ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 420

[WH-FRL 1697-4]

Iron and Steel Manufacturing Point Source Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed regulation.

SUMMARY: EPA proposes a regulation to limit effluent discharges to waters of the United States and the introduction of pollutants into publicly owned treatment works from facilities engaged in manufacturing steel. The Clean Water Act and a consent decree require EPA to issue this regulation.

The purpose of this proposal is to provide effluent limitations for "best practicable technology," "best available technology," "best conventional technology," and to establish new source performance standards and pretreatment standards. After considering comments received in response to this proposal, EPA will promulgate a final rule.

DATES: Comments on this proposal must be submitted on or before March 9, 1981.

ADDRESS: Send comments to: Mr. Ernst P. Hall, Effluent Guidelines Division (WH-552), Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460, ATTENTION: EGD Docket Clerk, PROPOSED IRON AND STEELMAKING RULES (WH-552).

The supporting information and all comments on this proposal will be available for inspection and copying at the EPA Public Information Reference Unit, Room 2922 (EPA Library). The EPA information regulation (40 CFR Part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Technical information and copies of technical documents may be obtained from Mr. Ernst P. Hall, at 426-2726 at the address listed above. The economic analysis may be obtained from the Office of Planning and Evaluation (PM 220), Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460.

SUPPLEMENTARY INFORMATION:

Organization of This Notice

I. Legal Authority

The regulation described in this notice is proposed under authority of Sections 301, 304, 306, 307, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, 33 USC §§ 1251 *et seq.*, as amended by the Clean Water Act of 1977, P.L. 92-517) (the "Act"). This regulation is also proposed in compliance with the Settlement Agreement in *Natural Resources Defense Council, Inc. v. Train*, 8 ERC 2120 (D.D.C 1976), modified, 12 ERC 1833 (D.D.C. 1979).

II. Background

The Clean Water Act

The Federal Water Pollution Control Act Amendments of 1972 established a comprehensive program to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," Section 101(a). By July 1, 1977, existing industrial dischargers were required to achieve "effluent limitations requiring the application of the best practicable control technology currently available" ("BPT"), Section 301(b)(1)(A); and by July 1, 1983, these dischargers were required to achieve "effluent limitations requiring the application of the best available technology economically achievable . . . which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants" ("BAT"), Section 301(b)(2)(A). New industrial direct dischargers were required to comply with Section 306 new source performance standards ("NSPS"), based upon best available demonstrated technology; and new and existing dischargers to publicly owned treatment works ("POTWs") were subject to pretreatment standards under Sections 307 (b) and (c) of the Act. While the requirements for direct dischargers were to be incorporated into National Pollutant Discharge Elimination System (NPDES) permits issued under Section 402 of the Act, pretreatment standards were made enforceable directly against dischargers to POTWs (indirect dischargers).

Although Section 402(a)(1) of the 1972 Act authorized the setting of requirements for direct dischargers on a case-by-case basis, Congress intended that, for the most part, control requirements would be based upon regulations promulgated by the Administrator of EPA. Section 304(b) of the Act required the Administrator to promulgate regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of BPT and BAT. Moreover, Sections 304(c) and 306 of the Act required promulgation of regulations for NSPS, and Sections 304(f), 307(b), and 307(c) required promulgation of regulations for pretreatment standards. In addition to these regulations for designated industry categories, Section 307(a) of the Act required the Administrator to promulgate effluent standards applicable to all dischargers of toxic pollutants. Finally, Section 501(a) of the Act authorized the Administrator to prescribe any additional regulations "necessary to carry out his functions" under the Act.

The EPA was unable to promulgate many of these regulations by the dates specified in the Act. In 1976, EPA was sued by several environmental groups, and in settlement of this lawsuit, EPA and the plaintiffs executed a "Settlement Agreement," which was approved by the Court. This Agreement required EPA to develop a program and adhere to a schedule to promulgate, for 21 major industries, BAT effluent limitations guidelines, pretreatment standards, and new source performance standards for 65 "priority" pollutants and classes of pollutants. *See Natural*

Resources Defense Council, Inc. v. *Train*, 8 ERC 2120 (D.D.C. 1976), modified, 12 ERC 1833 (D.D.C. 1979).

On December 27, 1977, the President signed into law the Clean Water Act of 1977. Although this law makes several important changes in the Federal water pollution control program, its most significant feature is the incorporation into the Act of several basic elements of the Settlement Agreement program for toxic pollution control. Sections 301(b)(2)(A) and 301(b)(2)(C) of the Act now require the achievement by July 1, 1984 of effluent limitations requiring application of BAT for "toxic" pollutants, including the 65 "priority" pollutants and classes of pollutants which Congress declared "toxic" under Section 301(b) of the Act. Likewise, the EPA programs for new source performance standards and pretreatment standards are now aimed principally at toxic pollutant controls. Moreover, to strengthen the toxics control program, Congress added Section 304(e) to the Act, authorizing the Administrator to prescribe "best management practices" ("BMPs") to prevent the release of toxic and hazardous pollutants from plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage associated with, or ancillary to, the manufacturing or treatment process.

In keeping with its emphasis on toxic pollutants, the Clean Water Act of 1977 also revises the control program for nontoxic pollutants. Instead of BAT for "conventional" pollutants identified under Section 304(a)(4) (including total suspended solids, biological oxygen demand, oil and grease and, fecal coliform, and pH), the new Section 301(b)(2)(E) requires achievement by July 1, 1984, of "effluent limitations requiring the application of the best conventional pollutant control technology" ("BCT"). The factors considered in assessing BCT for an industry include the costs of attaining a reduction in effluents and the effluent reduction benefits derived compared to the costs and effluent reduction benefits from the discharge of publicly owned treatment works [Section 304(b)(4)(B)]. For nontoxic, nonconventional pollutants, Sections 301(b)(2)(A) and (b)(2)(F) require achievement of BAT effluent limitations within three years after their establishment or July 1, 1984, whichever is later, but not later than July 1, 1987.

The purpose of this proposed regulation is to provide effluent limitations for BPT, BAT, and BCT, and to establish NSPS, pretreatment standards for existing sources (PSES), and pretreatment standards for new sources (PSNS), under Sections 301, 304, 306, 307, and 501 of the Clean Water Act.

Prior EPA Regulations

On June 28, 1974, EPA promulgated effluent limitations guidelines for BPT and BAT, NSPS, and PSNS for the basic steelmaking operations (Phase I) within the integrated steel industry. 39 FR 24114–24133, 40 CFR Part 420, Subparts A-L. that regulation covered 12 subcategories of the industry: By-Product Cokemaking, Beehive Cokemaking, Sintering, Blast Furnace (Iron), Blast Furnace (Ferromanganese), Basic Oxygen Furnace (Semi-Wet Air Pollution Control Methods), Basic Oxygen Furnace (Wet Air Pollution Control Methods), Open Hearth Furnace, Electric Arc Furnace (Semi-Wet Air Pollution Control Methods), Vacuum Degassing, and Continuous Casting.

In response to several petitions for review, the United States Court of Appeals for the Third Circuit remanded that regulation to the Agency on November 7, 1975. *American Iron and Steel Institute, et al.* v. *EPA*, 526 F.2d 1027 (3rd Cir. 1975) ("AISI I"), While the Court rejected all technical challenges to the BPT limitations, it held that the BAT effluent limitations and NSPS for certain subcategories were "not demonstrated." In addition, the court questioned all of the regulation on the grounds that EPA had failed to consider adequately the impact of plant age on the cost or feasibility of retrofitting pollution control equipment, to assess the impact of the regulations on water scarcity in arid and semi-arid regions of the country, and to make adequate "net/gross' provisions for pollutants found in intake water supplies.[1]

On March 29, 1976, EPA promulgated BPT effluent limitations guidelines and proposed BAT limitations, NSPS and PSNS for steel forming and finishing operations (Phase II) within the iron and steel industry. 39 FR 12990–13030, 40 CFR Part 420, Subparts M–Z. That regulation covered 14 subcategories of the industry: Hot Forming—Primary; Hot Forming—Section; Hot Forming—Flat; Hot Forming—Pipe & Tube; Pickling—Sulfuric Acid—Batch and Continuous; Pickling—Hydrochloric Acid—Batch and Continuous; Cold Rolling; Hot Coatings—Galvanizing; Hot Coatings—Terne; Miscellaneous Runoffs—Storage Piles, Casting, and Slagging; Combination Acid Pickling—Batch and Continuous; Scale Removal—Kolene and Hydride; Wire Pickling and Coating; and Continuous Alkaline Cleaning.

In response to several petitions for review, the U.S. Court of Appeals for the Third Circuit remanded the regulation to the Agency on September 14, 1977, *American Iron and Steel Institute, et al.* v. *EPA*, 568 F2d 284 (3d Cir. 1977). While the court again rejected all technical challenges to the BPT limitations, it again questioned the regulation in regard to the age/retrofit and water scarcity issues. In addition, the court invalidated the regulation as applied to the specialty steel industry for lack of proper notice. Finally, the Court directed EPA to reevaluate its estimates of the cost of compliance with the regulation in light of certain "site-specific" factors and to reexamine its economic impact analysis.[2]

On June 26, 1978 the Agency promulgated General Pretreatment Regulations applicable to existing and new indirect dischargers within the steel industry and other major industries, 43 FR 27936–2773 (40 CFR Part 403). Those regulations are currently in effect.

Overview of the Industry

The steel industry is included within the United States Department of Commerce, Bureau of the Census Standard Industrial classification (SIC) Major Group 33—Primary Metal Industries. Those parts of the industry covered by this regulation are the subgroup SIC Nos. 3312, (except coil coatings) 3315, 3316, and 3317. These include all processes, subprocesses, and alternate processes involved in the manufacture of intermediate or finished products in the above categories.

The manufacture of steel involves many processes which require large quantities of raw material and other resources. Steel facilities range from comparatively small plants engaging in one or more production processes to extremely large integrated complexes engaging in several or all production processes. Even the smallest steel facility, however, represents a fairly large industrial complex. Because of the wide variety of products and processes in this industry, operations vary from plant to plant.

The 1978 revenues of the United States steel industry were about 46 billion dollars. The industry ranks third

[1] The court also held that the "form" of the regulations was improper, because they did not provide "ranges" of limitations to be selected by permit issuers. This holding, however, was recalled in *American Iron and Steel Institute, et al.* v. *EPA*, 560 F.2d 589 (3d Cir. 1977).

[2] The court also held that EPA had no statutory authority to exempt plants in the Mahoning Valley region of Eastern Ohio from compliance with the BPT regulations.

in the nation behind the automotive and petroleum industries in the values of its total shipments; and, with about 500,000 employees, is second only to the automotive industry in the number of employees.

Fifteen steel corporations provided approximately 87% of the total annual U.S. steel ingot production. U.S. steel production represents about 15% of world production.

The steel industry can be segregated into two major components: raw steelmaking; and forming and finishing operations. The Agency estimates that there are about 680 plant locations containing over two thousand individual steelmaking and forming and finishing operations. A listing of these plants is contained in the Appendix B to Volume I of the technical Development Document.

In the first major process, coal is converted to coke which is then combined with iron ore and limestone in a blast furnace to produce iron. The iron is then purified into steel in either open hearth, basic oxygen, or electric arc furnaces. Finally, the steel can be further refined by vacuum degassing.

Following the steelmaking processes are the hot forming (including continuous casting) and cold finishing operations. These operations are so varied that a simple classification and description is difficult. In general, hot forming primary mills reduce steel ingots to slabs or blooms and secondary hot forming mills reduce slabs or blooms to billets, plates, shapes, strip, and various other products. Steel finishing operations involve a number of other processes that do little to alter the dimensions of the hot rolled product, but which impart desirable surface or mechanical properties.

Water is essential to the industry and is used in appreciable quantities in virtually all process operations. An average of 40,000 gallons of water is used in the production of every ton of finished steel, making the industry one of the highest water users of any manufacturing industry.

The following wastewater pollutants have historically been regulated in the steel industry: suspended solids, ammonia-N, fluoride, cyanide, phenols, oil and grease, iron, total and hexavalent chromium, tin, lead, and zinc. The discharge of these pollutants is limited by this regulation. Other pollutants, such as chloride, are found in the industry's wastewaters. However, the Agency is not proposing limitations for those pollutants in this regulation because the technology for their removal is presently considered to be beyond the scope of best practicable or best available technology for this industry.

In addition to the pollutants known to be present in steel industry wastewaters, many other pollutants became subject to consideration as a result of the NRDC/EPA Settlement Agreement noted earlier. The original list of 65 pollutant classes was defined more specifically by selecting definite compounds within each class to facilitate analytical qualification and quantification and to serve as indicators for other members of the classes. The list of 129 specific toxic pollutants was therefore developed.

III. Scope of This Rulemaking and Summary of Methodology

This proposed regulation expands the water pollution control requirements for the steel industry. In EPA's prior regulations, emphasis was placed on the achievement of best practicable technology (BPT) by July 1, 1977. In general, this technology level represented the average of the best existing performances of well-known technologies for control of familiar (i.e., "classical") pollutants.

In contrast, EPA's efforts are now directed toward insuring the achievement by July 1, 1984, of the best available technology economically achievable, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants. At a minimum, this technology level represents the best economically achievable performance in any industrial category or subcategory. Moreover, as a result of the Clean Water Act of 1977, the emphasis of EPA's program has shifted from "classical" pollutants to the control of toxic substances.

EPA's implementation of the Act required a complex investigation, described in this section and succeeding sections of this notice. EPA and its laboratories and consultants had to develop analytical methods for toxic pollutant detection and measurement, which are discussed under Sampling and analytical Program. EPA then gathered technical and financial data about the industry, which are summarized under Data Gathering Efforts.

EPA studied the steel industry to determine whether differences in raw materials, final products, manufacturing processes, equipment, age and size of plants, water usage, wastewater constituents, or other factors required the development of separate effluent limitations and standards for different segments of the industry. This study included the identification of raw waste and treated effluent characteristics, including: (1) the sources and volume of water used, the processes employed, and the sources of pollutants and wastewaters in the plant, and (2) the constituents of wastewaters, including toxic pollutants (See Industry Subcategorization for further discussion). EPA identified the pollutants which are being considered for effluent limitations and standards of performance, and statistically analyzed raw waste constituents, as discussed in detail in Section V of the Development Documents for the various subcategories.

EPA identified several distinct control and treatment technologies, including both in-plant and end-of-process technologies, which are in use or are capable of being used in the steel industry. The Agency compiled and analyzed historical data and newly generated effluent quality data resulting from the application of these technologies. The long-term performance, operational limitations, and reliability of each of the treatment and control technologies were also identified. In addition, EPA considered the nonwater quality environmental impacts of these technologies, including impacts on air quality, solid waste generation, water scarcity, and energy requirements.

The Agency estimated the cost of each control and treatment technology by using standard engineering analysis as applied to the applicable wastewater characteristics. EPA derived unit process costs from model plant characteristics (production and flow) applied to each treatment process (i.e., primary coagulation-sedimentation, activated sludge, multi-media filtration). These unit process costs were added to yield the total costs for each treatment level. After confirming the reasonableness of this methodology by comparing EPA cost estimates to actual treatment system costs reported by the industry, the Agency evaluated the economic impacts of these costs. (Costs are reviewed in each subcategory report of the Development Document. Economic impacts are reviewed in the section of this notice entitled Costs, Effluent Reduction Benefits, and Economic Impacts.)

Upon consideration of these factors, as more fully described below, EPA identified various control and treatment technologies including the BPT, BCT, BAT, PSES, PSNS, and NSPS model treatment systems. The proposed regulation, however, does not require the installation of any particular

technology. Rather, it requires the achievement of effluent limitations representative of the proper operation of these technologies or equivalent technologies.

The proposed effluent limitations for BPT, BCT, BAT, PSES, and PSNS, and NSPS are expressed as mass limitations (lbs/1000 lbs) of product and are calculated by multiplying four figures: (1) effluent concentrations determined from analysis of control technology performance data, (2) wastewater discharge flow for each subcategory, (3) any relevant process or treatment variability factor (e.g., maximum month vs. maximum day), and (4) the appropriate conversion factor. This basic calculation was performed for each regulated pollutant in each subcategory of the industry.

In reevaluting the previously promulgated BPT limitations in light of the Third Circuit's decisions, EPA found that in most instances those limitations are well demonstrated and, in some instances, are less stringent than could be currently justified.

IV. Data Gathering Efforts

Before initiating this study, EPA reviewed the original Development Documents and appendices.[3] The Agency concluded that additional data were required to respond to the Third Circuit's ruling in *AISI I* and *AISI II* and to develop regulations in accordance with both the Clean Water Act and the *NDRC* v *Train* Settlement Agreement.

The Agency sent Data Collection Portfolios (DCPs) to *all* basic steelmaking operations and to approximately 85% of the steel forming and finishing operations in the United States. The DCPs requested information concerning production processes, production capacity and rates, process water usage, wastewater generation rates, wastewater treatment and disposal methods, treatment costs, location, age of production and treatment facilities, as well as general analytical information. The Agency received responses from 393 steelmaking operations and from 1631 steel forming and finishing operations.

The Agency also sent Detailed Data Collection Portfolios (D-DCPs), under the authority of Section 308 of the Act, to 50 steelmaking facilities and 128 forming and finishing facilities. The D-DCPs requested detailed information concerning the cost of installing pollution control equipment including capital, annual and retrofit costs. The D-DCPs also requested long-term analytical data and data regarding specific production operations.

The Agency determined the presence and magnitude of the 129 specific toxic pollutants in steel industry wastewaters in a two-part sampling and analysis program involving 31 steelmaking facilities and 83 forming and finishing facilities.

The Agency obtained data not only from previous studies, questionnaire responses, and sampling visits, but also from NPDES permit files, contacts with pollutant control equipment suppliers, treatability studies, and literature searches. The data gathering program solicited all known sources of data. All available information was used in developing the proposed regulation.

V. Sampling and Analytical Program

The sampling and analysis program for this rulemaking concentrated on the toxic pollutants designated in the Clean Water Act. However, conventional and nonconventional pollutants were also studied. Although it was expected that, except for cokemaking, toxic pollutants in the steel industry would be inorganic rather than organic, the wasteswaters from this industry were sampled and analyzed for the presence of toxic organic pollutants. The Agency has not promulgated analytical methods for many of the organic toxic pollutants under Section 304(h) of the Act, although a number of these methods have been proposed (44 FR 69464, December 3, 1979; 44 FR 75028, December 18, 1979). Additional information on the development of sampling and analytical methods for toxic organic pollutants is contained in the preamble to the proposed regulation for the Leather Tanning Point Source Category, 40 CFR Part 425, 44 FR 38749, dated July 2, 1979.

Before analyzing steel industry wastewaters EPA concluded that it had to specify specific toxic pollutants for analysis. The list of 65 pollutants and classes of pollutants potentially includes thousands of specific pollutants; analyses for all of them would overwhelm private and government laboratory resources. In order to make the task more manageable, EPA selected pollutants for study in this and other industry rulemakings. The criteria for choosing these pollutants included the frequency of their occurrence in water, their chemical stability and structure, the amount of the chemical produced, and the availability of chemical standards for measurement.

EPA checked for the presence and magnitude of the 129 pollutants in steel industry wastewaters in a two-phase sampling and analysis program. The Agency selected plants for sampling which it believed were representative of the manufacturing processes, the prevalent mix of production among plants, and the current treatment technology in the industry. During the first phase of the program EPA sampled ten steelmaking facilities and eleven forming and finishing facilities. During the second phase of the program, EPA sampled 21 steelmaking facilities and 72 forming and finishing facilities.

The primary objective of the field sampling program was to obtain composite samples of wastewater from which to determine the concentrations of toxic pollutants. Sampling visits were made during two to three consecutive days of plant operation, with raw wastewater samples taken either before treatment or after minimal preliminary treatment. Treated effluent samples were taken following application of in-place treatment technologies. EPA also sampled intake water to determine the presence of toxic pollutants prior to contamination by steelmaking processes.

During the first phase of the sampling program the Agency detected and quantified wastewater constituents included on the list of 129 toxic pollutants. Wherever possible, each sample of an individual raw waste stream, a combined waste stream, or a treated effluent was collected by an automatic, time series sample compositor over 2 to 3 consecutive 24 hour sampling periods. Where automatic compositing was not possible, grab samples were taken and composited manually. The purpose of the second phase of the sampling program was to confirm the presence and further quantify the concentrations and waste loadings of the toxic pollutants found during the first phase of the program.

EPA used the analytical techniques described in *Sampling and Analysis Procedures for Screening of Industrial Effluents for Priority Pollutants*, revised April, 1977. Very similar methods are found among those proposed on December 3, 1979. EPA did not find significant quantities of toxic organic pollutants in most steelmaking wastewaters. The exceptions are cokemaking and cold rolling wastewaters.

Metals analyses for the Phase I operations were by inductively coupled plasma optical emission spectrometry except that the standard flameless

[3] See *EPA* 440/1-74-024a; Development Document for Effluent Limitation Guidelines and New Source Performance Standards for the Steelmaking Segment of the Iron and Steel Manufacturing Point Source Category, June, 1974; and EPA 440/1-76/048-d; Development Document for Interim Final Effluent Limitations Guidelines and Proposed New Source Performance Standards for the Forming, Finishing, and Specialty Steel Segments of the Iron and Steel Manufacturing Point Source Category, March, 1976.

atomic adsorption method was used for mercury analyses. Metals analyses for the Phase II operations were by a combination of flame and flameless atomic adsorption methods.

