars. It was also thought that the costs did not include land costs.

The costs as given are generous estimates of those which may be incurred. Costs such as those for demolition, etc., which might be necessary for installation of treatment in an existing plant, were not included, since those costs would be highly variable from plant to plant. Also highly variable will be the cost of land. However, it is believed that none of the seven plants in the industry which were visited and which utilized wet air pollution control systems will be forced to purchase land for water pollution control purposes. Because of the variability in cost and the belief that no plant in the industry will be required to purchase such land, this cost was not included. Inflation, has of course, affected the actual costs, so that such a system if actually built now would be somewhat more expensive than if built in August 1971.

(5) Some commentators objected to the use of limitations on a gross, rather than net basis. It was remarked, for example, that the amounts to be removed and the cost of removal are dependent upon the intake levels, that discharge levels could not be met because of the intake levels, etc.

If not otherwise specified, the effluent limitation numbers in this regulation will be applied as absolute discharge limitations. The use of such absolute limitations is generally appropriate since the concentration of a pollutant remaining after the application of a given treatment technology is relatively independent of minor variations in the pollutant concentration in the waste or the source of the pollutant. EPA intends to amend the NPDES regulations to take into account, when appropriate, pollutants already existing in the stream, so that in certain cases an effluent limitation may be adjusted to take into account pollutants entering with a discharger's supply providing the water is withdrawn from the same source into which it is discharged. If the source is other than the receiving waterbody, the effluent standards will be applied as absolute limitations without adjustment.

(6) It was remarked that ranges of numbers (i.e., limitations) are needed for flexibility in writing the permit, so that variations in age, size, location, etc., may receive allowances. It was also noted

that the location (climate) of a plant could have an effect on the wastewater treatment system's performance.

Range is provided for, as are the other factors, by the breaking up of the industry into subcategories with different effluent limitations. The factor of size has been taken into account when writing the permit on a production basis. Additionally, the factor of location (climate) can be rectified when designing the treatment system. A special provision allowing flexibility in the application of the limitations representing best practicable control technology currently available has been added, to account for special circumstances applicable to individual dischargers that may not have been adequately taken into account when the regulations were developed.

(7) Some commentators felt that the data base was insufficient for the promulgation of guidelines and that not enough time was covered to be truly representative of year-round operating conditions.

Within the required time constraints for the collection of data, it was impossible to expand the sampling and analytical work to cover more plants, or even to collect more samples from the same plants. However, it is felt that the overall type sampling performed provides a good representation of wastewaters and that this data, together with the contractor's many years of experience in water and waste treatment in similar industries, provides an adequate basis for the regulation. The only water usage at the vast majority of plants in the ferroalloys industry is for non-contact cooling. Only one third of the electric furnaces in the industry use wet air pollution control methods. The economic impact study noted that nine plants (out of 22) use wet methods. Of these nine, six (or 2/3rds) were visited, and five sampled—a rather high level of coverage. The data thus obtained is the best available from any source at this time.

(8) Some comments were received regarding the testing methods and procedures followed.

The analytical methods used for measuring the pollutants in the various samples are now reported in the Development Document. As to any inaccuracy in the flow measurements, these measurements were the best which could be obtained during the sampling program.

(9) Many commentators objected, some very strenuously, to the requirement of zero discharge of pollutants for new sources of open electric furnaces, to be achieved by the use of dry, rather than wet, dust collection systems. The point was raised that it was "unreasonably restrictive for the Environmental Protection Agency to specify a particular type of emission control equipment . . ."

The proposed guidelines and standards have been rewritten to permit a discharge. The reason for this is that flexibility in selecting air pollution control equipment is believed to be necessary, and application of the best practicable

and best available technologies to wet scrubber emission control systems will not effect a zero discharge.

(10) It was remarked that the cost of water pollution cleanup may cause the premature phasing-out of older, smaller units, and that the combined economic impact of air and water pollution control would be very large, and that this impact would be borne by the plants without [air and water pollution control] equipment.