Analyses for cyanide and cyanide amendable to chlorination were also performed using 304(h) methods.

Analysis for asbestos fibers included transmission electron microscopy with selected area defraction; results were reported as chrysotile fiber count.

Analyses for conventional pollutants (BOD5, TSS, pH, and oil and grease) and nonconventional pollutants (total residual chlorine, iron, ammonia, fluoride, and COD) were performed using 304(h) methods.

VI. Industry Subcategorization

In developing this proposed regulation, the Agency determined that different effluent limitations and standards should be developed for distinct segments or subcategories of the steel industry. The Agency's consideration of industry subcategorization included an examination of the same factors and rationale described in its previous studies and the issues raised by the court in *AISI I* and *AISI II*. These factors are:

1. Manufacturing processes and equipment
2. Raw materials
3. Final products
4. Wastewater characteristics
5. Wastewater treatability
6. Size and age of facilities
7. Geographic location
8. Process water usage and discharge rates
9. Costs and economic impacts
10. Non-water quality environmental impacts

Based upon these factors, the Agency has decided to retain the same approach to subcategorization as outlined in previous regulations which is based primarily upon the various manufacturing processes in the steel industry. The Agency found that manufacturing process is the most significant factor and divided the industry into 12 main process subcategories on this basis. Section IV of Volume I of the Development Document contains a detailed discussion of the factors considered and the rationale for selecting the subcategories. The Agency determined that process based subcategorization is warranted in many cases because the wastewaters of the various processes contain different pollutants, requiring treatment by different control systems (e.g., phenol by biological systems in cokemaking and metals by precipitation in steelmaking). However, in some cases, the wastewaters of different processes were found to contain similar characteristics. In those instances, the Agency determined that subcategorization was appropriate because the process water usage and discharge flow rates varied so widely. A more detailed discussion of this issue is presented in Volume I of the development document.

The subcategories of the steel industry are as follows:

(1) Subpart A—Cokemaking Subcategory

Cokemaking operations involve the production of coke in by-product or beehive ovens. The production of metallurgical coke is an essential part of the steel industry, since coke is one of the basic raw materials necessary for the operation of ironmaking blast furnaces.

(2) Subpart B—Sintering Subcategory

Sintering operations involve the production of an agglomerate which is then used as a raw material in iron and steelmaking processes. This agglomerate (or "sinter") is made up of large quantites of waste particulate matter (fines, mill scale, and flue dust) which have been generated by blast furnaces, open hearth furnaces, basic oxygen furnaces, and recovered from hot forming operations.

(3) Subpart C—Ironmaking Subcategory

Ironmaking operations involve the conversion of iron bearing materials, limestone, and coke into molten iron in a reducing atmosphere in tall cylindrical (blast) furnaces.

(4) Subpart D—Steelmaking Subcategory

Steelmaking operations involve the production of steel in basic oxygen, open hearth, and electric arc furnaces from molten iron and steel scrap materials.

(5) Subpart E—Vacuum Degassing Subcategory

This operation involves the removal of gaseous material (deoxidation) from molten steel by applying a vacuum to the molten steel.

(6) Subpart F—Continuous Casting Subcategory

This operation involves the continuous formation of a primary steel shape (i.e., slab, billet, or bloom) from molten steel by casting the molten steel through a water-cooled mold.

(7) Subpart G—Hot Forming Subcategory

Hot forming is the steel forming process in which hot steel, in solid ingot form, is reduced in size during a series of forming steps into finished and semi-finished steel products.

(8) Subpart H—Scale Removal Subcategory

Scale removal from specialty steels is accomplished by immersing the steel in molten salt baths of kolene or hydride compounds.

(9) Subpart I—Acid Pickling Subcategory

Acid pickling is the process of chemically removing oxides and scale from the surface of steel using dilute inorganic acids.

(10) Subpart J—Cold Forming Subcategory

In cold forming operations, steel products are formed or reduced in thickness or size, or acted upon to produce a smooth surface or to control the mechanical properties of the metal. Rolling solutions are used in cold forming to cool and lubricate the product during the reduction operation.

(11) Subpart K—Alkaline Cleaning Subcategory

This operation involves the removal of rolling oil or other materials from the surface of steel products prior to further processing. The removal can be enhanced by the electrolysis of the steel in an alkaline solution.

(12) Subpart L—Hot Coating Subcategory

In the hot coating process, clean steel products are immersed in baths of various molten metals to deposit a thin layer of the metal on the product surface.

VII. Available Wastewater Control and Treatment Technology

A. Status of In-Place Technology

There are many different treatment technologies currently employed in the steel industry. Generally, primary wastewater treatment systems rely upon physical/chemical methods of treatment, including neutralization, sedimentation, flocculation and filtration. Treatment for toxic pollutants require adviced technologies such as biological treatment, carbon adsorption, ion exchange, reverse osmosis, and more sophisticated chemical techniques.

Within the cokemaking segment of the steel industry, organic pollutant removal is accomplished by biological treatment

in bio-oxidation lagoons and activated sludge plants, and, physical/chemical treatment in ammonia stills, dephenolizers and activated carbon systems. Sedimentation and filtration techniques are employed as well in this subcategory.

Treatment facilities at plants in the sintering, ironmaking and steelmaking subcategories rely heavily upon sedimentation and flocculation techniques. Clarifiers and thickeners are principally used in connection with polymers and coagulants such as lime, alum, and ferric sulfate.

Wastewater from nearly all hot forming operations are treated in scale pits followed by lagoons, clarifiers, filters, or combinations thereof. Polymers and coagulants such as lime, alum, and ferric sulfate are normally used in conjunction with clarifiers. Filters are usually either gravity or pressure types with sand or other media.

Cold finishing treatment techniques include equalization prior to further treatment; neutralization with lime, caustic or acid; flocculation with polymer; and, sedimentation. Central or combined treatment systems are common for these operations.

Another important treatment method commonly practiced in the steel industry is recycle of treated wastewaters. Recycle can be effectively used to significantly reduce wastewater flows and the amount of pollutants discharged to receiving streams. Systems employing high rates of recycle are demonstrated in several subcategories of the steel industry.

B. Advanced Technologies Considered

The Agency considered advanced treatment systems to control the level of toxic and non-conventional pollutants at the BAT, NSPS, PSES, and PSNS levels of treatment. Some of these include in-plant control, however, most include the installation of additional end-of-pipe treatment components.

In-plant control is demonstrated in several subcategories and has been incorporated, where appropriated, into the model BAT, BCT, NSPS, PSES, and PSNS treatment systems. In pickling operations, cascade rinse systems reduce the volume of rinse flow discharged by up to 95%, and are included into the model BAT, BCT, NSPS, PSES and PSNS treatment systems.

The Agency also considered other in-plant control measures such as reducing wastewater generation rates and process modifications. These control measures are highly subcategory specific and are discussed in detail in the respective subcategory reports.

Add-on technology to BPT was considered for the BAT, NSPS, PSES, and PSNS levels of treatment in most of the subcategories. Some of these control measures for the toxic pollutants include two-stage (i.e. extended) biological treatment (cokemaking); granular activated carbon; powdered carbon addition; pressure filtration; pressure filtration accompanied with sulfide addition; and, multi-stage evaporation/condensation systems. Details on these advanced systems are presented in Section VI of volume I of the Development Document.

VIII. Best Practicable Technology (BPT) Effluent Limitations

The factors considered in defining best practicable control technology currently available (BPT) include the total cost of application of technology in relation to the effluent reduction benefits from such application, the age of equipment and facilities involved, the process employed, nonwater quality environmental impacts (including energy requirements) and other factors the Administrator considers appropriate. In general, the BPT technology level represents the average of the best existing performances of plants of various ages, sizes, processes or other common characteristics. Where existing performance is uniformly inadequate, BPT may be transferred from a different subcategory or industry. Limitations based upon transfer technology must be supported by a conclusion that the technology is, indeed, transferable and a reasonable prediction that it will be capable of achieving the prescribed effluent limits. See *Tanners' Council of America* v. *Train*, 540 F2d 1188 (4th Cir. 1976). BPT focuses on end-of-pipe treatment rather than process changes or internal controls, except where the process changes are common industry practice.

The cost-benefit inquiry for BPT is a limited balancing, committed to EPA's discretion, which does not require the Agency to quantify benefits in monetary terms. See, e.g., *AISI I, supra*. In balancing costs in relation to effluent reduction benefits, EPA considers the volume and nature of existing discharges, the volume and nature of discharges expected after application of BPT, the general environmental effects of the pollutants, and the cost and economic impact of the required pollution control level. The Act does not require or permit consideration of water quality problems attributable to particular point sources or industries, or water quality improvements in particular water bodies. Therefore, EPA has not considered these factors. See *Weyerhaeuser Company* v. *Costle*, 590 F 2d 1011 (D.C. Cir. 1978).

A detailed discussion of the bases for selecting the proposed BPT effluent limitations is set forth in Section IX of each subcategory report of the Development Document. The components of the BPT model treatment systems are presented in Appendix D.

IX. Best Available Technology (BAT) Effluent Limitations

The factors considered in assessing best available technology economically achievable (BAT) include the age of equipment and facilities involved, the process employed, process changes, nonwater quality environmental impacts (including energy requirements) and the costs of application of such technology (Section 304(b)(2)(B)). In general, the BAT technology level represents, at a minimum, the best economically achievable performance of plants of various ages, sizes, processes or other shared characteristics. As with BPT, where existing performance is uniformly inadequate, BAT may be transferred from a different industry or subcategory. BAT may include process changes or internal controls, even when not common industry practice.

The statutory assessment of BAT "considers" costs, but does not require a balancing of costs against effluent reduction benefits (see *Weyerhaeuser* v. *Costle, supra*). In developing the proposed BAT limitations, however, EPA has given substantial weight to the reasonableness of costs. The Agency has considered the volume and nature of discharges, the volume and nature of discharges expected after application of BAT, the general environmental effects of the pollutants, and the costs and economic impact of the required pollution control levels.

Despite this expanded consideration of costs, the primary determinant of BAT is effluent reduction capability. As a result of the Clean Water Act of 1977, the achievement of BAT has become the principal national means of controlling toxic water pollution. The steel industry discharges over forty different toxic pollutants. EPA considered two to five alternative BAT treatment systems for each subcategory which can reduce the discharge of toxic pollutants by over 90% from BPT levels. A detailed discussion of the bases for selecting the proposed BAT effluent limitations is set forth in Section X of each subcategory report of the Development Document. The components of the BAT model treatment systems are presented in Appendix D.

X. New Source Performance Standards (NSPS)

The basis for new source performance standards (NSPS) under Section 306 of the Act is the best available demonstrated technology. Industry has the opportunity to design the best and most efficient steelmaking processes and wastewater treatment technologies for new plants. Congress therefore directed EPA to consider the best demonstrated process changes, in- plant controls, and end-of-pipe treatment technologies which reduce pollution to the maximum extent feasible. EPA considered two to four alternative treatment systems for each subcategory in selecting proposed NSPS.

A detailed discussion of the bases for selecting the proposed new source performance standards is set forth in Seciton XII of each subcategory report of the Development Document. The components of the NSPS model treatment systems are presented in Appendix D.

XI. Pretreatment Standards for Existing Sources (PSES)

Section 307(b) of the Act requires EPA to promulgate pretreatment standards for existing sources (PSES), which must be achieved within three years of promulgation. PSES are designed to prevent the discharge of pollutants which pass through, interfere with, or are otherwise incompatible with the operation of Publicly Owned Treatment Works (POTWs). The Clean Water Act of 1977 adds a new dimension by requiring pretreatment for pollutants, such as toxic metals, that pass through POTWs in amounts that would exceed direct discharge effluent limitations or limit POTW sludge management alternatives, including the beneficial use of sludges on agricultural lands. The legislative history of the 1977 Act indicates that pretreatment standards are to be technology-based and analogous to the best available technology for removal of toxic pollutants. The general pretreatment regulations (40 CFR Part 403), which served as the framework for the proposed pretreatment standards for the steel industry, can be found at 43 FR 27736 (June 26, 1978).

EPA has determined that many of the metals present in the steel industry's raw wastewaters pass through POTWs, may limit POTW sludge disposal alternatives and can interfere with biological treatment in the POTW. These metals include: antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc.

Accordingly, EPA is proposing pretreatment standards for metals and other toxic and non-conventional pollutants in this proposed regulation. In addition to the factors discussed above, EPA considered the following factors in developing the proposed pretreatment standards:

1. The manufacturing processes employed by the industry;
2. The age and size of the equipment and facilities involved;
3. The location of manufacturing facilities;
4. Process changes;
5. The engineering aspects of the application of pretreatment technology and its relationship to the POTW;
6. The cost of application of technology in relation to the effluent reduction and other benefits achieved from such application; and,
7. Nonwater quality environmental impact (including energy requirements).

The methodology used to develop the effluent limitations is the same as that used to develop the direct discharger limitations. A detailed discussion of the bases for selecting the proposed pretreatment standards for existing sources is set forth in Section XIII of each subcategory report of the Development Document. The components of the PSES model treatment systems are presented in Appendix D.

XII. Pretreatment Standards for New Sources (PSNS)

Section 307(c) of the Act requires EPA to promulgate pretreatment standards for new sources (PSNS) at the same time that it promulgates NSPS. New indirect dischargers, like new direct dischargers, have the opportunity to incorporate the best available demonstrated technologies including process changes, in-plant controls, and end-of-pipe treatment technologies, and to use plant site selection to ensure adequate treatment system installation. The Agency is proposing PSNS based on the same considerations discussed in Section XI relating PSES.

A detailed discussion of the bases for selecting the proposed pretratment standards for new sources is set forth in Section XIII of each subcategory report of the Development Document. The components of the PSNS model treatment systems are presented in Appendix D.

XIII. Best Conventional Technology (BCT) Effluent Limitations

The 1977 amendments added Section 301(b)(4)(E) to the Act, establishing "best conventional pollutant control technology" (BCT) for discharges of conventional pollutants from existing industrial point sources. Conventional pollutants are those defined in Section 304(b)(4)—BOD, TSS, fecal coliform, and pH—and any additional pollutants defined by the Administrator as "conventional." On July 30, 1979, the Agency added oil and grease as a conventional pollutant (44 FR 44501).

BCT is not an additional limitation, but replaces BAT for the control of conventional pollutants. BCT requires that limitations for conventional pollutants be assessed in light of a new "cost-reasonableness" test, which involves a comparison of the cost and level of reduction of conventional pollutants from the discharge of publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. In its review of BAT for "secondary" industries, the Agency established BCT levels based upon a methodology described at 44 FR 50732 (Aug. 29, 1979). This methodology compares removal costs (dollars per pound of pollutant, measuring from BPT to BCT) with costs for an average POTW. The removal costs of an average POTW has been established by EPA as $1.34 per pound in July, 1978 dollars.

Where the removal costs of industry are less than the removal costs of an average POTW, the Agency has found the costs to be reasonable and is proposing limitations based upon BCT. In other subcategories where conventional pollutant removal costs exceeded this cost, the Agency is proposing BCT limitations which are equal to the proposed BPT limitations for conventional pollutants. A detailed discussion of the bases for selecting the best conventional technology effluent limitations is set forth in Section XI of each subcategory report of the Development Document. The components of the BCT model treatment systems are presented in Appendix D.

XIV. Regulated Pollutants

The basis for selecting the regulated pollutants, as well as the general nature and environmental effects of these pollutants, is discussed in detail in Section V of Volume I of the Development Document. Some of these pollutants are designated as toxic under Section.307(a) of the Act.

A. BPT—The pollutants controlled by this regulation include, for the most part, the same pollutants controlled by the prior BPT limitations. Some pollutants were deleted for various subcategories (e.g., chromium for hydride scale removal operations) because studies undertaken subsequent to the promulgation of the previous limitations

indicate that these pollutants are not found in great quantities in steel industry wastewaters.

The BPT effluent limitations are expressed in terms of maximum monthly average and maximum daily mass effluent limitations in kilograms of pollutant per 1000 kilograms (lbs/1000 lbs) of product. The limitations are calculated by multiplying the demonstrated pollutant concentrations, the BPT model discharge flow for each subcategory, and an appropriate conversion factor. For maximum daily limitations, the industry average limitation is multiplied by the appropriate variability factor.

B. BCT—The pollutants controlled by the BCT limitations include the statutory conventional pollutants, TSS, pH, and oil and grease. The Agency is not proposing BCT limitations for BOD. It is proposing BCT limitations in all twelve steel industry subcategories. Where the BCT model treatment system failed the BCT cost test, the Agency is proposing BCT limitations which are the same as the proposed BPT limitations.

C. BAT and NSPS—1. Non-toxic, Non-conventional Pollutants—The non-toxic, non-conventional pollutants limited by BAT and NSPS include ammonia-N and fluoride. These pollutants are subject to numerical limitations expressed in kilograms per 1000 kilograms (lbs/1000 lbs) of product. Total residual chlorine is also limited in two subcategories where chlorine is used in the treatment process.

2. Toxic Pollutants—Forty-eight toxic pollutants were found at concentrations above treatability levels in steel industry wastewaters. (Section V of Volume I contains a list of these pollutants.) Thirty toxic pollutants were found in cokemaking wastewaters. The Agency is proposing effluent limitations in one or more subcategories for the following toxic pollutants: phenols, cyanide, benzene, naphthalene, benzo(a)pyrene, 1,1,1-trichloroethane, 2-nitrophenol, anthracene, tetrachloroethylene, cadmium, chromium, copper, lead, nickel, and zinc. These pollutants are subject to numerical limitations expressed in kilograms per 1000 kilograms (lbs/1000 lbs) of product. The remaining toxic pollutants found in steel industry wastewaters, which are not specifically limited in the proposed regulation, will be controlled by limitations proposed for "indicator" pollutants as discussed below.

3. Indicator Pollutants—The difficulty and cost of analyses for the many toxic pollutants found in steel industry wastewaters has prompted EPA to propose an alternative method of regulating certain toxic pollutants. Instead of proposing specific effluent limitations for each of the forty-eight toxic pollutants found in the industry's wastewaters above treatability levels, the Agency is proposing effluent limitations for certain "indicator" pollutants. These include chromium, lead, zinc, phenols (4AAP) and several of the toxic organic compounds. The data available to EPA show generally that the control of the selected "indicator" pollutants will result in comparable control of other toxic pollutants found in the wastewaters but not specifically limited. By establishing specific limitations on only the "indicator" pollutants, the Agency will reduce the difficulty, high cost, and delays of pollutant monitoring and analyses that would result if pollutant limitations were established for each toxic pollutant. EPA estimates that industry will save about $10 million annually in monitoring and analysis costs. Section V in Volume I of the Development Document discusses in detail the pollutants found in steel industry wastewaters and those for which the Agency is proposing limitations at the BAT and NSPS levels of treatment. Section X of each subcategory report discusses the bases for the selection of "indicator" pollutants for each subcategory.

D. PSES and PSNS—The Agency is proposing PSES and PSNS for the same toxic pollutants which are limited at BAT and NSPS. The Agency is proposing those standards to insure against POTW upsets, to prevent contamination of POTW sludges and to guard against a pass-through of toxic pollutants. The PSES and PSNS are expressed as maximum monthly average and maximum daily mass limitations in kilograms per 1000 kilograms (lbs/1000 lbs) of product. As a general rule, the Agency establishes pretreatment standards on the basis of concentration. However, for the steel industry, the Agency believes the standards should be based upon mass limitations (kg/kkg) to insure that effective toxic pollutant control is provided and to minimize the hydraulic impact of large volume steel industry discharges on POTWs.

XV. Pollutants and Subcategories Not Regulated

The Settlement Agreement contained provisions authorizing the exclusion from regulation, in certain instances, of toxic pollutants and industry subcategories. These provisions have been rewritten in a Revised Settlement Agreement which was approved by the District Court for the District of Columbia on March 9, 1979.

Paragraph 8(a)(iii) of the Revised Settlement Agreement allows the Administrator to exclude from regulation toxic pollutants not detectable by Section 304(h) analytical methods or other state-of-the-art methods. The toxic pollutants not detected and therefore, excluded from regulation are listed in APPENDIX B to this proposed regulation.

Paragraph 8(a)(iii) of the Revised Settlement Agreement allows the Administrator to exclude from regulation toxic pollutants detected in the effluent in only trace quantities and not likely to cause toxic effects. APPENDIX B lists the toxic pollutants in each subcategory which were detected in the effluent in trace amounts (at or below the nominal limit of analytical quantification), which are not likely to cause toxic effects and which are excluded from the proposed regulation.

Paragraph 8(a)(iii) of the Revised Settlement Agreement allows the Administrator to exclude from regulation toxic pollutants detected in the effluent from a small number of sources and uniquely related to those sources. APPENDIX B contains a column labeled "Unique Occurrence" which lists those pollutants detected in the effluents of only one plant and uniquely related to that plant, which have been excluded from the proposed regulation. Appendix C contains the list of pollutants, by subcategory, for which limitations are being proposed.

XVI. Monitoring Recommendations

When required to carry out the objectives of the Act, EPA is authorized by Section 308 to require the owner or operator of a pollutant discharge source to establish and maintain records; make reports; install and use monitoring equipment or methods; sample effluents; and, provide such other information as the Administrator may reasonably require. The authority under Section 308 has been frequently used by permit issuers to set monitoring requirements to "determine whether any person is in violation" of the requirements of a permit or other requirement of the Act [Section 308(a)(2)]. Additionally, EPA has frequently sought information under Section 308 to aid in developing regulations for many industries.

In this and other "toxics" regulations, EPA has developed typical monitoring programs for direct and indirect dischargers for the purpose of estimating monitoring costs as part of the economic impact analysis of the proposed regulation. These monitoring programs are not intended to supercede or duplicate existing compliance monitoring requirements set by NPDES

permit authorities but may be used as a guide in establishing minimum NPDES monitoring requirements. A minimum monitoring and analysis program is feasible at this time because only a small number of toxic pollutants will be limited, the cost of toxic pollutant analyses has decreased, and laboratory availability and efficiency have dramatically increased since the initiation of this study.

The monitoring and analysis program considered by the Agency includes continuous flow monitoring, grab sampling for pH (3 grabs per day, once a week), and oil and grease (3 grabs/day, once a week), and the collection of 24-hour composite samples once per week for all limited pollutants except noted below. More intensive monitoring is suggested for the period of time necessary to determine compliance with the proposed limitations. Accordingly, as of July 1, 1984, (the required compliance date for BCT and BAT), or as of the date of attainment of operational level of treatment facilities if such facilities are completed prior to July 1, 1984, monitoring and analysis of the limited pollutants should be carried out on a schedule of five daily composite samples per week (once per week for GC/MS pollutants). When the appropriate regulatory authority determines that compliance has been demonstrated monitoring can then be undertaken in accordance with the long term schedule discussed above. It should be noted that EPA may, on a case-by-case basis request collection of additional samples of raw wastewater or wastewater at points of intermediate treatment to determine treatment efficiencies.

XVII. Costs, Effluent Reduction Benefits, and Economic Impacts

Executive Order 12044 requires EPA and other agencies to perform Regulatory Analyses of certain regulations, 43 FR 12661 (March 23, 1978). EPA's proposed regulations for implementing Executive Order 12044 require a Regulatory Analysis for major significant regulations involving annualized compliance costs of $100 million or meeting other specified criteria, 43 FR 29891 (July 11, 1978). Where these criteria are met, the proposed regulations require EPA to prepare a formal Regulatory Analysis, including an economic impact analysis and an evaluation of regulatory alternatives. The proposed regulation for the steel industry meets the criteria for a formal Regulatory Analysis.

The capital and annual costs of this regulation are summarized below.

Cost of Regulation—*Steel Industry*

[Millions of 1978 dollars]

[Based upon estimated facilities in place 6/30/80]

	Capital costs		
	Facilities in-place	Facilities required	Total
BPT	1,826.0	417.8	2,243.8
BAT (BCT)	[1] 188.6	444.1	632.7
NSPS	.0	159.5	159.5
Total	2,014.6	1,021.4	3,036.0

[1] Includes $49.5 million of committed BAT expenditures.

Annual Costs

	Incremental		Total	
	1984	1990	1984	1990
BPT	96.6	92.7	444.3	420.7
BAT (BCT)	150.3	93.6	193.2	133.8
NSPS	16.7	39.9	16.7	39.9
Total	263.6	226.2	654.2	594.4

EPA estimates that the total additional investment costs for the proposed regulation are about $1.02 billion. The associated annualized costs (including interest, depreciation, operating and maintenance) will be about $264 million in 1984, and drop to $226 million in 1990.

BPT–EPA estimates that, as of July 1, 1980, the steel industry must invest an additional $418 million to comply with the proposed BPT limitations. EPA estimates that the industry will incur annualized costs (including interest, depreciation, operating and maintenance) of $96.6 million of 1984. These costs decrease to $92.7 million by 1990.

BAT–EPA estimates that the steel industry must invest an additional $444.1 million to comply with the proposed BAT limitations. The incremental annual costs necessary to achieve the proposed BAT limitations are about $150.3 million in 1984. These costs decrease to $93.6 million in 1990. The costs to comply with the proposed BAT limitations includes the cost to comply with the proposed BCT limitations as the BAT model technology includes the BCT model technology in nearly every instance.

Compliance with the proposed BAT and BCT limitations will result in the removal of about 1,900 tons per year of toxic organic pollutants, 2,500 tons per year of toxic metals and 130,000 tons per year of other pollutants. As discussed in detail each subcategory report of the Development Document, the Agency has concluded that the effluent reduction benefits associated the industry's compliance with the proposed limitations and standards justify the costs. The Agency, between proposal and promulgation, will continue to evaluate alternative BAT levels that are either more or less stringent than those proposed herein.

EPA's economic impact assessment is set forth in *Economic Impact Analysis of Proposed Effluent Limitations Guidelines, New Source Performance Standards and Pretreatment Standards for the Iron and Steel Manufacturing Point Source Category.*

This report, focuses on the production, pollution control, and financial characteristics of the steel industry. In analyzing these industry characteristics, the Agency employed a policy testing model of the steel industry which combines a methodology for calculating economic effects with the cost impact methodology employed by the American Iron and Steel Institute (AISI) in its investigation of pollution control costs for the industry. This combination permits and integrated analysis of the costs and financial effects of environmental regulations.

The Agency assessed the economic impact of this regulation under three scenarios. The first scenario was based on a continuation, over the 1981–90 period, of the economic environment and government economic policy the steel industry faced over the past decade. The second scenario was based on an average 3.0 percent growth in steel shipments, higher profitability, and changes in government policy that included more rapid recovery of capital investments, a return to "fair value" steel import prices in the domestic market, and the latitude for the steel industry to increase prices constrained only by supply and demand forces. The third scenario was designed to reflect changes in the economic environment due to government economic policies that would affect the steel industry's performance throughout the 1980s. The third scenario examines the impact of this regulation by evaluating the effect of common elements of the economic recovery policies various groups within government are currently considering. Specific changes include an increase in real economic growth due to tax incentives, a reinstatement of trigger prices, and approximately a 40 percent increase in depreciation cash flows. Continuation of past policies include, until at least the mid-1980s, a 10.1 percent limit on nominal steel price increases set by the current "Anti-Inflation" program. The results of these three analyses are summarized in Tables 1 and 2.

Table 1.—*Short-Run Economic Impact of Proposed Water Pollution Control Regulations, 1984*

	Domestic shipments [millions of net tons]	Employment [thousands of employees]	Market share [percent]
Industry Status in 1979	100.3	342.0	84.8
Scenario 1:			
Baseline	101.3	334.5	82.0
Additional Water Pollution Control Costs:			
Zero Pass-Through	101.3	335.8	82.0
Full Pass-Through	101.3	335.8	82.0
Scenario 2:			
Baseline	106.7	356.0	82.0
Additional Water Pollution Control Costs	106.7	357.3	82.0
Scenario 3:			
Baseline	106.6	354.8	[1]85.0
Additional Water Pollution Control Costs	106.6	356.1	85.0

[1]Reflects the new surge provisions of the recently reinstituted Trigger Price Mechanism.

Table 2.—*Long-run Economic Impact of Proposed Water Pollution Control Regulations, 1990*

	Domestic shipments [millions of net tons]	Employment [thousands of employees]	Market share [percent]
Industry Status in 1979	100.3	342.0	84.8
Scenario 1:			
Baseline	92.4	271.1	71.5
Additional Water Pollution Control Costs:			
Zero Pass-Through	86.1	254.6	66.6
Full Pass-Through	89.1	262.9	68.9
Scenario 2			
Baseline	126.0	366.4	82.0
Additional Water Pollution Control costs	126.0	368.3	82.0
Scenario 3			
Baseline	117.8	341.5	[1]85.0
Additional Water Pollution Control Costs	115.3	336.0	[1]83.2

[1]Represents a recovery from a baseline market share of 77.8 percent in 1988 and from a market share after additional water pollution control costs of 73.4 percent also in 1988.

First Scenario

In the first scenario, the effects of two cost pass-through assumptions were examined—zero pass-through of annual costs and full pass-through of annual costs. The analysis indicated that in either case the industry will be unable to finance the capital necessary to maintain existing production facilities, while at the same time maintaining bond ratings high enough to ensure ready access to debt capital markets. The capital requirements of this regulation will further reduce capital to maintain existing facilities. Because of the poor profit projections, the Agency does not think the industry can issue common stock without diluting stockholders' equity. Therefore, the industry will have to rely on debt as the principal source of funds for financing its investments.

Market Share—Zero Pass-Through of Annual Costs

Large debt issues could push debt to capitalization ratios to levels incompatible with bond ratings necessary to ensure ready access to debt funds and interest coverage ratios necessary to avoid undue risk of failure to meet financial obligations. Consequently, the Agency expects the industry to forego some reworks expenditures. In this event, the Agency predicts that the steel industry's share of the domestic market for steel will decline by about 2.2 percent (to 69.3 percent) below the estimated 1990 baseline share (71.5 percent) after complying with the BPT limitations, and by an additional 2.7 percent (to 66.6 percent) after complying with BAT limitations, or a combined loss of 4.9 percentage points.

The industry will face excess capacity as it attempts to recover from the current recession and will face continued competition from foreign steel. Throughout the 1980s, both factors will prevent the industry from raising prices to levels that would enable them to recover the annual cost of this regulation.

Market Share—Full Pass-Through of Annual Costs

Although unlikely, if full pass-through of costs were assumed, the market share would only fall to 70.5 percent after compliance with the BPT limitations and to 68.9 percent after compliance with the BAT limitations, or a combined incremental loss of 2.6 percentage points.

Employment—Zero Pass-Through of Annual Costs

Assuming zero pass-through of annual costs, the decline in production capacity due to this regulation on the steel industry is expected to cause a loss of about 17,900 jobs below a projected baseline employment of 271,100, or about 6.6 percent of baseline employment. However, additional expenditures for water pollution control will increase industry employment by about 1,400. Thus, under the first scenario, the net effect of this proposed regulation will be a decline of about 16,500 jobs from the projected baseline employment, or 6.1 percent of baseline.

Employment—Full Pass-Through of Annual Costs

Assuming that all costs are passed through, capacity reductions would decrease steel industry employment by about 9,600 jobs from a projected baseline employment of 271,100. With additional jobs of 1,400, the net decline would be 8,200, or 3.0 percent of the baseline.

Second Scenario

Based on the analysis of these regulations under the second scenario, the long-run (1985–90) adverse impact of this regulation will be greatly reduced. The industry should be able to finance a full reworks program as well as all pollution control requirements during the 1981–90 period without a loss in current market share.

The analysis of this scenario indicates that the industry will face some financial strain during the 1981–84 period similar to that under the first scenario. It is during this period that the industry will have to make all the capital expenditures necessary to comply with the BPT and BAT regulations. These requirements will necessitate significant increases in debt financing because profitability will not begin to increase to levels that would permit additional common stock issues until about 1986. Thus, during the 1981–84 period, if industry attempts to prevent a deterioration in its bond ratings and tries to ensure ready access to capital markets, some reworks expenditures will be foregone.

Market Share

In contrast to the first scenario, this reduced capital expenditure program will be sporadic, spread over the entire industry, and not sustained. By 1984, profitability will begin to increase significantly, and by 1986 the industry should be able to begin issuing additional common stock. Thus, in the later part of the decade, the industry should be able to maintain its debt to capitalization and interest coverage ratios at levels that would ensure ready access to debt markets and avoid undue risks of default while at the same time financing all its capital requirements. Moreover, the industry can probably more than make up the reworks foregone in the first half of the decade thereby forestalling any loss in market share.

Employment

Under the second scenario, the effects of the regulation on employment should be positive. With no long-run reductions in productive capacity, there should be no decline in employment. However, additional expenditures on water pollution control equipment should increase employment by about 1,915 workers above a baseline employment of 336,400. Some minor reductions in

employment would occur due to a slightly reduced shipments volume resulting from price increases to cover water pollution control costs.

Third Scenario

The economic analysis under the third scenario reveals an overall impact that varies, depending on the time period, between the first and the second scenarios. The financial conditions of the steel industry depicted in the first scenario will persist until about 1987 or 1988, and then the industry will move towards the conditions depicted in the second scenario during the late 1980s and early 1990s.

Market Share

During the 1981-86 period, the industry will be under severe financial strain. Therefore, to meet the capital requirements of this regulation and to maintain ready access to capital markets, the industry will again forego reworks of existing facilities. Consequently, by 1988 the industry's share of the domestic steel market is expected to decline from a baseline level of 77.8 percent to 73.4 percent, or 4.4 percentage points, as a result of this proposed regulation. However, by 1986, profitability should begin to increase signficantly to levels that will enable the industry to reinstate a reworks program in addition to significant capacity replacement and expansion. Thus, by 1990, the industry's improved economic conditions will increase this market share to 83.2 percent compared to a baseline level of 85.0 percent.

Employment

The maximum impact of additional water requirements on employment would occur in 1987 and 1988. In these years, additional water pollution control requirements would lead to a decline in production labor of 16,190 jobs below the projected baseline. The decrease would be partically offset by the 1,650 jobs needed to operate the additional water pollution control equipment. Thus, the net effect of this water pollution control regulation on steel industry employment would be a *temporary* reduction of 14,540 jobs below the projected baseline employment by the late 1980s. After 1988, employment should begin to rebound. By 1990, employment will be reduced by 5,500 workers below a baseline of 341,500. However, some minor reductions in employment would also occur as a result of slight reductions in steel shipments due to price increases necessary to recover the water pollution control costs.

Conclusions

Based on the findings under these three scenarios, the industry's ability to finance required production capital over the 1981–90 period while complying with this regulation will depend on changes in broad government economic policies toward the industry. Policy changes could provide the industry with additional cash flows and could increase the demand for steel and steel industry profits as industry in general increases its expenditures on steel intensive capital equipment. In the presence of such changes, the steel industry's financial performance could begin to approach that described in the second scenario by the late 1980s or early 1990s. In the absence of such changes, the industry's performance throughout the 1980s could be best described by the first scenario. The Agency, in anticipation of some change in government policy towards industry, believes the assumptions embodied in the third scenario could well reflect the actual environment in which the steel industry will be operating in the 1980s. However, the Agency requests public comments on which of these three scenarios is the most appropriate for assessing the economic impact of this proposed regulation.

XVIII. Non-Water Quality Aspects of Pollution Control

The elimination or reduction of one form of pollution may aggravate other environmental problems. Sections 304(b) and 306 of the Act require EPA to consider the non-water quality environmental impacts (including energy requirements) of certain regulations. In compliance with these provisions, EPA considered the effect of this regulation on air pollution, solid waste generation, water consumption, and energy consumption. This proposed regulation was circulated to and reviewed by EPA personnel responsible for nonwater quality programs. While it is difficult to balance pollution problems against each other and against energy use, EPA is proposing a regulation which it believes best serves often competing national goals.

A detailed discussion of these impacts is contained in Section VIII of each subcategory report of the Development Document. Following is a summary of the non-water quality environmental impacts (including energy requirements) associated with the proposed regulation:

A. Air Pollution—Industry compliance with the proposed BPT, BAT, BCT, NSPS, PSES, and PSNS limitations and standards will not create any substantial air pollution problems. However, in several subcategories, slight air impacts can be expected. First, minimal amounts of volatile organic compounds may be released to the atmosphere by aeration of cokemaking wastewaters in biological treatment. Second, small emissions of air pollution may result when ironmaking wastewaters are used to quench the hot slag generated in the process. Third, water vapor containing some particulate matter will be released from the cooling tower systems used in several of the subcategories. The Agency does not consider any of these impacts to be significant.

B. Solid Waste—The Agency has determined that 37.3 million tons per year of solid waste (at 30% solids) have and will be generated by the steel industry in complying with the proposed regulation. Of this amount, almost all (37.0 million tons) is already generating by the steel industry in complying with the proposed BPT limitations. This solid waste is comprised almost entirely of treatment plant sludges. EPA recognizes that significant quantities of other solid wastes, such as electric furnace dust and blast furnace slag, are generated by the steel industry. However, those solid wastes are generated by the manufacturing processes and are not associated with this proposed water pollution control regulation. For this reason, process solid wastes are not included in this impact analysis.

The data gathered for this study demonstrate that the industry collects and disposes of most sludges currently generated in existing treatment systems. Hence, the industry is presently incurring sludge disposal costs and finding the necessary disposal sites. The Agency believes that the industry will continue to be able to do so. (EPA is unable to estimate accurately the number of disposal sites that are secure, well maintained operations). The average sludge disposal cost used in this analysis is $5.00 per ton. These costs have been included in the Agency's estimate for costs of compliance with the proposed regulation and the Agency expects the solid waste impacts associated with the proposed regulation to be small.

C. Consumptive Water Loss—Water loss is a remand issue of the 1974 and 1976 regulations. As discussed in detail in Section III of the development document, the Agency concludes that the benefits derived from compliance with the limitations justify the negative impacts associated with the consumption of water. The Agency has reached this conclusion after considering this issue on both an

industry-wide basis and on a water-scarce regional basis.

D. Energy Requirements—EPA estimates that compliance with the proposed regulation will result in a net increase of electrical energy consumption at the BPT and BAT/BCT levels of treatment as shown below:

Treatment level	Net energy consumption (kw-hr) (billion)
BPT	1.20
BAT/BCT	0.87
Total	2.07

The electric power requirements associated with the proposed BPT, BCT, and BAT limitations amount to 3.6 percent of the 57 billion kw-hrs of electrical energy consumed by the steel industry in 1978. This amounts to only 0.6 of the total energy (electric and nonelectric) consumed by the industry. The Agency concludes that the impacts of the energy consumed due to compliance with the proposed regulations is justified by the benefits derived from compliance with the proposed limitations and standards.

XIX. Best Management Practices (BMPs)

Section 304(e) of the Clean Water Act authorizes the Administrator to prescribe "best management practices" ("BMPs"). EPA intends to develop BMPs which are: (1) applicable to all industrial sites; (2) applicable to a designated industrial category; and (3) provide guidance to permit authorities in establishing BMPs required by unique circumstances at a given plant.

EPA is not proposing BMPs specific to the steel industry in this regulation.

XX. Upset and Bypass Provisions

An issue of recurrent concern has been whether industry guidelines should include provisions authorizing noncompliance with effluent limitations during periods of "upset" or "bypass." An upset, sometimes called an "excursion," is unintentional noncompliance occurring for reasons beyond the reasonable control of the permittee. It has been argued that an upset provision in EPA's effluent guidelines is necessary because such upsets will inevitably occur in even properly operated control equipment. Because technology-based limitations are based upon what technology can achieve, it is claimed that liability for such situations is improper. When confronted with this issue, courts have been divided on the question of whether an explicit upset or excursion incidents may be handled through EPA's exercise of enforcement discretion. Compare *Marathon Oil Co.* v. *EPA*, 564 F.2d 1253 (9th Cir 1977) with *Weyerhaeuser* v. *Costle, supra* and *Corn Refiners Association, et al.* v. *Costle*, 594 F2d 1223 (8th Cir. 1979). See also *American Petroleum Institute* v. *EPA*, 540 F.2d 1023 (10th Cir. 1976); *CPC International, Inc.* v. *Train*, 540 F.2d 1320 (8th Cir 1976); *FMC Corp.* v. *Train*, 539 F.2d 973 (4th Cir. 1976).

While an upset is an unintentional episode during which effluent limits are exceeded, a bypass is an act of intentional noncompliance during which waste treatment facilities are circumvented. Bypass provisions covering emergency situations have, in the past, been included in NPDES permits.

EPA has determined that both upset and bypass provisions should be included in NPDES permits and they are included in the NPDES regulations, 40 CFR § 122.60, 45 FR 33298; May 19, 1980. The upset provisions establishes an upset as an affirmative defense to prosecution for violation of technology-based effluent limitations. The bypass provision authorizes bypassing to prevent loss of life, personal injury, or severe property damage. Because this issue is resolved in the NPDES permit regulations, this proposed regulation does not address these issues.

XXI. Variances and Modifications

Upon the promulgation of the final regulation, the numerical effluent limitations for the appropriate subcategory must be included in all federal and state NPDES permits thereafter issued to steel industry direct dischargers. In addition, the pretreatment standards are directly applicable to indirect dischargers upon promulgation.

For the BPT and BCT effluent limitations, the only exception to the binding limitations is EPA's "fundamentally different factors" variance. See *E. I. duPont de Nemours and Co.* v. *Train*, 430 U.S. 112 (1977); *Weyerhaeuser Co.* v. *Costle, supra.* This variance recognizes factors concerning a particular discharger which are fundamentally different from the factors considered in this rulemaking. Although this variance clause was set forth in EPA's 1974–1976 steel industry regulations, it is now included in the NPDES regulations and will not be included in the steel or other industry regulations. See the final NPDES regulations, Act 45 FR 33290 (May 19, 1980), for the text and explanation of the "fundamentally different factors" variance.