The economic impact study indicates that no plant closings will be caused by the cost of waste water treatment. Since no plants will close, any smaller older furnaces prematurely phased out will be replaced by the more profitable larger furnaces. This has been general practice in the industry in the past few years. The combined cost of air and water pollution control could be large, particularly for those plants not presently controlling their air emissions. However, most or all of these plants utilize open furnaces, and will almost certainly install baghouses for air pollution control because of the present cost favorability. The eight plants which are reported in the economic impact study as being the most impacted by the water pollution control regulations are those which have already taken a responsible attitude toward air pollution by installing control devices. They would thus not incur costs for air pollution control systems.

(11) Some commentators felt that the standards were more restrictive (for 1977 and 1983) for open furnaces than for covered furnaces.

The standards are based upon water usage (per Mwh) and concentrations. Although the water usage for scrubbers cleaning gases from open furnaces was expected to be higher than for covered furnaces (since scrubber water usage is generally a function of gas volume and open furnaces may emit up to 50 times more gas than do covered furnaces), the water use was found to be slightly less during the sampling survey. Very few open furnaces utilizing wet air pollution control systems were found, compared to the number of such systems on covered furnaces. Most open furnaces were either uncontrolled or used baghouses. It was not thought to be reasonable to base the limitation on the water usage at plants using electrostatic precipitators or steam/hot water scrubbers, since the water usage of these systems is very much less than those of venturi scrubbers. Since the field data indicates that water usage on open furnace scrubbers is less than for covered furnace scrubbers, a more restrictive standard is justified.

(12) It was pointed out that the blow-down from a slag concentrator at plant F (which was originally reported to flow to a closed lagoon) flows to a cinder dump. On this basis, it was suggested that the limitation of zero discharge for 1983 and new sources is not applicable.

Although the plant in question states that there is no discharge from the slag concentration operation after the blow-

down reaches the cinder dump, a reexamination of the facts in this case leads us to believe that zero discharge for this category may not be uniformly achievable. Therefore, the limitations for this category have been changed to allow for discharge of blowdown from slag processing operations after treatment.

(13) One commentor expressed concern that "disruptions or losses in U.S. productive capacity will increase our reliance on imports and adversely affect our international balance of payments."

Two factors are expected to be the major determinants of future ferroalloy imports versus the amount processed domestically from foreign ores. First, the U.S. depends almost entirely upon imported ores (chrome, nickel, manganese, tungsten, etc.) to produce ferroalloys. The countries exporting these ores are beginning to develop ferroalloy processing capabilities. Once they have developed sufficient capacity, it is likely that they will attempt to shift the U.S. purchases from ores to ferroalloys. Second, the world wide demand for ferroalloys based on sustained high levels of steel production may affect the foreign ferroalloys supply that has traditionally constituted a significant portion of our consumption.

In summary, the effects of pollution control costs upon foreign trade are expected to be insignificant in the context of the more fundamental changes expected in the world wide ferroalloys supply/demand situation.

(14) The comment was made that "conclusions based on average figures will understate the economic impact on smaller plants since the analysis is heavily weighted toward the assessment of impact on large plants." It was also questioned whether the eight plants that must install effluent controls by 1977 were small plants and whether those eight plants would be able to pass on the costs through price increases.

The contractor analyzed the incremental costs for various size plants and found the costs to be directly (linearly) related to production capacity over a broad range of furnace and/or plant size. Thus, the impact on profitability is unrelated to company size, and it cannot be construed that smaller firms will be more adversely affected than larger firms. Half of the plants requiring effluent control investments by 1977 are owned by one firm. Since the combined output from those plants represent one third of the U.S. production, it is reasonable to assume that it is in a position to be a leader in price increases.

(15) Some correspondents endorsed the proposal made to the Administrator by the Effluent Standards and Water Quality Information Advisory Committee that a significantly different approach be taken in the development of effluent guidelines.

The committee's proposal is under evaluation as a contribution toward future refinements on guidelines for some industries. The Committee has indicated that its proposed methodology could not

be developed in sufficient time to be available for the current phase of guideline promulgation, which is proceeding according to a court-ordered schedule. Its present state of development does not provide sufficient evidence to warrant the Agency's delaying issuance of any standard in hopes that an alternative approach might be preferable.

(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 changes have been made in the regulation.