The BAT limitations in this regulation also are subject to EPA's "fundamentally different factors" variance. In addition, BAT limitations for non-toxic and non-conventional pollutants are subject to modifications under Sections 301(c) and 301(g) of the Act. According to Section 301(j)(1)(B), applications for these modifications must be filed within 270 days after promulgation of final effluent limitations guidelines. See 40 CFR Part 125 Part D. Under Section 301(1) of the Act, these statutory modifications are not applicable to "toxic" pollutants. Likewise, limitations on nonconventional pollutants used as "indicators" for toxic pollutants are not subject to Section 301(c) or Section 301(g) modifications, unless the discharger demonstrates that a waste stream does not contain any of the toxic pollutants for which the "indicator" was designed to demonstrate removal.

Pretreatment standards for existing sources are subject to the "fundamentally different factors" variance and credits for pollutants removed by POTWs. See 40 CFR 403.7, 403.13; 43 FR 27736 (June 26, 1978). Pretreatment standards for new sources are subject only to the credits provision in 40 CFR 403.7. New source performance standards are not subject to EPA's "fundamentally different factors" variance or any statutory or regulatory modifications. See *duPont* v. *Train, supra.*

XXII. Relationship to NPDES Permits

The BPT, BAT, BCT, and NSPS limitations and standards in this regulation will be applied to individual steel plants through NPDES permits issued by EPA or approved state agencies under Section 402 of the Act. The preceding section of this preamble discussed the binding effect of this regulation on NPDES permits, except to the extent that variances and modifications are expressly authorized. This section describes several other aspects of the interaction of this regulation and NPDES permits.

One matter which has been subject to different judicial views is the scope of NPDES permit proceedings in the absence of effluent limitations, guidelines and standards. Under currently applicable EPA regulations, states and EPA Regions issuing NPDES permits prior to promulgation of this regulation and before June 30, 1981 must include a "reopener clause," providing for permits to be modified to incorporate "toxics" regulations when they are

promulgated. Permits issued after June 30, 1981 must meet the requirements of Sections 301(b)(2) of the Clean Water Act whether or not applicable effluent limitation guidelines have been promulgated. See 40 CFR § 122.62(c), 45 FR 33290, 33339 (May 19, 1980). At one time EPA had adopted a policy of issuing short-term permits, with a view toward issuing long-term permits only after promulgation of these and other BAT regulations. While EPA continues to encourage EPA and State permit writers to issue short-term permits to primary industry dischargers until June 30, 1981, EPA has changed its policy to allow more flexibility. See 45 FR 33340 (May 19, 1980). EPA permit writers may issue long-term permits to primary industries even if guidelines have not yet been promulgated provided that the permits require compliance with BAT and BCT limitations and contain reopener clauses. The appropriate technology levels and limitations will be assessed by the permit issuer on a case-by-case basis on consideration of the statutory factors. See *U.S. Steel Corp.* v. *Train*, 556 F.2d 822 (7th Cir. 1977). In these situations, EPA documents and draft documents (including these proposed regulations and supporting documents) are relevant evidence, but not binding, in NPDES permit proceedings.

With respect to the steel industry, however, the EPA has decided not to issue (and to encourage state NPDES permit issuing authorities not to issue) case-by-case NPDES permits until the final limitations are promulgated; assuming these final limitations will be promulgated no later than July 1, 1981. In event the promulgation of the final limitations is delayed beyond July 1, 1981, EPA (or the appropriate state NPDES permitting authority) would issue permits on a case-by-case basis.

Another noteworthy topic is the effect of this regulation on the powers of NPDES permit issuing authorities. The promulgation of this regulation does not restrict the power of any permit-issuing authority to act in any manner not inconsistent with law or these or any other EPA regulations, guidelines or policy. For example, the fact that this regulation does not control a particular pollutant does not preclude the permit issuer from limiting such pollutant on a case-by-case basis, when necessary to carry out the purposes of the Act. In addition, to the extent that state water quality standards or other provisions of state or Federal law require limitation of pollutants not covered by this regulation (or require more stringent limitations on covered pollutants), such limitations must be applied by the permit-issuing authority.

EPA is evaluating the use of the water bubble concept for the steel industry. The water bubble concept is a method of developing effluent limitations that would allow dischargers to discharge greater amounts of effluent at outfalls where treatment costs are high in exchange for an equivalent decrease in effluent discharged at outfalls in the same plant where abatement is less expensive. Thus, the same amount of reduction in pollutant loadings can be obtained at less cost.

Using the water bubble concept, a discharger could discharge no more total pounds of pollutants than it could without a bubble. However, with the bubble concept the discharger would have the flexibility to allocate that discharge among its various outfalls in the least costly manner. For example, a discharger could trade an increase (above that prescribed by the effluent guidelines) of 10 pounds of pollutant X in outfall A for a decrease of 10 pounds of the same pollutant in outfall B.

In evaluating the water bubble concept for the steel industry, EPA wants to ensure that use of the concept will be equivalent in enforceability and environmental impact to control without a bubble. To ensure this equivalence, EPA is considering applying several conditions on the use of the water bubble concept:

a. *Dischargers must meet water quality standards.*

A change in the distribution of pollutant loadings among outfalls may adversely affect water quality even if total loadings do not increase. A permit writer would not approve the use of the water bubble concept if its application results in a violation of water quality standards.

b. *Trades would involve only the same pollutant.*

EPA would allow dischargers to trade a pollutant in one waste stream only against the same pollutant in another wastestream. For example, zinc would be traded for zinc, but not for chromium or lead.

c. *Each outfall must have a specific discharge limit.*

EPA would not approve applications of the water bubble concept that do not have specific enforceable limitations set for each outfall. The water bubble concept would not allow limitations to be set on a plant-wide "floating" basis.

d. *Dischargers would initiate, at their own expense, water bubble proposals during the normal permit reissuance process.*

The discharger would be responsible for developing its own water bubble proposal. EPA would allow dischargers to make proposals only during the normal permit reissuance process. In no case would EPA allow the water bubble proposal to delay compliance with pollution control requirements.

e. *Non-complying dischargers would not be allowed to use the water bubble concept.*

Only facilities in compliance with permit conditions, on an EPA approved compliance schedule, or on a court-ordered schedule for compliance with applicable effluent limitations and current water quality standards would be eligible to use the water bubble concept.

f. *All waste streams would be required to meet applicable BPT requirements.*

Dischargers would not be allowed to meet less than BPT limits for any outfall. Thus, a plant could not decrease control of a pollutant below the outfall specific BPT limitation, even if it were able to obtain sufficient reductions of the same pollutant at another outfall.

g. *Trading between some waste streams from different subcategories would be prohibited.*

This condition would restrict potential trades of pollutants to certain subcategory wastestreams. Currently, EPA is considering prohibiting any trades with cokemaking, ironmaking, and sintering subcategories because their pollutant characteristics are of a different nature than those from other iron and steel subcategories.

Between proposal and promulgation of the steel effluent guidelines, EPA will decide whether to include specific water bubble provisions as part of the final regulation. In making this decision, EPA will evaluate any comments received on the water bubble. For specific questions about this policy, please call Richard Raines, Economic Analysis Division, (202) 755-7733.

One additional topic that warrants discussion is the operation of EPA's NPDES enforcement program, many aspects of which have been considered in developing this regulation. The Agency wishes to emphasize that, although the Clean Water Act is a strict liability statute, the initiation of enforcement proceedings by EPA is discretionary. EPA has exercised and intends to exercise that discretion in a manner which recognizes and promotes good faith compliance efforts and conserves enforcement resources so as to maximize their availability for actions against those who fail to make good faith efforts to comply with the Act.

XXIII. Summary of Public Participation

Between November 1979 and April 1980, EPA circulated nine individual volumes, which together comprise the EPA contractor's draft technical report on the bases of this proposed regulation, including available treatment alternatives and costs. The draft technical report was distributed to a number of interested parties, including the American Iron and Steel Institute and several member firms, the Natural Resources Defense Council (NRDC), and affected state and municipal authorities. This document did not include recommendations for proposed effluent limitations and standards, but rather presented the EPA Contractor's draft technical report on treatment alternatives available, costs, and other information relating to this proposed regulation. A meeting was held in Washington, D.C. on May 19, 1980 for public discussion of comments on this document.

The following general issues raised by the industry are addressed below. Special issues and technical considerations are addressed elsewhere (see Section XXIV).

1. *Regulation of the Steel Industry at the BAT Level*

The AISI and some of its member companies have requested that the steel industry not be regulated at the BAT level, citing the significant removal of toxic and conventional pollutant loads from raw waste loads to the proposed BPT level.

The Agency agrees that the proposed BPT level of treatment for the steel industry provides for a significant reduction in the discharges of toxic, nonconventional, and conventional pollutants. This is not surprising since those familiar with the industry are aware of the quantity of raw materials and products moved through this industry, the vast quantities of water contaminated by its operations (over six billion gallons per day), and the tremendous size and pollution potential of its processes. Hence, any significant level of pollution control is bound to demonstrate a large percentage removal of pollutants from raw waste loads.

The Agency is more concerned with the toxic, nonconventional, and conventional pollutants discharged into the environment at the proposed BPT level rather than with the percentage reduction of pollutants from raw waste loads. For the steel industry those loadings are among the highest, if not the highest, of major American industries, amounting to over 2150 tons/year of toxic organic pollutants (including cyanide), 2740 tons/year of toxic metal pollutants, and 140,000 ton/year of nonconventional and conventional pollutants. There is more than a ninety percent reduction in the discharge of pollutants cited above from the proposed BPT limitations to the proposed BAT and BCT limitations. EPA estimates, however, that even when the steel industry complies with the proposed BAT and BCT limitations, 247 tons of toxic organic pollutants, 222 tons of toxic metal pollutants, and 10,300 tons of non-conventional and conventional pollutants will be discharged annually into the environment. These amounts are higher than the annual discharge of most other industries at their respective BPT levels of treatment.

Based upon the above considerations, the Agency believes that regulation of the steel industry at the proposed BAT level is appropriate.

2. *Central Treatment*

The Agency has received numerous requests from AISI and its members to create a subcategory within the proposed regulation allowing for central or combined treatment of wastewaters from various subcategories. There are two major issues associated with central treatment:

(1) The compatibility of effluent limitations for subcategories that can be effectively cotreated; and

(2) The historical inclusion of cooling water, surface runoff, roof runoff, and other nonprocess waters in existing central treatment systems.

With respect to the first issue, the Agency recognizes that central treatment of compatible wastewaters is an effective means to achieve compliance with the proposed regulation at a cost less than would be required for separate treatment systems. Accordingly, the Agency has taken direct, positive action to facilitate central treatment where it believes central treatment is effective. The prior 1974 and 1976 regulations contained BPT effluent limitations for the various subcategories that often were not compatible from the standpoint of co-treating similar wastewaters. These limitations are, by and large, identical to the proposed BPT limitations. The Agency did not revise these limitations for purposes of facilitating central treatment at the BPT level because it believes that co-treatment at that level of treatment is inappropriate due to the high discharge flow rates incorporated in certain BPT model treatment systems and the number of unregulated toxic pollutants.

However, at the BAT and NSPS levels, this proposed regulation directly addresses the central treatment problem by providing limitations for the same pollutants for subcategories that can be effectively co-treated. Hence, this issue will be resolved for all levels of treatment upon promulgation of the proposed BAT and BCT limitations and NSPS. The Agency has concluded that, with adequate pretreatment where necessary, wastewaters from the following groups of subcategories can be treated together to achieve the proposed limitations:

Group and Subcategory

1. Cokemaking
2. Sintering, Iron Making
3. Steelmaking, Vacuum Degassing, Continuous Casting, Hot Forming, Pickling, Cold Rolling, Alkaline Cleaning, Hot Coatings

The Agency considered the nature of coke plant wastewaters and the biological treatment currently used to treat those wastewaters in developing the proposed BAT limitations and believes that coke plant wastewaters must be treated separately to insure the effective removal of toxic and non-conventional pollutants. Based upon the nature of toxic and non-conventional pollutants found in sintering and ironmaking wastewaters, and the treatment systems considering in developing the proposed BAT effluent limitations, the Agency believes that these wastewaters can be effectively co-treated at the BAT level. The Agency is proposing limitations for the same pollutants in these categories to facilitate co-treatment. However, the Agency concludes that treatment of cokemaking, sintering, and ironmaking wastewaters with wastewaters from other subcategories allows for the dilution of non-conventional and toxic pollutants not found in wastewaters from the other subcategories (i.e., Ammonia-N, Cyanide, Phenolic compounds, and other organic compounds found in cokemaking wastewaters) which reduces the treatability of those pollutants, and, therefore that such co-treatment is not appropriate.

The proposed BCT and BAT limitations for the subcategories listed in Group 3 above are compatible and facilitate the implementation of extensive central treatment. Where necessary, pretreatment for the following subcategories may be required: pickling; cold rolling; and hot coatings.

The Agency has decided not to oppose the establishment a central treatment subcategory in the proposed regulation. There are numerous combinations of wastewater treatment systems that can be and are being employed ranging from individual

recycle systems followed by central treatment of blowdowns and once-through flows, to total plant-wide recycle systems with treatment of the blowdown. These combinations are so numerous, that it is not possible for the Agency to regulate effectively the discharge of toxic pollutants at the BAT level with a central treatment subcategory. The only feasible means of limiting discharges from those treatment systems is to establish limitations based on pollutant concentrations. However, the use of concentration limitations alone cannot provide for effective limitation of toxic pollutant discharges since those limitations do not regulate discharge flow. The reduction in discharge flow provides most of the toxic pollutant loading removal to be achieved by industry's compliance with the proposed BAT and BCT limitations.

In all cases, the limitations applicable to a central treatment facility should be the sum of the applicable effluent loading limitations for the individual subcategory processes tributary to the central treatment facility.

Based upon the above considerations, the Agency believes that the development of a central treatment subcategory which provides for effective regulation of toxic pollutants is not possible or necessary. However, the Agency has made central treatment possible under the proposed BAT, BCT, and NSPS limitations and standards by carefully selecting the toxic pollutants to be limited for those subcategories that have compatible wastes.

As noted above, the second major issue pertaining to central treatment is the historical inclusion of cooling water, surface runoff and roof runoff in central treatment systems. While separation of these non-process waters has been accomplished at many steel plants and even at many older steel plants, it may be inordinately expensive to do so at a small number of plants.

The Agency believes its model treatment system cost estimates, which are based upon the more costly separate treatment systems for each subcategory, are sufficiently generous to cover all site-specific and retrofit costs associated with upgrading most existing central treatment systems to the point where the proposed BAT limitations can be achieved. However, there may be instances where, because of unique site-specific factors, the proposed BAT limitations may not be achievable without the expenditure of amounts significantly higher than those estimated by the Agency. In such instances, the Agency believes that the plants should receive alternative BAT limitations.

In establishing alternative BAT limitations for a particular plant the Agency would evaluate the existing central treatment system on a site-specific basis by the following three steps.

(1) Computing the applicable BAT effluent limitations by summing the allowable effluent loadings for each subcategory process tributary to the central treatment facility.

(2) Requiring separation of those non-process flows that can reasonably be accomplished.

(3) Adjusting recycle rates for the remaining flows and requiring appropriate blowdown treatment to achieve the applicable effluent limitations.

Where surface and roof runoff have not been separated from process wastewaters, surge capacity can be provided prior to recycle to maintain low blowdown rates. In extreme cases it may be necessary to provide for additional flow allowances during rainfall events.

There are two stages at which the Agency can evaluate whether a particular plant or central treatment facility should be subject to effluent limitations less stringent than the generally applicable BAT limitations. The Agency could, where feasible, identify certain plants in the final regulation for which alternative limitations are appropriate, and establish limitations for those facilities. If the Agency finds that it can, from a practical standpoint, resolve this issue in the regulation, it will do so. Alternatively, the Agency could resolve this issue at the permit writing stage. The discharges could apply for a "fundamentally different factor" variance under 40 CFR § 125.31(b)(3). For example, if the cost of segregating the non-process waters and installing the BAT model technologies, or otherwise achieving compliance with the appropriate BAT limitations, would be "wholly out of proportion" to the Agency's estimated cost, the discharger may obtain relief from the generally applicable limitations. Under the variance procedure, the permit writer would evaluate the existing central treatment system and alternative treatment approaches, and propose alternative limitations for that facility on a case-by-case basis.

As stated previously, the Agency would like to resolve this issue under the first approach. The Agency met with representatives of AISI and its member companies regarding those plants which they believed were entitled to alternative effluent limitations or inclusion in a central treatment subcategory. At those meetings, the industry representatives presented data for more than thirty plants. Based upon those data and its independent analysis of the problem, the Agency has identified seven plants which it believes may be entitled to relief from the generally applicable limitations. They are as follows:

Plant	Locations	Central treat facility
1. Armco Steel	Ashland, KY	Total plant.
2. Bethlehem Steel	Sparrows Point, MD.	Humphrey's Creek.
3. Bethlehem Steel	Burns Harbor	Total plant.
4. National Steel	Granite City, IL	Total plant.
5. Republic Steel	Gadsden, AL	Total plant.
6. U.S. Steel	Lorain, OH	Pipe mill lagoon.
7. U.S. Steel	Provo, UT	Total plant.

The Agency is continuing to analyze whether these or any other plants should have alternative limitations, and if so, what those limitations should be. If it determines that alternative limitations are appropriate, it will give notice of those proposed alternative limitations and provide an opportunity for comment.

The Agency is soliciting comments regarding whether these plants, or any other plants should have alternative limitations. The commenter should provide the following information for each plant:

(1) A schematic diagram of the existing wastewater treatment facility showing each major treatment component;

(2) Flow rates;

(3) A scale map of the area of the plant served by the wastewater treatment facility, including the treatment facility and water supply and discharge points;

(4) An estimate of the capital investment required to meet the proposed BAT limitations for the facility; and

(5) The effluent limitations which could be achieved if the discharger were to spend an amount equal to the Agency's model treatment system cost estimate for the facility and the treatment facilities which would be used to meet those limitations.

3. *Consumptive use of Water.*

a. One commenter suggested that EPA had failed to consider adequately, the impact of the proposed limitations on water consumption. The commenter contends that EPA has failed to estimate accurately the water consumption associated with industry's compliance with the proposed limitations, failed to consider the adverse impact which this water consumption would have on users of water downstream from the

commenter, and failed to account generally for the water scarity problems of the arid and semi-arid western states.

In response to the court's remand on this issue, EPA undertook an extensive analysis of the water consumption impact of this proposed regulation. The manner in which the Agency examined this issue, and the bases for its conclusions, are presented in detail in Section III of Volume 1 of the Development Document. The Agency estimated the water that will be consumed by the various water pollution control systems available for use in the steel industry. Based on the assumption that the industry will use evaporative cooling devices, the Agency estimates the water loss to be only 0.07% of the daily flow of steel industry process waters at the BPT level and 0.25% of daily flow at the BAT level. On the other hand, by proposing the limitations at their present level, the process water intake flow of steel industry will decrease by 40%, thus precluding approximately 3 billion gallons per day from becoming contaminated by steel industry processes.

Moreover, the Agency surveyed the following four steel plants which it considers to be the only major plants located in arid or semi-arid regions of the country.

0196A CF&I Steel Corporation, Pueblo, Colorado
0443A Kaiser Steel Corporation Fontana, California
0492A Lone Star Steel Company Lone Star, Texas
0864A United States Steel Corporation Provo, Utah

Based upon information provided by these companies, the Agency found that nearly all of the recycle and evaporative cooling systems included in the model treatment systems used to develop the proposed limitations and standards have been installed at these plants. Consequently, the incremental water consumption associated with compliance with the proposed limitations and standards is either minimal or non-existent for plants located in arid or semi-arid regions.

Although the commenter noted above suggested the Agency failed to account for water consumption associated with "drift" (as opposed to evaporation) from wet cooling towers, that loss of water was accounted for in the Agency's estimate of water consumption. (0.1% of flow).

The commenter also suggested that the increased water consumption which will result from compliance with the proposed regulation will adversely effect downstream users of water including agricultural and industrial users. Beyond the Agency's determination that the adverse impacts associated with the estimated increase in water consumption is justified by the benefit of reducing the pollutant load discharged to meet the proposed limitations, EPA is not able to consider properly the site specific factors cited by the commenter. Such site specific non-water quality environmental factors may be considered in a request for a variance by an NPDES permit applicant (See 40 CFR 125, Subpart D). The Agency notes that the commenter is located in a state which has been delegated the authority to administer the NPDES program. The permitting authority which will issue the permit and consider any requests for a variance is uniquely suited to account for the regional and state concerns cited by the commenter.

b. The commenter also suggests that the Agency is ignoring Section 101(g) of the CWA by proposing limitations which will result in increased water consumption. The commenter suggests that Section 101(g) recognizes the primacy of state water laws and allocation systems over the CWA.

EPA does not agree with the commenter's conclusion regarding the primacy of state water laws over the CWA. The court, in *AISI II,* noted the primacy of the CWA over state water laws based upon the Supremacy Clause of the U.S. Constitution. That conclusion is equally applicable now and the existence of state water laws does not prohibit EPA from establishing limitations which incidentally involve the consumptive use of water. The Agency does, however, understand that Congress intended that EPA not unnecessarily interfere with those rights. It is noteworthy that EPA is preparing a report to Congress under Section 102(D) of the CWA regarding measures to coordinate water quality and water quantity issues and policies. This report demonstrates the Agency's continued sensitivity to this issue and its efforts to accommodate both goals.

XXIV. Solicitation of Comments

EPA invites and encourages public participation in this rulemaking. The Agency asks that any deficiencies in the record of this proposal be pointed to with specificity and that suggested revisions or corrections be supported by data.

EPA is particularly interested in receiving additional comments and information on the following issues:

A. General Issues

1. Whether the proposed limitations and standards for each of the subcategories are appropriate. Specifically, the Agency solicits comments on whether the proposed BPT limitations for the following operations, which are less stringent than those contained in prior regulations, are appropriate: (a) cokemaking—by-product; (b) sintering; (c) open hearth—wet

2. Whether the Agency has accurately estimated the cost of compliance with the proposed limitations and standards including site-specific costs, retrofit costs, and any other costs of compliance with the regulation.

3. Whether the pollutants proposed for limitation in each subcategory are appropriate. Specifically, the Agency solicits comments regarding the use of indicator pollutants and whether the indicator pollutants selected are appropriate.

4. In establishing limitations for the pickling, scale removal, alkaline cleaning, cold rolling, and hot coating operations, the Agency used production tonnage as a normalizing basis. The Agency does not have sufficient data available to develop effluent limitations on the basis of product surface area. While the Agency understands that product surface area data are not universally available throughout the industry, the Agency solicits comments on whether establishing limitations on that basis is appropriate, how those limitations could be established, and the data with which they could be established.

5. EPA is evaluating the use of the water bubble policy for the steel industry. Section XXII contains a discussion of how the policy might work and possible conditions for its application. EPA solicits comments on all aspects of the use of the water bubble policy in the steel industry. In particular, EPA solicits comments on the following issues:

a. Will the steel industry benefit from use of the water bubble concept? Comments are solicited on the amounts, which specific plants may save using the water bubble concept.

b. What conditions for applying the water bubble concept are needed to ensure that it is equivalent in enforceability and water quality impact to control without a bubble? Comments are solicited on the possible conditions for its application which are described in Section XXII.

c. Can the water bubble concept be implemented without excessive

administrative burden on the EPA or state permit issuing authorities?

6. Whether the definitions of steel industry processes and products contained in the proposed regulation are sufficiently specific to identify their applicability.

B. Subcategory Specific Issues

1. *Cokemaking.*

a. Whether separate BAT limitations for existing full-scale physical-chemical treatment systems incorporating granular activated carbon adsorption are warranted; or whether BAT limitations based upon biological treatment should be universally applicable.

b. The Agency has recently obtained data which indicate that the proposed BAT limitations for cokemaking may be achieved with single-stage biological treatment systems similar to those contained in the model BPT treatment systems. The Agency expects that the costs for such systems will be substantially less than those for the model BAT treatment systems. The Agency solicits comments regarding: (i) whether or not single stage biological treatment similar to that used in the BPT model treatment systems can be used with post filtration to attain the proposed BAT limitations; and (ii) if such systems cannot achieve the proposed BAT limitations, what BAT limitations would be appropriate for these systems.

2. *Ironmaking.*

a. Whether the proposed BCT, BAT, NSPS, PSES, and PSNS limitations are appropriate for both ferromanganese and ironmaking blast furnaces.

b. The Agency is soliciting comments on whether it would be appropriate to promulgate a new source performance standard and a pretreatment standard for new sources of zero discharge based upon evaporation of blast furnace blowdown on slag.

3. *Vacuum Degassing.*—The Agency found a vacuum degassing plant that achieves zero discharge using the treatment system components identified by the Agency as the model BPT system. Accordingly, the Agency solicits comments on whether zero discharge limitations and standards should be promulgated as BAT, BCT, NSPS, PSES, and PSNS for the vacuum degassing subcategory based upon the demonstrated performance of this plant. No costs beyond those required for compliance with the proposed BPT limitations would be necessary to achieve zero discharge for vacuum degassing operations.

4. *Continuous Casting.*—The Agency found that about twenty-five percent of the continuous casting plants achieve zero discharge using the treatment system components identified by the Agency as the model BPT system. Accordingly, the Agency solicits comments on whether zero discharge limitations and standards should be promulgated as BAT, BCT, NSPS, PSES, and PSNS for the continuous casting subcategory based upon the demonstrated performance of these plants. No costs beyond those required for compliance with the proposed BPT limitations would be necessary to achieve zero discharge for continuous casting operations.

5. *Hot Forming.*

a. The Agency found that the following number of hot forming mills achieve zero discharge using the treatment system components identified by the Agency as BPT, BAT, and BCT model treatment systems:

Subdivision and Number of Mills

Primary—3
Section—9
Flat—1
Pipe and Tube—1

Accordingly, the Agency solicits comments on whether zero discharge limitations and standards should be promulgated as BAT, BCT, NSPS, PSES and PSNS for any or all of the hot forming subdivisions. No costs beyond those required to achieve compliance with the proposed BPT, BAT, and BCT limitations would be necessary to achieve zero discharge for hot forming operations.

b. The Agency is proposing BAT, NSPS, PSES, and PSNS limitations and standards for toxic metal pollutants for the hot forming subcategory. Several commenters have suggested that hot forming operations for carbon steel products do not contribute any toxic metal pollutants to its wastewaters. They therefore contend that the proposed BAT, NSPS, PSES, and PSNS limitations and standards are not appropriate for those operations. The Agency believes that its data clearly indicate that both carbon and specialty steel hot forming operations contribute toxic metal pollutants to its process wastewaters above treatability levels. These data indicate the hot forming operations can contribute about 1,670 tons/year of toxic metal pollutants at the proposed BPT level and that these discharges can be reduced to about 90 tons/year at the proposed BAT Level. The Agency solicits comments on the following issues:

(1) Whether hot forming operations should be subdivided between carbon steel and specialty steel operations to a greater degree than is currently contemplated in this proposed regulation.

(2) Whether, and to what extent, carbon and specialty steel operations contribute toxic metal pollutants to process wastewaters.

The Agency is interested in any relevant data which bears on these issues. To the extent that any commenter would like to conduct sampling activities and submit data prior to the close of the comment period, the Agency will provide direction regarding the appropriation sampling points for particular facilities.

6. *Cold Rolling.*

a. The Agency has received comments indicating that product quality requirements may be limiting factors in achieving the discharge flows which may be required to achieve the proposed limitations. However, the Agency has insufficient documentation or data to support this claim. Hence, the Agency solicits data and documentation on this issue.

b. Based upon available data, the Agency believes that the toxic organic pollutant contamination of selected cold rolling operation wastewaters is attributable to the type of rolling and coating solutions applied to the various steel products. However, the agency has found that some cold rolling operation wastewaters are not contaminated by those pollutants. The Agency is continuing to investigate this issue. The Agency solicits data and documentation on whether toxic organic pollutant-free rolling solutions can be used in most or all cold rolling operations.

7. *Hot Coatings.*—The Agency found several hot coating operations without fume scrubbers in the following subdivisions which achieve zero discharge using the treatment system components identified by the Agency as the BPT model system:

Subdivision and Product Type

Galvanizing—Strip, sheet, and miscellaneous products, wire products and fasteners
Other coatings—Strip, sheet, and miscellaneous products

Accordingly, the Agency solicits comments on whether the hot coatings subcategory should be further subdivided and whether zero discharge limitations and standards should be promulgated as BAT, BCT, NSPS, PSES, and PSNS for those segments of the hot coatings subcategory where zero discharge has been demonstrated. No costs beyond those required for compliance with the proposed BPT limitations would be necessary to achieve zero discharge for those hot coatings operations.

In addition, the Agency has prepared a compilation of responses to comments received on the October 1979 draft technical report. This compilation is available from Ernst P. Hall, Effluent Guidelines Division (WH-552), Environmental Protection Agency, 401 M Street, Washington, D.C. 20460 (Phone: 202-426-2586). The Agency is also soliciting additional comments on each of the specific issues raised in these comments and the three general issues raised in Section XXIII.

Dated: December 24, 1980.

Douglas M. Costle,

Administrator.

Appendix A—Abbreviations, Acronyms and Other Terms Used in This Notice

ACT—The Clean Water Act.

AGENCY—The U.S. Environmental Protection Agency.

BAT—The best available technology economically achievable under Section 304(b)(2)(B) of the Act.

BCT—The best conventional pollutant control technology, under Section 304(b)(4) of the Act.

BMP—Best management practices under Section 304(e) of the Act.

BPT—The best practicable control technology currently available under Section 304(b)(1) of the Act.

Clean Water Act—The Federal Water pollution Control Act Amendments of 1972 (33 U.S.C. 1251 *et seq.*) as amended by the Clean Water Act of 1977 (Public Law 95-217).

Direct Discharger—A facility which discharges or may discharge pollutants directly into waters of the United States.

Indirect Discharger—A facility which introduces or may introduce pollutants into a publicly owned treatment works.

NPDES Permit—A National Pollutant Discharge Elimination System permit issued under Section 402 of the Act.

NSPS—New source performance standards under Section 306 of the Act.

POTW—Publicly owned treatment works.

PSES—Pretreatment standards for existing sources of indirect discharges under Section 307(b) of the Act.

PSNS—Pretreatment standards for new sources of direct discharges under Section 307(b) and (c) of the Act.

RCRA—Resource Conservation and Recovery Act (PL 94-580) of 1976, Amendments to Solid Waste Disposal Act.

Appendix B.—*Development of Regulated Pollutant List Iron and Steel Industry*

No.	Pollutant	Not detected	Unique occurrence	Not treatable	Regulation considered
001	Acenaphthene	-	-	X	-
002	Acrolein	X	-	-	-
003	Acrylonitrile	-	-	-	X
004	Benzene	-	-	-	X
005	Benzidine	X	-	-	-
006	Carbon Tetrachloride	-	-	X	-
007	Chlorobenzene	X	-	-	-
008	1,2,4-Trichlorobenzene	X	-	-	-
009	Hexzachloroben-zene	-	-	-	X
010	1,2-Dichloroethane	-	-	X	-
011	1,1,1,-Trichloroethane	-	-	-	X
012	Hexachloroethane	X	-	-	-
013	1,1-Dichloroethane	-	-	X	-
014	1,1,2-Trichloroethane	-	X	-	-
015	1,1,2,2-Tetrachloroeth-ane	-	-	X	-
016	Chloroethane	X	-	-	-
017	Bis(chloromethyl) ether	X	-	-	-
018	Bis(2-chloroethyl) ether	X	-	-	-
019	2-Chloroethyl vinyl ether	X	-	-	-
020	2-Chloronaphtha-lene	-	-	X	-
021	2,4,6-Trichlorophenol	-	-	X	-
022	Parachlorometacresol	-	-	-	X
023	Chloroform	-	-	-	X
024	2-Chlorophenol	-	-	-	X
025	1,2-Dichlorobenzene	-	-	X	-
026	1,3-Dichlorobenzene	X	-	-	-
027	1,4-Dichlorobenzene	-	-	X	-
028	3,3'-Dichlorobenzidine	X	-	-	-
029	1,1-Dichloroethylene	-	X	-	-
030	1,2-Transdichloroethylene	-	-	X	-
031	2,4-Dichlorophenol	-	-	X	-
032	1,2-Dichloropropane	X	-	-	-
033	1,2-Dichloropropylene	X	-	-	-
034	2,4-Dimethylphenol	-	-	-	X
035	2,4-Dinitrotoluene	-	-	-	X
036	2,6-Dinitrotoluene	-	-	-	X
037	1,2-Diphenylhydra-zine	-	-	X	-
038	Ethylbenzene	-	-	-	X
039	Fluoranthene	-	-	-	X
040	4-Chlorophenyl-phenyl ether	X	-	-	-
041	4-Bromophenyl-phenyl ether	X	-	-	-
042	Bis(2-chloroisopropyl) ether	X	-	-	-
043	Bis(2-chloroethoxy) methane	X	-	-	-
044	Methylenechloride	-	-	X	-
045	Methyl chloride	X	-	-	-
046	Methyl bromide	X	-	-	-
047	Bromoform	X	-	-	-
048	Dichlorobromomethane	-	-	X	-
049	Trichlorofluoromethane	X	-	-	-
050	Dichlorodifluoromethane	X	-	-	-
051	Chlorodibromomethane	X	-	-	-
052	Hexachlorobuta-diene	X	-	-	-
053	Hexachlorocyclopenta-diene	X	-	-	-
054	Isophorone	-	-	-	X
055	Naphthalene	-	-	-	X
056	Nitrobenzene	-	-	X	-
057	2-Nitrophenol	-	-	-	X
058	4-Nitrophenol	-	-	X	-
059	2,4-Dinitrophenol	-	-	X	-
060	4,6-Dinitro-o-cresol	-	-	-	X
061	N-Nitrosodimethylamine	X	-	-	-
062	N-Nitrosodiphenylamine	X	-	-	-
063	N-Nitrosodi-n-propylamine	X	-	-	-
064	Pentachlorophenol	-	-	-	X
065	Phenol	-	-	-	X
066	Bis(2-ethylhexyl) phthalate	-	-	-	X
067	Butyl benzylphthalate	-	-	-	X
068	Di-n-butylphthalate	-	-	-	X
069	Di-n-octylphthalate	-	-	-	X
070	Diethylphthalate	-	-	-	X
071	Dimethylphthalate	-	-	-	X
072	Benzo(a)anthracene	-	-	-	X
073	Benzo(a)pyrene	-	-	-	X
074	3,4-Benzofluor-anthene	-	X	-	-
075	Benzo(k)fluoranthene	-	X	-	-
076	Chrysene	-	-	-	X
077	Acenaphthylene	-	-	-	X
078	Anthracene	-	-	-	X
079	Benzo(ghi)perylene	-	X	-	-
080	Fluorene	-	-	-	X
081	Phenathrene	-	-	-	X
082	Dibenzo(a,h)anthracene	-	X	-	-
083	Indeno(1,2,3,cd)pyrene	-	X	-	-
084	Pyrene	-	-	-	X
085	Tetrachloroethylene	-	-	-	X
086	Toluene	-	-	-	X
087	Trichloroethylene	-	-	X	-
088	Vinyl chloride	-	X	-	-
089	Aldrin	-	X	-	-
090	Dieldrin	-	X	-	-
091	Chlordane	-	X	-	-
092	4,4'-DDT	-	X	-	-
093	4,4'-DDE	-	X	-	-
094	4,4'-DDD	-	X	-	-
095	a-endosufan-Alpha	-	X	-	-
096	b-endosulfan-Beta	-	X	-	-
097	Endosulfansulfate	-	X	-	-
098	Endrin	-	X	-	-
099	Endrin aldehyde	-	X	-	-
100	Heptachlor	-	X	-	-
101	Heptachlor epoxide	-	X	-	-
102	a-BHC-Alpha	-	X	-	-
103	b-BHC-Beta	-	X	-	-
104	R-BHC-Gamma	-	X	-	-
105	g-BHC-Delta	-	X	-	-
106	PCB-1242	-	X	-	-
107	PCB-1254	-	X	-	-
108	PCB-1221	-	X	-	-
109	PCB-1232	-	X	-	-
110	PCB-1248	-	X	-	-
111	PCB-1260	-	X	-	-
112	PCB-1016	-	X	-	-
113	Toxaphene	-	X	-	-
114	Antimony	-	-	-	X
115	Arsenic	-	-	-	X
116	Asbestos	X	-	-	-
117	Beryllium	-	-	X	-
118	Cadmium	-	-	-	X
119	Chromium	-	-	-	X
120	Copper	-	-	-	X
121	Cyanide	-	-	-	X
122	Lead	-	-	-	X
123	Mercury	-	-	X	-
124	Nickel	-	-	-	X
125	Selenium	-	-	-	X
126	Silver	-	-	-	X
127	Thallium	-	-	-	X
128	Zinc	-	-	-	X
129	2,3,7,8-Tetra-chlorodibenzo-p-dioxin	X	-	-	-
130	Xylene	-	-	-	X
	Aluminum	-	-	-	X
	Ammonia	-	-	-	X
	Dissolved Iron	-	-	-	X
	Fluoride	-	-	-	X
	Hexavalent Chromium	-	-	-	X
	Manganese	-	X	-	-
	Oil and Grease	-	-	-	X
	pH	-	-	-	X
	Phenolic Compounds	-	-	-	X
	Sulfide	-	-	-	X
	Toltal Suspended Solids	-	-	-	X

Key:
X indicates heading which applies to pollutant.

-Indicates heading which does not apply to pollutant.
Not Detected: Not detected in ay raw waste samples analyzed.
Unique Occurrence: Found at one or two plants at low levels.
Not Treatable: Detected at levels below practical treatability levels.
Req. Considered: Found in average concentrations of greater than 10ppb in at least one iron and steel subcategory.

Appendix C.—*Regulated Pollutant List, Iron and Steel Industry*

A. Cokemaking
Total Suspended Solids
Oil & Grease
Ammonia
Cyanide
Phenols (4AAP)
Benzene
Naphthalene
Benzo(a)pyrene
pH
B. Sintering
Total Suspended Solids
Oil & Grease
Ammonia
Cyanide
Phenols (4AAP)
Total Residual Chlorine
Lead
Zinc
pH
C. Ironmaking
Total Suspended Solids
Oil & Grease
Ammonia
Cyanide
Phenols (4AAP)
Total Residual Chlorine
Lead
Zinc
pH
D. Steelmaking
1. Basic Oxygen Furnace
Total Suspended Solids
Chromium
Lead
Zinc
pH
2. Open Hearth Furnace
Total Suspended Solids
Chromium
Lead
Zinc
pH
3. Electric Arc Furnace
Total Suspended Solids
Chromium
Lead
Zinc
pH
E. Vacuum Degassing
Total Suspended Solids
Chromium
Lead
Zinc
pH
F. Continuous Casting
Total Suspended Solids
Oil & Grease
Chromium
Lead
Zinc
pH
Hot Forming
Total Suspended Solids
Oil & Grease
Chromium
Lead
Zinc
pH
H. Scale Removal
1. Kolene
Total Suspended Solids
Chromium
pH
2. Hydride
Total Suspended Solids
Cyanide
Chromium
Lead
pH
I. Sulfuric Acid Pickling
Total Suspended Solids
Chromium
Lead
Zinc
pH
J. Hydrochloric Acid Pickling
Total Suspended Solids
Chromium
Lead
Zinc
pH
K. Combination Acid Pickling
Total Suspended Solids
Fluoride
Chromium
Copper
Nickel
pH
L. Cold Rolling
1. Recirculation and Combination
Total Suspended Solids
Oil & Grease
Chromium
Lead
Zinc
1,1,1-Trichlorophenol
2-Nitrophenol
Anthracene
Tetrachlororethylene
pH
2. Direct Application
Total Suspended Solids
Oil & Grease
Chromium
Zinc
pH
M. Alkaline Cleaning
Total Suspended Solids
Dissolved Iron
pH
N. Hot Coating
Total Suspended Solids
Oil & Grease
Cadmium
Chromium
Lead
Zinc
pH

Appendix D.—*Iron and Steel Model Treatment Summary*

Subcategory	Levels of treatment					
	BPT	BAT	BCT	NSPS	PSNS	PSES
A. Cokemaking:						
1. By-product	Fixed still, recycle final cooler, settling basin, acid neturalization, single stage bio-oxidation, clarifier, vacuum filter.	Extended bio-oxidation recycle of barometric condenser, clarifier, filter.	(3)	(4)	(4)	(4).
2. Beehive	Settling basin, 100% recycle.	(3)	(3)	(3)	(4)	(4).
B. Sintering	Polymer, thickener, vacuum filter, 93% recycle, acid neutralization.	95% recycle, lime addition, alkaline chlorination, clarifier, acid neutralization (from BPT (system), filter, dechlorination.	95% recycle, filter	(4)	(4)	(4).
C. Ironmaking	Polymer, thickener, vacuum filter, cooling tower, 96% recycle.	98% recycle, lime addition, alkaline chlorination, clarifier, acid neutralization filter, dechlorination.[7]	98% recycle clarifier.	(4)	(4)	(4).
D. Steelmaking:						
All semi-wet operations	Lime neutralization (open hearth operations only) polymer, clarifier/thickener, vacuum filter, 100% recycle.	(1)	(3)	(2)—for BOF, EAF, (1)—for OH	(5)	(5).
Basic Oxygen Furnace (Wet).	Polymer, clarifier/thickener, vacuum filter, 95% recycle, acid neutralization.	Lime neutralization, inclined plate separator, filter, acid neutralization (from BPT system).	Filter	(4)	(4)	(4).
Open Hearth Furnace (Wet).	Lime neutralization and polymer addition, clarifier/thickener, vacuum filter, 94% recycle.	Lime addition, inclined plate separator, filter.	Filter	(4)	(4)	(4).