(1) In the interests of uniformity with the other industry guidelines, the non-contact cooling water subcategory of this industry has been eliminated. Standards for noncontact cooling water for all industries will be promulgated in the future.

(2) Orthophosphate has been deleted as a pollutant parameter for the open electric furnaces with wet air pollution control devices subcategory (Subpart A) and the covered electric furnaces and other smelting operations with wet air pollution control devices subcategory (Subpart B). Phenols have been deleted as a pollutant parameter from Subpart A, and oil has been deleted as a pollutant parameter from all subcategories. These changes result from a reexamination of the raw data collected by the Agency's contractor and consideration of the costs of monitoring.

(3) A discharge from new open electric furnaces is now allowed. The reason for this is that flexibility in selecting air pollution control equipment is believed to be necessary, and application of the best practicable and best available technologies to wet scrubber emission control systems will not effect a zero discharge. This also allows plants to select air pollution control systems which are the most efficient and economic for that particular plant.

(4) Discharge of blowdown from slag processing operations (for 1983 and new sources) is now permitted. This results from an evaluation of data submitted by industry and a closer look at the data collected by the Agency's contractor.

(5) The standards for hexavalent chromium in Subpart A and B have been increased after consideration of the sensitivity of the analytical method.

(6) 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 appli-

cable 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 above listed changes will not significantly affect the conclusions of the economic study of the proposed regulations. The change in the standard for hexavalent chromium and the deletion of some parameters should not affect the cost of the treatment system. Dropping of the noncontact cooling water segment of this industry from the present promulgation will result in a reduction of investment costs of at least \$1.2 million dollars for 1977 and 1983. This represents about 8 percent of the total calculated investment for the entire industry. While this "savings" has a slight effect on the economic impact from this regulation, it should be kept in mind that noncontact cooling water will be regulated in the future, and some additional investment may be necessary. Allowing for discharge of blowdown from slag processing operations should also result in very minor savings.

(d) *Cost-benefit analysis.* The detrimental effects of the constituents of waste waters now discharged by point sources within the smelting and slag processing segments of the ferroalloy manufacturing point source category are discussed in Section VI of the report entitled "Development Document for Effluent Limitations Guidelines for the Smelting and Slag Processing Segments of the Ferroalloy Manufacturing Point Source Category" (February, 1974). 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 Ferroalloys Industry" (August, 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 ferroalloys 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) *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, a manual entitled, "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Smelting and Slag Processing Segments of the Ferroalloy Manufacturing Point Source Category," has been published and is available for purchase from the Government Printing Office, Washington, D.C., 20401 for a nominal fee.

(f) *Final rulemaking.* In consideration of the foregoing, 40 CFR Chapter I, Subchapter N is hereby amended by adding a new Part 424, Ferroalloy Manufacturing Point Source Category, to read as set forth below. This final regulation is promulgated as set forth below and shall be effective April 23, 1974.

Dated: February 8, 1974.

RUSSELL E. TRAIN,
Administrator.

PART 424—FERROALLOY MANUFACTURING POINT SOURCE CATEGORY

Subpart A—Open Electric Furnaces With Wet Air Pollution Control Devices Subcategory

- Sec. 424.10 Applicability; description of the open electric furnaces with wet air pollution control devices subcategory.
- 424.11 Specialized definitions.
- 424.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 424.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 424.14 [Reserved]
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Subpart B—Covered Electric Furnaces and Other Smelting Operations With Wet Air Pollution Control Devices Subcategory

- 424.20 Applicability; description of the covered electric furnaces and other smelting operations with wet air pollution control devices subcategory.
- 424.21 Specialized definitions.
- 424.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 424.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 424.24 [Reserved]
- 424.25 Standards of performance for new sources.
- 424.26 Pretreatment standards for new sources.

Subpart C—Slag Processing Subcategory

- Sec. 424.30 Applicability; description of the slag processing subcategory.
- 424.31 Specialized definitions.
- 424.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 424.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 424.34 [Reserved]
- 424.35 Standards of performance for new sources.
- 424.36 Pretreatment standards for new sources.

Subpart A—Open Electric Furnaces With Wet Air Pollution Control Devices Subcategory

§ 424.10 Applicability; description of the open electric furnaces with wet air pollution control devices subcategory.