Appendix D.—*Iron and Steel Model Treatment Summary*—Continued

Subcategory	Levels of treatment					
	BPT	BAT	BCT	NSPS	PSNS	PSES
Electric Arc Furnace (Wet).	Polymer, clarifier/thickener, vacuum filter, 98% recycle.	Lime addition, inclined plate separator, filter.				
E. Vacuum Degassing	Scale pit, cooling tower, 98% recycle.	Filter	(2)	(4)	(4)	(4).
F. Continuous Cooling	Scale pit, 96% recycle, flat bed filter, cooling tower.	99% recycle, Filter	(3)	Scale pit, 99% recycle, flat bed filter, cooling tower.	(5)	(5).
G. Hot Forming:						
Model 1	Scale pit, 50% recycle, clarifier, vacuum filter, filter.	Cooling tower, 96% recycle	(3)	Scale pit, recycle, roughing clarifier, vacuum filter, cooling tower, recycle filter blowdown.	(5)	(5).
Model 2	Scale pit, clarifier, vacuum filter, filter.	Cooling tower, 96% recycle	(3)	Scale pit, recycle, roughing clarifier, vacuum filter, cooling tower, recycle filter blowdown.	(5)	(5).
Model 3	Scale pit, 50% recycle, settling lagoon.	Cooling tower, 96% recycle, filter.	(3)	Scale pit, recycle, roughing clarifier, vacuum filter, cooling tower, recycle filter blowdown.	(5)	(5).
H. Scale Removal:						
1. Kolene	Oil skimming, acid addition, chromium, reduction, lime, polymer, thickener, vacuum filter.	Filter	(2)	(4) (except settling basin in place of thickener).	(5)	(5).
2. Hydride	Cyanide oxidation, acid and polymer addition, thickener, vacuum filter.	Filter	(3)	(4) (except settling basin in place of thickener).	(5)	(5).
I. Acid Pickling:						
1. Sulfuric:						
a. Neutralization	Spent pickle liquor storage tank, FHS recycle, equalization of SPL, rinse water and fume hood scrubber blowdown, lime and polymer addition, aeration, settling basin.	Cascade Rinse	(2)	Acid recovery system (acid discharge)	(5)	(4) (except clarifier and vacuum filter in place of settling basin).
b. Acid Recovery	Spent acid storage system, cascade rinse, PHS recycle, acid recovery system (zero discharge).	(2)	(2)	(2)	(2)	(2).
2. Hydrochloric:						
a. Neutralization	Spent pickle liquor storage tank, FHS recycle, equalization of SPL, rinse water and fume hood scrubber blowdown, lime and polymer addition, aeration, thickener, vacuum filter.	Cascade Rinse	Batch—(2) Continuous—(3) plus a filter.	(4) (except clarifier in place of thickener).	(5)	(5).
b. Acid regeneration	Spent acid storage tank, acid regeneration systems, FHS recycle, equalization tank, lime and polymer addition, aeration, thickener, vacuum filter.	Cascade Rinse, AVS recycle	(3) plus a filter	(4) (except clarifier in place of thickener).	(5)	(5).
3. Combination	Spent pickle liquor storage tank, FHS recycle, equalization of SPL, rinse water and fume hood scrubber blowdown, oil skimmer, lime and polymer, clarifier, vacuum filter.	Cascade Rinse	(2)	(4)	(5)	(4) (except no oil skimmer is provided).
J. Cold Forming:						
1. Cold Rolling	Alum, acid (for emulsion breaking), lime and polymer, air flotation, settling basin.	Filter	Recirculation: (2) Direct application and combination (3).	(4) and the requirement all new mills will be of the recirculation type.	(5)	(4).
2. Pipe and Tube:						
a. Water	Scale pit, oil skimmer, 100% recycle.	(1)	(2)	(2)	(6)	(6).
b. Oil	Scale pit, oil skimmer, recycle waste oil storage tank (contractor removal as required).	(2)	(2)	(2)	(2)	(2).
K. Alkaline Cleaning	Equalization tank with oil skimmer, acid and polymer, thickener, vacuum filter.	(1)	(2)	Equalization tank with oil skimmer, acid, polymer, aeration, settling basin, vacuum filter, filter.	(6)	(6).
L. Hot Casting	Lime and polymer, thickener, vacuum filter.	FHS recycle, Cascade Rinse	Same as BAT plus a filter (8). Same as BPT (9). Same as BAT (10).	(4)	(4)	(4).

[1] No standards/limitations are presently proposed; therefore, no treatment model considered. [2] Same as BPT. [3] Same as BAT. [4] Same as BPT plus BAT. [5] Same as NSPS. [6] Only general pretreatment standards as proposed. [7] Approximately 60% of the iron making plants are expected to install 98% recycle and slag evaporation in place of BAT. [8] Applies to all galvanizing operations with and without scrubber, terne and other metals for sheet and strip operations with scrubbers. [9] Applies to all other metal coating operations without scrubbers. [10] Applies to terne sheet and strip operations without scrubbers, other metal coating operations, wire products and fasteners with scrubbers.

SPL: Spent Pickle Liquor. AVS: Absorber Vent Scrubber. FHS: Fume Hood Scrubber.

EPA proposes to amend Part 420 of CFR to read as follows:

PART 420—IRON AND STEEL MANUFACTURING POINT SOURCE CATEGORY

General Provisions

Sec.
420.01 Applicability.
420.02 General Definitions.

Subpart A—Cokemaking Subcategory

420.10 Applicability; description of the cokemaking subcategory.
420.11 Specialized definitions.
420.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.14 New source performance standards (NSPS).
420.15 Pretreatment standards for existing sources (PSES).
420.16 Pretreatment standards for new sources (PSNS).
420.17 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart B—Sintering Subcategory

420.20 Applicability; description of the sintering subcategory.
420.21 Specialized defintions.
420.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.24 New source performance standards (NSPS).
420.25 Pretreatment standards for existing sources (PSES).
420.26 Pretreatment standards for new sources (PSNS).
420.27 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart C—Ironmaking Subcategory

420.30 Applicability; description of the ironmaking subcategory.
420.31 Specialized definitions.
420.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.34 New source performance standards (NSPS).
420.35 Pretreatment standards for existing sources (PSES).
420.36 Pretreatment standards for new sources (PSNS).
420.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart D—Steelmaking Subcategory

420.40 Applicability; description of the steelmaking subcategory.
420.41 Specialized definitions.
420.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.44 New source performance standards (NSP).
420.45 Pretreatment standards for existing sources (PSES).
420.46 Pretreatment standards for new sources (PSNS).
420.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart E—Vacuum Degassing Subcategory

420.50 Applicability; description of the vacuum degassing subcategory.
420.51 Specialized definitions.
420.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.54 New source performance standards (NSPS).
420.55 Pretreatment standards for existing sources (PSES).
420.56 Pretreatment standards for new sources (PSNS).
420.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart F—Continuous Casting Subcategory

420.60 Applicability; description of the continuous casting subcategory.
420.61 Special definitions.
420.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.64 New source performance standards (NSPS).
420.65 Pretreatment standards for existing sources (PSES).
420.66 Pretreatment standards for new sources (PSNS).
420.67 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart G—Hot Forming Subcategory

420.70 Applicability; description of the hot forming subcategory.
420.71 Specialized definitions.
420.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.74 New source performance standards (NSPS).
420.75 Pretreatment standards for existing sources (PSES).
420.76 Pretreatment Standards for new sources (PSNS).
420.77 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart H—Scale Removal Subcategory

420.80 Applicability; description of the scale removal subcategory.
420.81 Specialized definitions.
420.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
420.84 New source performance standards (NSPS).
420.85 Pretreatment standards for existing sources (PSES).
420.86 Pretreatment standards for new sources (PSNS).
420.87 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart I—Acid Pickling Subcategory

420.90 Applicablity; description of the acid pickling subcategory.
420.91 Specialized definitions.
420.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
420.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available

Authority: Sec. 301; 304(b), (c), (e), and (g); 306(b) and (c); 307; 308 and 501, Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the "Act"); 33 USC 1311; 1314(b), (c), (e), and (g); 1316(b) and (c); 1317; 1318; and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567; Pub. L. 95–217.

General Provisions

§ 420.01 Applicability.

The provisions of this part apply to discharges and to the introduction of pollutants into a publicly owned treatment works resulting from production operations in the Iron and Steel Point Source Category.

§ 420.02 General definitions.

In addition to the definitions set forth in 40 CFR Part 401, the following definitions apply to this part:

(a) The term "TSS" (or total suspended solids, or total suspended residue) means the value obtained by the method specified in 40 CFR § 136.3.

(b) The term "oil and grease" (or O&G) means the value obtained by the method specified in 40 CFR § 136.3

(c) The term "ammonia-N" (or ammonia-nitrogen) means the value obtained by the manual distillation (at pH 9.5) followed by nesslerization method specified in 40 CFR § 136.3.

(d) The term "cyanide" means total cyanide and is determined by the method specified in 40 CFR § 136.3.

(e) The term "phenols 4AAP" (or phenolic compounds) means the value obtained by the method specified in 40 CFR § 136.3

(f) The term "TRC" (or total residual chlorine) means the value obtained by the iodometric titration with an amperometric endpoint method specified in 40 CFR § 136.3

(g) The term "fluoride" means the value obtained by the method specified in 40 CFR § 136.3.

(h) The term "cadmium" means total cadmium and is determined by the method specified in 40 CFR § 136.3.

(i) The term "chromium" means total chromium and is determined by the method specified in 40 CFR § 136.3.

(j) The term "hexavalent chromium" (or chromium VI) means the value obtained by the method specified in 40 CFR § 136.3.

(k) The term "copper" means total copper and is determined by the method specified in 40 CFR § 136.3.

(l) The term "iron, dissolved" means the value obtained by the method specified in 40 CFR § 136.3.

(m) The term "lead" means total lead and is determined by the method specified in 40 CFR § 136.3.

(n) The term "nickel" means total nickel and is determined by the method specified in 40 CFR § 136.3.

(o) The term "zinc" means total zinc and is determined by the method specified in 40 CFR § 136.3.

(p) The term "benzene" (or priority pollutant No. 4) means the value obtained by the standard method Number 602 specified in 44 FR 69464, 69570 (December 3, 1979).

(q) The term "benzo (a) pyrene" (or priority pollutant No. 73 means the value obtained by the standard method Number 610 specified in 44 FR 69464, 69570 (December 3, 1979).

(r) The term "naphthalene" (or priority pollutant No. 55) means the value obtained by the standard method Number 610 specified in 44 FR 69464, 69571 (December 3, 1979).

(s) The term "1,1,1-trichloroethane" (or priority pollutant No. 11) means the value obtained by the standard method specified in 44 FR 69464, 69572 (December 3, 1979).

(t) The term "2-nitrophenol" (or priority pollutant No. 57) means the value obtained by the standard method Number 604 specified in 44 FR 69464, 69571 (December 3, 1979).

(u) The term "anthracene" (or priority pollutant No. 78) means the value obtained by the standard method Number 610 specified in 44 FR 69464, 69570 (December 3, 1979).

(v) The term "tetrachloroethylene" (or priority pollutant No. 85) means the value obtained by the standard method Number 601 specified in 44 FR 69464, 69572 (December 3, 1979).

(w) The term "pH" means the value obtained by the standard method specified in 40 CFR § 136.3.

Subpart A—Cokemaking Subcategory

§ 420.10 Applicability; description of the cokemaking subcategory.

The provisions of this subpart are applicable to discharges and introduction of pollutants into publicly owned treatment works resulting from by-product and beehive cokemaking operations.

§ 420.11 Specialized definitions.

(a) The term "beehive cokemaking" means those operations in which coal is heated with the admission of air in

controlled amounts for the purpose of producing coke. There are no by-product recovery operations associated with beehive cokemaking operations.

(b) The term "By-Product" cokemaking means those cokemaking operations in which coal is heated in the absence of air to produce coke. In this process, by-products are recovered from the gases and liquids driven from the coal during cokemaking.

(c) The term "wet desulfurization system" means those systems which remove sulfur compounds from coke oven gases and produce a contaminated process wastewater.

(d) The term "indirect ammonia recovery system" means those systems which recover ammonium hydroxide as a by-product from coke oven gases and waste ammonia liquors.

(e) The term "physical chemcial treatment system" means those full scale coke plant wastewater treatment systems incorporating full scale granular activated carbon adsorption units which were in operation prior to the date of proposal of this regulation.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) *By-Product cokemaking.*

Subpart A

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.2250	0.0750
O&G	.0327	.0109
Ammonia-N	.2736	.0912
Cyanide	.0657	.0219
Phenols (4AAP)	.0045	.0015
pH—Within the range of 6.0 to 9.0.		

(1) Increased loadings, not to exceed 15 percent of the above limitations, are allowed for by-product coke plants which have wet desulfurization systems but only to the extent such systems generate an increased effluent volume.

(2) Increased loadings, not to exceed 30 percent of the above limitations, are allowed for by-product coke plants which include indirect ammonia recovery systems but only to the extent that such systems generate an increased effluent volume.

(b) *Beehive cokemaking.* No discharge of process wastewater pollutants to navigable waters.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *By-Product Cokemaking.*

Subpart A

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Ammonia-N	0.05110	0.00957
Cyanide	.00320	.00160
Phenols (4AAP)	.0000640	.0000160
Benzene	.0000638	.0000319
Naphthalene	.0000128	.0000064
Benzo(a)pyrene	.0000256	.0000128

(1) Increased loadings, not to exceed 16 percent of the above limitations, are allowed for by-product coke plants which have wet desulfurization systems but only to the extent such systems generate an increased effluent volume.

(2) Increased loadings, not to exceed 33 percent of the above limitations, are allowed for by-product coke plants which include indirect ammonia recovery systems but only to the extent such systems generate an increased effluent volume.

(3) The following BAT effluent limitations apply to by-product coke plants with physical chemical treatment systems:

Subpart A

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Ammonia-N	0.05160	0.02580
Phenols (4AAP)	.0000860	.0000215
Benzene	.0000430	.0000215
Naphthalene	.0000086	.0000043
Benzo(a)pyrene	.0000172	.0000086

Increased loadings, not to exceed 25 percent of the above limitations, are allowed for by-product coke plants with physical chemical treatment systems which have wet desulfurization systems but only to the extent such systems generate an increased effluent volume.

(b) *Beehive cokemaking.* No discharge of process wastewater pollutants to navigable waters.

§ 420.14 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) *By-Product cokemaking.*

Subpart A

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.34418	0.01280
Oil & grease	.00638	
Ammonia-N	.05110	.00957
Cyanide	.00320	.00160
Phenols (4AAP)	.0000640	.0000160
Benzene	.0000638	.0000319
Naphthalene	.0000128	.0000064
Benzo(a)pyrene	.0000256	.0000128
ph—within the range of 6.0 to 9.0.		

(1) Increased loadings, not to exceed 16 percent of the above standards, are allowed for by-product coke plants which have wet disulfurization systems but only to the extent such systems generate an increased effluent volume.

(2) Increased loadings, not to exceed 33 percent of the above standards, are allowed for by-product coke plants which include indirect ammonia recovery systems but only to the extent such systems generate an increased effluent volume.

(b) *Beehive cokemaking.* No discharge of process wastewater pollutants to navigable waters.

§420.15 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *By-Product cokemaking.*

Subpart A

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Ammonia-N	0.05110	0.00957
Cyanide	.00320	.00160
Phenols (4AAP)	.0000640	.0000160
Benzene	.0000638	.0000319
Naphthalene	.0000128	.0000064
Benzo(a)pyrene	.0000256	.0000128

(1) Increased loadings, not to exceed 16 percent of the above standards, are allowed for by-product coke plants which have wet disulfurization systems but only to the extent such systems generate an increased effluent volume.

(2) Increased loadings, not to exceed 33 percent of the above standards, are allowed for by-product coke plants which include indirect ammonia recovery systems but only to the extent such systems generate an increased effluent volume.

(3) The following pretreatment standards for existing sources apply to by-product coke plants with physical chemical treatment systems:

Subpart A

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Ammonia-N	0.05160	0.02580
Phenols(4AAP)	.0000860	.0000215
Benzene	.0000430	.0000215
Naphthalene	.0000086	.0000043
Benzo(a)pyrene	.0000172	.0000086

Increased loadings, not to exceed 25 percent of the above standards, are allowed for by-product coke plants with physical chemical treatment systems which have wet desulfurization systems but only to the extent such systems generate an increased effluent volume.

(b) *Beehive cokemaking.* [Reserved]

§ 420.16 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) *By-Product cokemaking.*

Subpart A

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Ammonia-N	0.05110	0.00957
Cyanide	.00320	.00160
Phenols(4AAP)	.0000640	.0000160
Benzene	.0000638	.0000319
Naphthalene	.0000128	.0000064
Benzo(a)pyrene	.0000256	.0000128

(1) Increased loadings, not to exceed 16 percent of the above standards, are allowed for by-product coke plants which have wet desulfurization systems but only to the extent such systems generate an increased effluent volume.

(2) Increased loadings, not to exceed 33 percent of the above standards, are allowed for by-product coke plants which include indirect ammonia recovery systems but only to the extent such systems generate an increased effluent volume.

(b) *Beehive cokemaking.* [Reserved]

§ 420.17 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology:

(a) *By-Product cokemaking.*

Subpart A

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03418	0.01280
O&G	.00638	
pH—Within the range of 6.0 to 9.0.		

(1) Increased loadings, not to exceed 16 percent of the above limitations, are allowed for by-product coke plants which have wet desulfurization systems but only to the extent such systems generate an increased effluent volume.

(2) Increased loadings, not to exceed 33 percent of the above limitations, are allowed for by-product coke plants which include indirect ammonia recovery systems but only to the extent such systems generate an increased effluent volume.

(3) The following BCT effluent limitations apply to by-product coke plants with physical chemical treatment systems:

Subpart A

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02294	0.00859
O&G	.00430	
pH—Within the range of 6.0 to 9.0.		

Increased loadings, not to exceed 25 percent of the above limitations, are allowed for by-product coke plants with physical chemical treatment systems which have wet desulfurization systems but only to the extent such systems generate an increased effluent volume.

(b) Beehive Cokemaking.

No discharge of process wastewater pollutant to navigable waters.

Subpart B—Sintering Subcategory

§ 420.20 Applicability; description of the sintering subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from sintering operations conducted by the heating of iron bearing wastes (mill scale and dust from blast furnaces and steelmaking furnaces) together with fine iron ore, limestone, and coke fines in an ignition furnace and traveling grate to produce an agglomerate for charging to the blast furnace.

§ 420.21 Specialized definitions [Reserved]

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart B

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0624	0.0208
O&G	.0126	.0042
pH—Within the range of 6.0 to 9.0.		

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

Except as provided in 40 CFR §§ 124.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

Subpart B

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Ammonia-N	0.0006260	0.0003130
Cyanide	.0001564	.0000782
Phenols(4AAP)	.0000626	.0000313
TRC	.0001560	
Lead	.0000626	.0000313
Zinc	.0000626	.0000313

§ 420.24 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

Subpart B

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01252	0.00469
O&G	.00313	
Ammonia-N	.0006260	.0003130
Cyanide	.0001564	.0000782
Phenols(4AAP)	.0000626	.0000313
TRC	.0001560	
Lead	.0000626	.0000313
Zinc	.0000626	.0000313
pH—Within the range of 6.0 to 9.0.		

§ 420.25 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

Subpart B

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Ammonia-N	0.0006260	0.0003130
Cyanide	.0001564	.0000782
Phenols(4AAP)	.0000626	.0000313
TRC	.0001560	
Lead	.0000626	.0000313
Zinc	.0000626	.0000313

§ 420.26 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

Subpart B

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Ammonia-N	0.0006260	0.0003130
Cyanide	.0001564	.0000782
Phenols (4AAP)	.0000626	.0000313
TRC	.0001560	
Lead	.0000626	.0000313
Zinc	.0000626	.0000313

§ 420.27 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Subpart B

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01252	0.00469
O&G	.00313	
pH—Within the range of 6.0 to 9.0.		

Subpart C—Ironmaking Subcategory

§ 420.30 Applicability; description of the ironmaking subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from ironmaking operations in which iron ore is reduced to molten iron in a blast furnace.

§ 420.31 Specialized definitions.

(a) The term "ferromanganese blast furnace" means those blast furnaces which produce molten iron containing more than fifty percent manganese.

(b) The term "iron blast furnace" means all blast furnaces except ferromanganese blast furnaces.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) *Iron Blast Furnace.*

Subpart C

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0780	0.0260
Ammonia-N	.1605	.0535
Cyanide	.0234	.0078
Phenols (4AAP)	.0063	.0021
pH—Within the range of 6.0 to 9.0.		

Ferromanganese Blast Furnace.

Subpart C

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.3129	0.1043
Ammonia-N	1.2861	.4287
Cyanide	.4689	.1563
Phenols (4AAP)	.0624	.0208
pH—Within the range of 6.0 to 9.0.		

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *Iron Blast Furnace.*

Subpart C

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Ammonia-N	0.000584	0.000292
Cyanide	.000584	.000292
Phenols (4AAP)	.000584	.0000292
TRC	.000146	
Lead	.0002190	.0000730
Zinc	.0002628	.0000876

(b) *Ferromanganese Blast Furnace.* [Reserved]

§ 420.34 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) *Iron Blast Furnace.*

Subpart C

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01169	0.00438
O&G	.00292	
Ammonia-N	.000584	.000292
Cyanide	.000584	.000292
Phenols (4AAP)	.0000584	.0000292
TRC	.000146	

Subpart C—Continued

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
Lead	.0002190	.0000730
Zinc	.0002628	.0000876
pH—Within the range of 6.0 to 9.0.		

(b) *Ferromanganese Blast Furnace.* [Reserved]

§ 420.35 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *Iron Blast Furnace.*

Subpart C

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Ammonia-N	0.000584	0.000292
Cyanide	.000584	.000292
Phenols (4AAP)	.0000584	.0000292
TRC	.000146	
Lead	.0002190	.0000730
Zinc	.0002628	.0000876

(b) *Ferromanganese Blast Furnace.* [Reserved]

§ 420.36 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) *Iron Blast Furnace.*

Subpart C

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Ammonia-N	0.000584	0.000292
Cyanide	.000584	.000292
Phenols (4AAP)	.0000584	.0000292
TRC	.000146	

Subpart C—Continued

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
Lead	.0002190	.0000730
Zinc	.0002628	.0000876

(b) *Ferromanganese Blast Furnace.* [Reserved]

§ 420.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available conventional control technology.

(a) *Iron Blast Furnace.*

Subpart C

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.01169	0.00438
O&G	.00292	
pH—Within the range of 6.0 to 9.0.		

(b) *Ferromanganese Blast Furnace.* [Reserved]

Subpart D—Steelmaking Subcategory

§ 420.40 Applicability; description of the steelmaking subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from steelmaking operations conducted in basic oxygen, open hearth, and electric arc furnaces.

§ 420.41 Specialized definitions.

(a) The term "basic oxygen furnace steelmaking" means the production of steel from molten iron, steel scrap, fluxes, and various combinations thereof, in refractory lined furnaces by adding oxygen.

(b) The term "open hearth furnace steelmaking" means the production of steel from molten iron, steel scrap, fluxes, and various combinations thereof, in refractory lined fuel-fired furnaces equipped with regenerative chambers to recover heat from the flue and combustion gases.

(c) The term "electric arc furnace steelmaking" means the production of steel principally from steel scrap and fluxes in refractory lined furnaces by passing an electric current through the scrap or steel bath.

(d) The term "wet" means those steelmaking air cleaning systems that primarily use water for furnace gas cleaning.

(e) The term "semi-wet" means those steelmaking air cleaning systems that use water to condition the temperature and humidity of furnace gases such that the gases may be cleaned in dry air pollution control systems.

(f) The term "open combustion" means those basic oxygen furnace steelmaking wet air cleaning systems which are designed to allow excess air to enter the air pollution control system for the purpose of combusting the carbon monoxide in furnance gases.

(g) The term "suppressed combustion" means those basic oxygen furnace steelmaking wet air cleaning systems which designed to limit or suppress the combustion of carbon monoxide in furnace gases by restricting the amount of excess air entering the air pollution control system.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

(a) *Basic oxygen furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet-suppressed combustion.*

Subpart D

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.0312	0.0104
pH—Within the range of 6.0 to 9.0.		

(3) *Wet-open combustion.*

Subpart D

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.0312	0.0104
pH—Within the range of 6.0 to 9.0.		

(b) *Open hearth furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.0687	0.0229
pH—Within the range of 6.0 to 9.0.		

(c) *Electric arc furnace steelmaking.*—(1) *Semi-wet.*

No discharge of process wastewater pollutants to navigable waters.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0312	0.0104
pH—Within the range of 6.0 to 9.0.		

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *Basic oxygen furnace steelmaking.*—

(1) *Semi-wet.*—No discharge of process wastewater pollutants to navigable waters.

(2) *Wet-suppressed combustion.*

Subpart D

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000624	0.0000208
Lead	.000188	.0000626
Zinc	.000188	.0000626

(3) *Wet-open combustion.*

Subpart D

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002034	0.0000678
Lead	.0002034	.0000678
Zinc	.0002439	.0000813

(b) *Open hearth furnace steelmaking.*—(1) *Semi-wet.*

(b) *Open hearth furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001377	0.0000459
Lead	.0002064	.0000688
Zinc	.000414	.000138

(c) *Electric arc furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000939	0.0000313
Lead	.0001878	.0000626
Zinc	.0002190	.0000730

§ 420.44 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) *Basic oxygen furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet-suppressed combustion.*

Subpart D

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.008357	0.003130
Chromium	.0000624	.0000208
Lead	.000188	.0000626
Zinc	.000188	.0000626
pH—Within the range of 6.0 to 9.0.		

(3) *Wet-open combustion.*

Subpart D

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01087	0.00407
Chromium	.0002034	.0000678
Lead	.0002034	.0000678
Zinc	.0002439	.0000813
pH—Within the range of 6.0 to 9.0.		

(b) *Open hearth furnace steelmaking.*—(1) *Semi-wet.* [Reserved]

(2) *Wet.* [Reserved]

(c) *Electric arc furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.008357	0.003130
Chromium	.0000939	.0000313
Lead	.0001878	.0000626
Zinc	.0002190	.0000730
pH—Within the range of 6.0 to 9.0.		

§ 420.45 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *Basic oxygen furnace steelmaking.* (1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet-suppressed combustion.*

Subpart D

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000624	0.0000208
Lead	.000188	.0000626
Zinc	.000188	.0000626

(3) *Wet-open combustion.*

Subpart D

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002034	0.0000678
Lead	.0002034	.0000678
Zinc	.0002439	.0000813

(b) *Open hearth furnace steelmaking.* (1) *Semi-wet.* No discharge of process wastewater pollutants to publicly owned treatment works.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001377	0.0000459
Lead	.0002064	.0000688
Zinc	.000414	.000138

(c) *Electric arc furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to publicly owned treatment works.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000939	0.0000313
Lead	.0001878	.0000626
Zinc	.0002190	.0000730

§ 420.46 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) *Basic oxygen furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to publicly owned treatment works.

(2) *Wet-suppressed combustion.*

Subpart D

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000624	0.0000208
Lead	.000188	.0000626
Zinc	.000188	.0000626

(3) Wet-open combustion.

Subpart D

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002034	0.0000678
Lead	.0002034	.0000678
Zinc	.0002439	.0000813

(b) *Open hearth furnace steelmaking.*—(1) *Semi-wet.* [Reserved]

(2) *Wet.* [Reserved]

(c) *Electric arc furnace steelmaking.*—(1) *Semi-wet.* No discharge of process

wastewater pollutants to publicly owned treatment works.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000939	0.0000313
Lead	.0001878	.0000626
Zinc	.0002190	.0000730

§420.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

(a) *Basic oxygen furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet-suppressed combustion.*

Subpart D

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.008357	0.00313
pH—Within the range of 6.0 to 9.0.		

(3) *Wet-open combustion.*

Subpart D

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01087	0.00407
pH—Within the range of 6.0 to 9.0.		

(b) *Open hearth furnace steelmaking.*—(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01837	0.00688
pH—Within the range of 6.0 to 9.0.		

(c) Electric arc furnace steelmaking.

(1) *Semi-wet.* No discharge of process wastewater pollutants to navigable waters.

(2) *Wet.*

Subpart D

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.0312	0.0104
pH—Within the range of 6.0 to 9.0.		

Subpart E—Vacuum Degassing Subcategory

§ 420.50 Applicability; description of the vacuum degassing subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from vacuum degassing operations conducted by applying a vacuum to molten steel.

§ 420.51 Specialized definitions [Reserved]

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart E

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.01563	0.00521
pH—Within the range of 6.0 to 9.0.		

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Subpart E

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.0000312	0.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104

§ 420.54 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the values set forth below.

Subpart E

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of Daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.00417	0.00156
Chromium	.0000312	.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104
pH—Within the range of 6.0 to 9.0.		

§ 420.55 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

Subpart E

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000312	0.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104

§ 420.56 Pretreatment standards for new sources.

Any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

Subpart E

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000312	0.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104

§ 420.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Subpart E

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01563	0.00521
pH—Within the range of 6.0 to 9.0.		

Subpart F—Continuous Casting Subcategory

§ 420.60 Applicability; description of the continuous casting subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from the continuous casting of molten steel into intermediate or semi-finished steel products through water cooled molds.

§ 420.61 Specialized definitions. [Reserved]

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart F

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0780	0.0260
Oil and Grease	.0234	.0078
pH—Within the range of 6.0 to 9.0.		

§ 420.63 Effluent limitations representing the degree of effluent reduction attainable by the appliation of the best available technology economically achievable.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Subpart F

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000312	0.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104

§ 420.64 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

Subpart F

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TTS	0.00417	0.00156
O&G	.00104	
Chromium	.0000312	.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104
pH—Within the range of 6.0 to 9.0.		

§ 420.65 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

Subpart F

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000312	0.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104

§ 420.66 Pretreatment standards for new sources.

Any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

Subpart F

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000312	0.0000104
Lead	.0000312	.0000104

Subpart F—Continued

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
Zinc	.0000312	.0000104

§ 420.67 Effluent limitations representing the degree of effluent reduction achievable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Subpart F

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.00417	0.00156
Oil & Grease	.00104	
pH—Within the range of 6.0 to 9.0.		

Subpart G—Hot Forming Subcategory

§ 420.70 Applicability; description of the hot forming subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from hot forming operations conducted in primary, section, flat, and pipe and tube mills.

§ 420.71 Specialized definitions.

(a) The term "hot forming" means those steel operations in which solidified, heated steel is shaped by rolls.

(b) The term "primary mill" means those steel hot forming operations that reduce ingots to blooms or slabs by passing the ingots between rotating steel rolls. The "primary mill" performs the first steel hot forming operation on solidified steel after its is removed from the ingot molds.

(c) The term "section mill" means those steel hot forming operations that produce a variety of finished and semi-finished steel products other than the products of those mills specified below in subsections (d), (e), (f), (g) and (h).

(d) The term "flat mill" means those steel hot forming operations that reduce heated slabs to plates, strip and sheet, or skelp.

(e) The term "pipe and tube mill" means those steel hot forming operations that produce butt welded or seamless tubular steel products.

(f) The term "scarfing" means those steel surface conditioning operations in which flames generated by oxygen and fuel are used to remove surface metal imperfections from slabs, billets, or blooms.

(g) The term "plate mill" means those steel hot forming operations that produce flat hot-rolled products which are (1) betwen 8 and 48 inches wide and over 0.23 inches thick; or (2) greater than 48 inches wide and over 0.18 inches thick.

(h) The term "hot strip and sheet mill" means those steel hot forming operations that produce flat hot-rolled products other than plates.

(i) The term "specialty steel" means those steel products which contain: (1) any of the following elements at levels above the specified percentages, by weight: manganese, 1.65 percent; silicon, 0.60 percent; or copper, 0.60 percent; or (2) any of the following elements when added to enhance the properties of the steel product: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, vanadium or zirconium.

(j) The term "carbon steel" means those steel products other than specialty steel products.

(k) The term "carbon hot forming operation" (or "carbon") means those hot forming operations which produce a majority, on a tonnage basis, of carbon steel products.

(l) The term "specialty hot forming operations" (or "specialty") applies to all hot forming operations other than "carbon hot forming operations."

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best particable control technology currently available.

(a) *Primary mills.* (1) *Carbon, without scarfing.*

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TTS	0.1113	0.0371
O&G	.0864	0288
ph—Within the range of 6.0 to 9.0.		

(2) *Carbon with scarfing.*

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TTS	0.1359	0.0453
O&G	1056	.0352
ph—Within the range of 6.0 to 9.0.		

(3) *Specialty.*

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1962	0.0654
O&G	.1524	.0508
pH—Within the range of 6.0 to 9.0.		

(b) Section mills.

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0726	0.242
O&G	.330	.110
pH—Within the range of 6.0 to 9.0.		

(c) *Flat mills.*

(1) Hot strip and sheet mills.

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.993	0.331
O&G	.522	.174
pH—Within the range of 6.0 to 9.0.		

(2) Carbon plate mills.

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.501	0.167
O&G	.501	.167
pH—Within the range of 6.0 to 9.0.		

(3) *Specialty plate mills.*

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
TSS	1.128	0.376
O&G	1.128	.376
pH—Within the range of 6.0 to 9.0.		

(d) Pipe and tube mills.

Subpart G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.426	0.142
O&G	.126	.042
pH—Within the range of 6.0 to 9.0.		

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *Primary mills.*

(1) Without scarfing.

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001125	0.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375

(2) With scarfing.

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive day
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001752	0.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584

(b) *Section mills.*

(1) Carbon

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002502	0.0000834
Lead	.0002502	.0000834
Zinc	.0002502	.0000834

(2) Specialty

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001626	0.0000542
Lead	.0001626	.0000542
Zinc	.0001626	.0000542

(c) *Flat mills.*

(1) Hot strip and sheet mills

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000324	0.000108
Lead	.000324	.000108
Zinc	.000324	.000108

(2) Carbon plate mills

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001752	0.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584

(3) Specialty plate mills

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000750	0.0000250
Lead	.0000750	.0000250
Zinc	.0000750	.0000250

(d) Pipe and tube mills

Subpart G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002751	0.0000917
Lead	.0002751	.0000917
Zinc	.0002751	.0000917

§ 420.74 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) Primary mills

(1) Without scarfing

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01503	0.00563
O&G	.00373	
Chromium	.0001125	.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375
pH—Within the range of 6.0 to 9.0.		

(2) With scarfing

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02339	0.00876
O&G	.00584	
Chromium	.0001752	.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584
pH—Within the range of 6.0 to 9.0.		

(b) Section mills.

(1) Carbon

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03338	0.01250
O&G	.00834	
Chromium	.0002502	.0000834
Lead	.0002502	.0000834
Zinc	.0002502	.0000834
pH—Within the range of 6.0 to 9.0.		

(2) Specialty

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02171	0.00813
O&G	.00542	
Chromium	.0001626	.0000542
Lead	.0001626	.0000542
Zinc	.0001626	.0000542
pH—Within the range of 6.0 to 9.0.		

(c) Flat mills.

(1) Hot strip and sheet mills

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.04352	0.01630
O&G	.01090	
Chromium	.000324	.0000108
Lead	.000324	.0000108
Zinc	.000324	.0000108
pH—Within the range of 6.0 to 9.0.		

(2) Carbon plate mills

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02339	0.00876
O&G	.00584	
Chromium	.0001752	.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584
pH—Within the range of 6.0 to 9.0.		

(3) Specialty plate mills

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.01001	0.00375
O&G	.00250	
Chromium	.0000750	.0000250
Lead	.0000750	.0000250
Zinc	.0000750	.0000250
pH—Within the range of 6.0 to 9.0.		

(d) *Pipe and tube mills.*

Subpart G

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.03685	0.01380
O&G	.00917	
Chromium	.0002751	.0000917
Lead	.0002751	.0000917
Zinc	.0002751	.0000917
pH—Within the range of 6.0 to 9.0.		

§ 420.75 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *Primary mills.*

(1) Without scarfing

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.0001125	0.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375

(2) With scarfing

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.0001752	0.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584

(b) *Section mills.*

(1) Carbon

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.0002502	0.0000834
Lead	.0002502	.0000834
Zinc	.0002502	.0000834

(2) Specialty

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001626	0.0000542
Lead	.0001626	.0000542
Zinc	.0001626	.0000542

(c) *Flat mills.*

(1) Hot strip and sheet mills.

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000324	0.0000108
Lead	.000324	.0000108
Zinc	.000324	.0000108

(2) Carbon plate mills.

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001752	0.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584

(3) Specialty plate mills.

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000750	0.0000250
Lead	.0000750	.0000250
Zinc	.0000750	.0000250

(d) *Pipe and tube mills.*

Subpart G

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002751	0.0000917
Lead	.0002751	.0000917
Zinc	.0002751	.0000917

§ 420.76 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) *Primary mills.*

(1) Without scarfing.

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001125	0.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375

(2) With scarfing

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001752	0.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584

(b) *Section mills.*

(1) Carbon

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002502	0.0000834
Lead	.0002502	.0000834

Subpart G—Continued

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Zinc	.0002502	.0000834

(2) Specialty

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001626	0.0000542
Lead	.0001626	.0000542
Zinc	.0001626	.0000542

(c) *Flat mills.*

(1) Hot strip and sheet mills

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000324	0.000108
Lead	.000324	.000108
Zinc	.000324	.000108

(2) Carbon plate mills

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001752	0.0000584
Lead	.0001752	.0000584
Zinc	.0001752	.0000584

(3) Specialty plate mills

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000750	0.0000250

Subpart G—Continued

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
Lead	.0000750	.0000250
Zinc	.0000750	.0000250

(d) *Pipe and tube mills.*

Subpart G

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002751	0.0000917
Lead	.0002751	.0000917
Zinc	.0002751	.0000917

§ 420.77 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

(a) *Primary mills.*

(1) Without scarfing

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01503	0.00563
O&G	.00373	
pH—Within the range of 6.0 to 9.0.		

(2) With scarfing

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02339	0.00876
O&G	.00584	
pH—Within the range of 6.0 to 9.0.		

(b) *Section mills.*

(1) Carbon

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03338	0.01250
O&G	.00834	
pH—Within the range of 6.0 to 9.0		

(2) Specialty

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02171	0.00813
O&G	.00542	
pH—Within the range of 6.0 to 9.0.		

(c) *Flat mills.*

(1) Hot strip and sheet mills.

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.04352	0.01630
O&G	.01090	
pH—Within the range of 6.0 to 9.0.		

(2) Carbon plate mills.

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02339	0.00876
O&G	.00584	
pH—Within the range of 6.0 to 9.0.		

(3) Specialty plate mills.

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01001	0.00375
O&G	.00250	
pH—Within the range of 6.0 to 9.0.		

(d) *Pipe and tube mills.*

Subpart G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03685	0.01380
O&G	.00917	
pH—Within the range of 6.0 to 9.0.		

Subpart H—Scale Removal Subcategory

§ 420.80 Applicability; description of the scale removal subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from kolene and hydride scale removal operations.

§ 420.81 Specialized definitions.

(a) The term "kolene scale removal" means the removal of scale from semi-finished steel products by the action of molten salts baths other than those containing sodium hydride.

(b) The term "hydride scale removal" means the removal of scale from semi-finished steel products by the action of molten salt baths containing sodium hydride.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) *Kolene Scale Removal.*

Subpart H

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1563	0.0521
Chromium	.0030	.0010
Chromium (hexavalent)	.00030	.00010
Iron (dissolved)	.0063	.0021
pH—Within the range of 6.0 to 9.0.		

(b) *Hydride Scale Removal.*

Subpart H

Pollutant or pollutant property	BPT effluent limitations: Maximum for any 1 day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.375	0.125
Cyanide	.00375	.00125
Chromium	.00750	.00250
Chromium (hexavalent)	.00090	.00030
Iron (dissolved)	.0150	.0050
pH—Within the range of 6.0 to 9.0.		

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

Except as provided in 40 CFR § 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *Kolene Scale Removal.*

Subpart H

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000390	0.000130

(b) *Hydride Scale Removal.*

Subpart H

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cyanide	0.000312	0.000104
Chromium	.000126	.000042

Subpart H—Continued

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
Lead	.000126	.000042

§ 420.84 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) *Kolene Scale Removal.*

Subpart H

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03471	0.0130
Chromium	.000252	.000084
pH—Within the range of 6.0 to 9.0.		

(b) *Hydride Scale Removal.*

Subpart H

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.008277	0.00310
Cyanide	.000156	.000052
Chromium	.000063	.000021
Lead	.000063	.000021
pH—Within the range of 6.0 to 9.0.		

§ 420.85 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *Kolene Scale Removal.*

Subpart H

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.000390	0.000130

(b) *Hydride Scale Removal.*

Subpart H

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Cyanide	0.000312	0.000104
Chromium	.000126	.000042
Lead	.000126	.000042

§ 420.86 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) *Kolene Scale Removal.*

Subpart H

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of Product	
Chromium	0.0000252	0.0000084

(b) *Hydride Scale Removal.*

Subpart H

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of Product	
Cyanide	0.000156	0.000052
Chromium	.000063	.000021
Lead	.000063	.000021

§ 420.87 Effluent limitations representing the degree of effluent reduction attainable by the application the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32 any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

(a) *Kolene Scale Removal.*

Subpart H

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of Product	
TSS	0.1563	0.0521
pH—Within the range of 6.0 to 9.0.		

(b) *Hydride Scale Removal.*

Subpart H

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of Product	
TSS	0.01655	0.00620
pH—Within the range of 6.0 to 9.0.		

Subpart I—Acid Pickling Subcategory

§ 420.90 Applicability; description of the acid pickling subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from sulfuric acid, hydrochloric acid, or combination acid pickling operations.

§ 420.91 Specialized definitions.

(a) The term "sulfuric acid pickling" means those operations in which steel products are immersed in sulfuric acid solutions to chemically remove scale and oxides and those rinsing steps associated with such immersion.

(b) The term "hydrochloric acid pickling" means those operations in which steel products are immersed in hydrochloric acid solutions to chemically remove oxides and scale, and those rinsing operations associated with such immersion.