The provisions of this subpart are applicable to discharges resulting from the smelting of ferroalloys in open electric furnaces with wet air pollution control devices. This subcategory includes those electric furnaces of such construction or configuration that the furnace off-gases are burned above the furnace charge level by air drawn into the system. After combustion the gases are cleaned in a wet air pollution control device, such as a scrubber, an electrostatic precipitator with water or other aqueous sprays, etc. The provisions of this subpart are not applicable to noncontact cooling water or to those electric furnaces which are covered, closed, sealed, or semi-covered and in which the furnace off-gases are not burned prior to collection (regulated in Subpart B).

§ 424.11 Specialized definitions.

For the purpose of this subpart: (a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) The term "Mwh" shall mean megawatt hour(s) of electrical energy consumed in the smelting process (furnace power consumption).

§ 424.12 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 subcategory 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 characteristics	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units kg/Mwh	
TSS.....	0.319	0.169
Chromium total.....	.006	.002
Chromium VI.....	.006	.003
Manganese total.....	.004	.002
pH.....	Within the range 6.0 to 9.0	
	English units lb/Mwh	
TSS.....	0.703	0.352
Chromium total.....	.014	.007
Chromium VI.....	.0014	.0007
Manganese total.....	.141	.070
pH.....	Within the range 6.0 to 9.0	

§ 424.13 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, controlled by this section, 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 kg/Mwh	
TSS.....	0.024	0.012
Chromium total.....	.0008	.0004
Chromium VI.....	.00008	.00004
Manganese total.....	.008	.0039
pH.....	Within the range 6.0 to 9.0	
	English units lb/Mwh	
TSS.....	0.052	0.026
Chromium total.....	.0017	.0009
Chromium VI.....	.0002	.0001
Manganese total.....	.017	.0086
pH.....	Within the range 6.0 to 9.0	

§ 424.14 [Reserved]

§ 424.15 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, 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 kg/Mwh	
TSS.....	0.024	0.012
Chromium total.....	.0008	.0004
Chromium VI.....	.00008	.00004
Manganese total.....	.008	.0039
pH.....	Within the range 6.0 to 9.0	
	English units lb/Mwh	
TSS.....	0.052	0.026
Chromium total.....	.0017	.0009
Chromium VI.....	.0002	.0001
Manganese total.....	.017	.0086
pH.....	Within the range 6.0 to 9.0	

§ 424.16 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the open electric furnaces with wet air pollution control devices 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 40 CFR 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 40 CFR 424.15; 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—Covered Electric Furnaces and Other Smelting Operations With Wet Air Pollution Control Devices Subcategory

§ 424.20 Applicability; description of the covered electric furnaces and other smelting operations with wet air pollution control devices subcategory.

The provisions of this subpart are applicable to discharges resulting from the smelting of ferroalloys in covered electric furnaces or other smelting operations, not elsewhere included in this part, with wet air pollution control devices. This subcategory includes those electric furnaces of such construction or configuration (known as covered, closed, sealed, semi-covered or semi-closed furnaces) that the furnace off-gases are not burned prior to collection and cleaning, and which off-gases are cleaned after collection in a wet air pollution control device such as a scrubber, 'wet' baghouse, etc. This subcategory also includes those non-electric furnace smelting operations, such as exothermic (i.e., aluminothermic or silicothermic) smelting, ferromanganese refining, etc., where these are controlled for air pollution by wet air pollution control devices. This subcategory does not include noncontact cooling water or those furnaces which utilize dry dust collection techniques, such as dry baghouses.

§ 424.21 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 "Mwh" shall mean megawatt hour(s) of electrical energy consumed in the smelting process (furnace power consumption).

§ 424.22 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 funda-

mentally 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 kg/Mwh	
TSS.....	0.410	0.209
Chromium total.....	.008	.004
Chromium VI.....	.0003	.0001
Manganese total.....	.034	.013
Cyanide total.....	.001	.002
Phenols.....	.009	.004
pH.....	Within the range 6.0 to 9.0	
	English units lb/Mwh	
TSS.....	0.922	0.461
Chromium total.....	.018	.009
Chromium VI.....	.0013	.0003
Manganese total.....	.184	.022
Cyanide total.....	.009	.005
Phenols.....	.013	.009
pH.....	Within the range 6.0 to 9.0	

Provided, however, That for nonelectric furnace smelting processes, the units of the effluent limitations set forth in this section shall be read as "kg/kg of product (lb/ton of products)", rather than "kg/Mwh (lb/Mwh)", and the limitations (except for pH) shall be three (3) times those listed in the table in this section.

§ 424.23 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, controlled by this section, 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 kg/Mwh	
TSS.....	0.032	0.016
Chromium total.....	.001	.0005
Chromium VI.....	.0001	.00005
Manganese total.....	.011	.005
Cyanide total.....	.0005	.0003
Phenols.....	.0004	.0002
pH.....	Within the range 6.0 to 9.0	
	English units lb/Mwh	
TSS.....	0.071	0.035
Chromium total.....	.002	.0012
Chromium VI.....	.0002	.0001
Manganese total.....	.023	.012
Cyanide total.....	.001	.0006
Phenols.....	.0009	.0005
pH.....	Within the range 6.0 to 9.0	

Provided, however, That for nonelectric furnace smelting processes, the units of the effluent limitations set forth in this section shall be read as "kg/kg of product (lb/ton of product)", rather than "kg/Mwh (lb/Mwh)", and the limitations (except for pH) shall be three (3) times those listed in the table in this section.

§ 424.24 [Reserved]

§ 424.25 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, 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 kg/Mwh	
TSS.....	0.032	0.016
Chromium total.....	.001	.0005
Chromium VI.....	.0001	.00005
Manganese total.....	.011	.005
Cyanide total.....	.0005	.0003
Phenols.....	.0004	.0002
pH.....	Within the range 6.0 to 9.0	
	English units lb/Mwh	
TSS.....	0.071	0.035
Chromium total.....	.002	.0012
Chromium VI.....	.0002	.0001
Manganese total.....	.023	.012
Cyanide total.....	.001	.0006
Phenols.....	.0009	.0005
pH.....	Within the range 6.0 to 9.0	

Provided, however, That for nonelectric furnace smelting processes, the units of the effluent limitations set forth in this section shall be read as "kg/kg of product (lb/ton of product)", rather than "kg/Mwh (lb/Mwh)", and the limitations (except for pH) shall be three (3) times those listed in the table in this section.

§ 424.26 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within

the covered electric furnaces and other smelting operations with wet air pollution control devices 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 40 CFR 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 40 CFR 424.25; 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—Slag Processing Subcategory
§ 424.30 Applicability; description of the slag processing subcategory.

The provisions of this subpart are applicable to discharges resulting from slag processing, wherein (1) the residual metallic values in the furnace slag are recovered via concentration for return to the furnace, or (2) the slag is "shotted" for other further use.

§ 424.31 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.

§ 424.32 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 subcategory 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 kg/kg processed	
TSS.....	2.000	1.330
Chromium total.....	.033	.026
Manganese total.....	.532	.266
pH.....	Within the range 6.0 to 9.0	
	English units lb/ton processed	
TSS.....	5.319	2.929
Chromium total.....	.106	.063
Manganese total.....	1.064	.532
pH.....	Within the range 6.0 to 9.0	

§ 424.33 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, controlled by this section, 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 kg/kg processed	
TSS.....	0.271	0.136
Chromium total.....	.0024	.0027
Manganese total.....	.034	.027
pH.....	Within the range 6.0 to 9.0	
	English units lb/ton processed	
TSS.....	0.542	0.271
Chromium total.....	.011	.0054
Manganese total.....	.168	.054
pH.....	Within the range 6.0 to 9.0	

RULES AND REGULATIONS

§ 424.34 [Reserved]

§ 424.35 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, 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 kg/kg processed	
TSS.....	0.271	0.136
Chromium total....	.0054	.0027
Manganese total....	.054	.027
pH.....	Within the range 6.0 to 9.0	
	English units lb/ton processed	
TSS.....	0.542	0.271
Chromium total....	.011	.0054
Manganese total....	.108	.054
pH.....	Within the range 6.0 to 9.0	

§ 424.36 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the slag processing 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 40 CFR 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 40 CFR 424.35; 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.

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