(c) The term "combination acid pickling" means those operations in which steel products are immersed in solutions of more than one acid to chemically remove oxides and scale, and those rinsing operations associated with such immersion.

(d) The term "fume scrubber" means those pollution control devices used to remove and clean fumes originating in pickling operation.

(e) The term "batch" means those pickling operations which process steel products such as coiled wire, rods, and tubes in discrete batches or bundles.

(f) The term "continuous" means those pickling operations which process steel products other than in discrete batches or bundles.

(g) The term "acid recovery" means those sulfuric acid pickling operations that include processes for recovering the unreacted acid from spent pickling acid solutions

(h) The term "acid regeneration" means those hydrochloric acid pickling operations that include processes for regenerating acid from spent pickling acid solutions.

(i) The term "neutralization" means those acid pickling operations that do not include acid recovery or acid regeneration processes.

(j) The term "spent acid solution" (or spent pickle liquor) means those solutions of steel pickling acids which have been used in the pickling process and are discharged or removed therefrom.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) *Sulfuric acid pickling.* (1) Batch neutralization.

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.2252	0.07506
O&G*	.04503	.01501
Iron (dissolved)	.00450	.00150
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(2) Batch; acid recovery.

No discharge of process wastewater pollutants to navigable waters.

(3) Continuous neutralization without spent acid solutions.

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1407	0.0469
O&G*	.0281	.00938
Iron (dissolved)	.00281	.000938
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(4) Continuous neutralization with spent acid solutions.

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1563	0.0521
O&G*	.0312	.0104
Iron (dissolved)	.00312	.00104
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(5) Continuous acid recovery. No discharge of process wastewater pollutants to navigable waters.

(b) *Hydrochloric acid pickling.* (1) Batch neutralization without fume scrubbers.

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1440	0.0480
O&G*	.02880	.00960
Iron (dissolved)	.002880	.000960
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(2) Batch neutralization with fume scrubbers.

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1752	0.0584
O&G*	.0351	.0117
Iron (dissolved)	.00351	.0117
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(3) Continuous neutralization without fume scrubbers

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1440	0.0480
O&G*	.02880	.00960
Iron (dissolved)	.002880	.000960
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(4) Continuous neutralization with fume scrubbers.

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1752	0.0584
O&G*	.0351	.0117
Iron (dissolved)	.00351	.00117
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(5) Continuous acid regeneration without fume scrubbers.

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.2502	0.0834
O&G*	.0498	.0166
Iron (dissolved)	.00498	.00166
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(6) Continuous acid regeneration with fume scrubbers.

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.2814	0.0938
O&G*	.0561	.0187
Iron (dissolved)	.00561	.00187
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(c) *Combination acid pickling.* (1) Batch pipe and tube products.

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.2190	0.0730
O&G*	.0876	.0292
Chromium	.00483	.00146
Iron (dissolved)	.00876	.00292
Nickel	.00219	.000730
Fluoride**	.1314	.0438
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.
**The limitations for fluoride apply only when hydrofluoric acid pickling solutions are used.

(2) Batch—other products.

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0627	0.0209
O&G*	.0249	.00830
Chromium	.00125	.000417
Iron (dissolved)	.00249	.000830
Nickel	.000627	.000209
Fluoride**	.0375	.0125
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.
**The limitations for fluoride apply only when hydrofluoric acid pickling solutions are used.

(3) Continuous.

Subpart I

Pollutant or pollutant property	BPT effluent limitations: Maximum for any one day	BPT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.3120	0.104
O&G*	.1251	.0417
Chromium	.00627	.00209
Iron (dissolved)	.01251	.00417
Nickel	.003120	.00104
Fluoride**	.1878	.0626
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.
**The limitations for fluoride apply only when hydrofluoric acid pickling solutions are used.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *Sulfuric acid pickling.* (1) Batch neutralization.

Subpart I

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000876	0.0000292
Lead	.0000876	.0000292
Zinc	.0000876	.0000292

(2) Batch acid recovery.

No discharge of process wastewater pollutants to navigable waters.

(3) Continuous neutralization.

Subpart I

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000690	0.0000230
Lead	.0000690	.0000230
Zinc	.0000690	.0000230

(4) Continuous acid recovery.

No discharge of process wastewater pollutants to navigable waters.

(b) Hydrochloric acid pickling.

(1) Batch neutralization.

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001125	0.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375

(2) Continuous neutralization.

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000687	0.0000229
Lead	.0000687	.0000229
Zinc	.0000687	.0000229

(3) Continuous acid regeneration.

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000876	0.0000292
Lead	.0000876	.0000292
Zinc	.0000876	.0000292

(c) *Combination acid pickling.*

(1) Batch.

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001314	0.0000438
Copper	.0001314	.0000438
Nickel	.0001971	.0000876
Fluoride [1]	.01971	.00657

[1] The limitations for fluoride apply only when hydrofluoric acid pickling solutions are used.

(2) Continuous.

Subpart I

Pollutant or pollutant property	BAT Effluent limitation	
	Maximum for any one day	Average of daily values for 30 consecutive days.
	Kg/kkg (lb/1,000 lb) of products	
Chromium	0.000432	0.000144
Copper	.000432	.000144
Nickel	.000648	.000288
Fluoride*	.0648	.0216

*The limitations for fluoride apply only when hydrofluoric acid pickling solutions are used.

§ 420.94 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) *Sulfuric acid pickling.* No discharge of process wastewater pollutants to navigable waters.

(b) *Hydrochloric acid pickling.*

(1) Batch neutralization

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days.
	Kg/kkg (lb/1,000 lb) of products	
TSS	0.02260	0.01130
O&G*	.00750	.00375
Chromium	.0001125	.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375
ph—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(2) Continuous neutralization

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days.
	Kg/kkg (lb/1,000 lb) of products	
TSS	0.01376	0.00688
O&G*	.00458	.00229
Chromium	.0000678	.0000229
Lead	.0000678	.0000229
Zinc	.0000678	.0000229
ph—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(3) Continuous acid regeneration

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days.
	Kg/kkg (lb/1,000 lb) of products	
TSS	0.01752	0.00876
O&G*	.00584	.00292
Chromium	.0000876	.0000292
Lead	.0000876	.0000292
Zinc	.0000876	.0000292
ph—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(c) *Combination acid pickling.*

(1) Batch

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01126	0.00563
O&G*	.00376	.00188
Chromium	.0000564	.0000188
Copper	.0000564	.0000188
Nickel	.0000844	.0000375
Fluoride**	.00844	.00281
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

**The limitations for fluoride apply only when hydrofluoric acid pickling solutions are used.

(2) Continuous

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02260	0.01130
O&G*	.00750	.00375
Chromium	.0001125	.0000375
Copper	.0001125	.0000375
Nickel	.0001690	.0000751
Fluoride**	.0169	.00563
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

**The limitations for fluoride apply only when hydrofluoric acid pickling solutions are used.

§ 420.95 Pretreatment standards for existing sources.

Except as provided in 40 FR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *Sulfuric acid recovery.*

(1) Batch neutralization

Subpart I

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000876	0.0000292
Lead	.0000876	.0000292
Zinc	.0000876	.0000292

(2) *Batch acid recovery.* No discharge of process wastewater pollutants to publicly owned treatment works.

(3) Continuous neutralization

Subpart I

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000688	0.0000230
Lead	.0000688	.0000230
Zinc	.0000688	.0000230

(4) *Continuous acid recovery.*

No discharge of process wastewater pollutants to publicly owned treatment works.

(b) *Hydrochloric acid pickling.*

(1) Batch neutralization

Subpart I

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001125	0.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375

(2) Continuous neutralization

Subpart I

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000687	0.0000229
Lead	.0000687	.0000229
Zinc	.0000687	.0000229

(3) Continuous acid regeneration

Subpart I

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000876	0.0000292
Lead	.0000876	.0000292
Zinc	.0000876	.0000292

(c) *Combination acid pickling.*

(1) Batch

Subpart I

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001314	0.0000438
Copper	.0001314	.0000438
Nickel	.0001971	.0000876

(2) Continuous

Subpart I

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000432	0.0000144
Copper	.0000432	.0000144
Nickel	.0000648	.0000288

§ 420.96 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) *Sulfuric acid pickling.* No discharge of process wastewater pollutants to publicly owned treatment works.

(b) *Hydrocholoric acid pickling.*

(1) Batch neutralization

Subpart I

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.0001125	0.0000375
Lead	.0001125	.0000375
Zinc	.0001125	.0000375

(2) Continuous neutralization

Subpart I

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.0000687	0.0000229
Lead	.0000687	.0000229
Zinc	.0000687	.0000229

(3) Continuous acid regeneration

Subpart I

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
Chromium	0.0000876	0.0000292
Lead	.0000876	.0000292
Zinc	.0000867	.0000292

(c) *Combination acid pickling.*

(1) Batch

Subpart I

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000563	0.0000188
Copper	.0000563	.0000188
Nickel	.0000844	.0000375

(2) Continuous

Subpart I

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001125	0.0000375
Copper	.0001125	.0000375
Nickel	.0001690	.0000751

§ 420.97 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

(a) *Sulfuric acid pickling.*

(1) Batch neutralization

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.2252	0.07506
O&G*	.04503	.01501
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(2) *Batch acid recovery.* No discharge of process wastewater pollutants to navigable waters.

(3) Continuous neutralization without spent acid solutions

Subpart I

Pollutant or pollutant property	BCT Effluent Limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1407	0.0469
O&G*	.02814	.00938
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(4) Continuous neutralization with spent acid solutions

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1;000 lb) of product	
TSS	0.1563	0.0521
O&G*	0.0312	0.0104
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(5) Continuous acid recovery.

No discharge of process wastewater pollutants to navigable waters.

(b) *Hydrochloric acid pickling.*

(1) Batch neutralization without fume scrubbers.

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1440	0.0480
O&G*	.0288	.00960
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(2) Batch neutralization with fume scrubbers.

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1752	0.0584
O&G*	.0351	.0117
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(3) Continuous neutralization.

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.00918	0.00344
O&G*	.00229	
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(4) Continuous acid regeneration.

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.01169	0.00438
O&G*	.00292	
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(c) *Combination acid pickling.*

(1) Batch pipe and tube products.

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.2190	0.0730
O&G*	.0876	.0292
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(2) Batch—other products.

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0627	0.0209
O&G*	.0249	.0083
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

(3) Continuous.

Subpart I

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.3120	0.1040
O&G*	.1251	.0417
pH—Within the range of 6.0 to 9.0.		

*The limitations for oil and grease apply only when acid pickling wastewaters are treated with cold rolling wastewaters.

Subpart J—Cold Forming Subcategory

§ 420.100 Applicability; description of the cold forming subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works from cold rolling and cold working pipe and tube operations in which unheated steel is passed through rolls or otherwise processed to reduce its thickness, to produce a smooth surface, or to develop controlled mechanical properties in the steel.

§ 420.101 Specialized definitions.

(a) The term "recirculation mill" means those cold rolling operations which include recirculation of rolling solutions at all mill stands.

(b) The term "combination mill" means those cold rolling operations which include recirculation of rolling solutions at one or more mill stands, and once-through use of rolling solutions at the remaining stand or stands.

(c) The term "direct application mill" means those cold rolling operations which include once-through use of rolling solutions at all mill stands.

(d) The term "cold worked pipe and tube mill" means those cold forming operations that process unheated pipe and tube products using either water or oil solutions for cooling and lubrication.

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

Except as provided in 40 CFR 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) *Cold rolling mills.* (1) Recirculation mills.

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.00783	0.00261
O&G	.00312	.00104

Subpart J—Continued

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
Iron (dissolved)*	.000312	.000104
pH—Within the range of 6.0 to 9.0.		

*The limitations for dissolved iron apply only when cold rolling wastewaters are treated with acid pickling rinse wastewaters.

(2) Combination mills.

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1251	0.0417
O&G	.0501	.0167
Iron (dissolved)*	.00501	.00167
pH—Within the range of 6.0 to 9.0.		

*The limitations for dissolved iron apply only when cold rolling wastewaters are treated with acid pickling rinse wastewaters.

(3) Direct application mills.

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.3120	0.1040
O&G	.1251	.0417
Iron (dissolved)*	.01251	.00417
pH—Within the range of 6.0 to 9.0.		

*The limitations for dissolved iron apply only when cold rolling wastewaters are treated with acid pickling rinse wastewaters.

(b) *Cold worked pipe and tube mills.* (1) Using water. No discharge of process wastewater pollutants to navigable waters.

(2) Using oil solutions. No dischage of process wastewater pollutants to navigable waters.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *Cold rolling.* (1) Recirculation mills.

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0000312	0.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104
1,1,1-trichloroethane	.0000312	.0000104
2-Nitrophenol	.00000783	.00000261
Anthracene	.00000312	.00000104
Tetrachloroethylene	.00001563	.00000521

(2) Combination mills.

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000312	0.000104
Lead	.000312	.000104
Zinc	.000312	.000104
1,1,1-trichloroethane	.000312	.000104
2-Nitrophenol	.0000783	.0000261
Anthracene	.0000312	.0000104
Tetrachloroethylene	.0001563	.0000521

(3) Direct application mills.

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000501	0.000167
Lead	.000501	.000167
Zinc	.000501	.000167

(b) *Cold worked pipe and tube mills.* (1) Using water. No discharge of process wastewater pollutants to navigable waters.

(2) Using oil solutions. No discharge of process wastewater pollutants to navigable waters.

§ 420.104 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) Cold rolling mills.

Subpart J

Pollutant or pollutant property	New Source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.001671	0.000626
Oil and grease	.000417	
Chromium	.00001251	.00000417
Lead	.00001251	.00000417
Zinc	.00001251	.00000417
1,1,1-trichloroethane	.00001251	.00000417
2-Nitrophenol	.00000312	.00000104
Anthracene	.000001251	.000000417
Tetrachloroethylene	.00000627	.00000209
pH—Within the range of 6.0 to 9.0.		

(b) *Cold worked pipe and tube mills.*

(1) Using water. No discharge of process wastewater pollutants to navigable waters.

(2) Using oil solutions. No discharge of process wastewater pollutants to navigable waters.

§ 420.105 Pretreatment standards for existing sources.

Except as provided in 40 CFR §§ 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *Cold rolling.*

(1) Recirculation mills.

Subpart J

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
O&G	0.00104	
Chromium	.0000312	0.0000104
Lead	.0000312	.0000104
Zinc	.0000312	.0000104
1,1,1trichloroethane	.0000312	.0000104
2-Nitrophenol	.00000783	.00000261
Anthracene	.00000312	.00000104
Tetrachloroethylene	.00001563	.00000521

(2) Combination mills.

Subpart J

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
O&G	0.0104	
Chromium	.000312	0.000104
Lead	.000312	.000104
Zinc	.000312	.000104

Subpart J—Continued

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
1,1,1-trichloroethane	.000312	.000104
2-Nitrophenol	.0000783	.0000261
Anthracene	.0000312	.0000104
Tetrachloroethylene	.0001563	.0000521

(3) Direct application mills.

Subpart J

Pollutant or pollutant property	Pretreatment standards for existing sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
O&G	0.0167	
Chromium	.000501	0.000167
Lead	.000501	.000167
Zinc	.000501	.000167

(b) *Cold worked pipe and tube mills.*—(1) *Using water.* No discharge of process wastewater pollutants to publicly owned treatment works.

(2) *Using oil solutions.* No discharge of process wastewater pollutants to publicly owned treatment works.

§ 420.106 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) Cold rolling mills.

Subpart J

Pollutant or pollutant property	Pretreatment standards for new sources	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
O&G	0.000417	
Chromium	.00001251	0.00000417
Lead	.00001251	.00000417
Zinc	.00001251	.00000417
1,1,1-trichloroethane	.00001251	.00000417
2-Nitrophenol	.00000312	.00000104
Anthracene	.000001251	.00000417
Tetrachloroethylene	.00000627	.00000209
pH—Within the range of 6.0 to 9.0.		

(b) *Cold worked pipe and tube mills.*—(1) *Using water.* No discharge of process wastewater pollutants to publicly owned treatment works.

(2) *Using oil solutions.* No discharge of process wastewater pollutants to publicly owned treatment works.

§ 420.107 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32 any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

(a) *Cold rolling.*

(1) Recirculation mills.

Subpart J

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.00783	0.00261
O&G	.00312	.00104
pH—Within the range of 6.0 to 9.0.		

(2) Combination mills.

Subpart J

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0417	0.0156
O&G	0.0104	
pH—Within the range of 6.0 to 9.0.		

(3) Direct application mills.

Subpart J

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0668	0.0250
O&G	0.0167	
pH—Within the range of 6.0 to 9.0.		

(b) Cold worked pipe and tube mills.—(1) *Using water. No discharge of process wastewater pollutants to navigable waters.*

(2) *Using oil solutions. No discharge of process wastewater pollutants to navigable waters.*

Subpart K—Alkaline Cleaning Subcategory

§ 420.110 Applicability; description of the alkaline cleaning subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from operations in which steel and steel products are immersed in alkaline cleaning baths to remove mineral and animal fats or oils from the steel, and those rinsing operations which follow such immersion.

§ 420.111 Specialized definitions.

(a) The term "batch" means those alkaline cleaning operations which process steel products such as coiled wire, rods, and tubes in discrete batches or bundles.

(b) The term "continuous" means those alkaline cleaning operations which process steel products other than in discrete batches or bundles.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart K

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0156	0.0052
pH—Within the range of 6.0 to 9.0.		

§ 420.113 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. [Reserved]

§ 420.114 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

Subpart K

Pollutant or pollutant property	New source performance standards	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.00828	0.00310
O&G	.00210	
pH—Within the range of 6.0 to 9.0.		

§ 420.115 Pretreatment standards for existing sources.

Any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403.

§ 420.116 Pretreatment standards for new sources.

Any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403.

§ 420.117 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR §§ 125.30–.32 any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Subpart K

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0156	0.0052
pH—Within the range of 6.0 to 9.0.		

Subpart L—Hot Coating Subcategory

§ 420.120 Applicability; description of the hot coating subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from the operations in which steel is coated with zinc, terne metal, or other metals by the hot dip process, and those rinsing operations associated with that process.

§ 420.121 Specialized definitions.

(a) The term "galvanizing" means coating steel products with zinc by the hot dip process including the immersion of the steel product in a molten bath of zinc metal, and the related operations preceding and subsequent to the immersion phase.

(b) The term "terne coating" means coating steel products with terne metal by the hot dip process including the immersion of the steel products in a molten bath of lead and tin metals, and the related operations preceding and subsequent to the immersion phase.

(c) The term "other coatings" means coating steel products with metals other than zinc or terne metal by the hot dip process including the immersion of the steel products in a molten bath of metal, and the related operations preceding and subsequent to the immersion phase.

(d) The term "fume scrubber" means wet air pollution control devices used to remove and clean fumes originating in hot coating operations.

(e) The term "strip, sheet and miscellaneous products" means steel products other than wire products and fasteners.

(f) The term "wire products and fasteners" means steel wire, products manufactured from steel wire, and steel fasteners manufactured of steel wire or other steel shapes.

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

Except as provided in 40 CFR §§ 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) *Galvanizing.* (1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days.
	Kg/kkg (lb/1,000 lb) of products	
TSS	0.375	0.125
O&G	.1125	.0375
Chromium	.0225	.0075
Chromium (Hexavalent)	.00015	.00005
Zinc	.0375	.0125
pH—Within the range of 6.0 to 9.0.		

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.750	0.250
O&G	.225	.075
Chromium	.0450	.0150
Chromium (Hexavalent)	.00030	.00010
Zinc	.0750	.0250
pH—Within the range of 6.0 to 9.0.		

(3) Wire products and fasteners without fume scrubbers

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	1.500	0.500
O&G	.450	.150
Chromium	.030	.010
Chromium (Hexavalent)	.00060	.00020
Zinc	.150	.050
pH—Within the range of 6.0 to 9.0.		

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	2.4375	0.8125
O&G	.7313	.2438
Chromium	.04875	.01625
Chromium (Hexavalent)	.000975	.000325
Zinc	.2438	.0813
pH—Within the range of 6.0 to 9.0.		

(b) *Terne coating.* (1) Without fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.375	0.125
O&G	.1125	.0375
Lead	.00375	.00125
Tin	.0375	.0125
pH—Within the range of 6.0 to 9.0.		

(2) With fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.750	0.250
O&G	.225	.0750
Lead	.00750	.00250
Tin	.0750	.0250
pH—Within the range of 6.0 to 9.0.		

(c) *Other coatings.* (1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.375	0.125
O&G	.1125	.0375
Cadmium*	.00375	.00125
Chromium	.00150	.00050
Lead	.00375	.00125
Zinc	.0225	.00750
pH—Within the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.750	0.250
O&G	.225	.075
Cadmium*	.00750	.00250
Chromium	.00300	.00100
Lead	.00750	.00250
Zinc	.0450	.0150
pH—Within the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	1.50	0.500
O&G	.450	.150
Cadmium*	.0150	.0050

Subpart L—Continued

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
Chromium	.0150	.0050
Lead	.0150	.0050
Zinc	.090	.030
pH—Within the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	2.438	0.813
O&G	.731	.244
Cadmium*	.02438	.00813
Chromium	.02438	.00813
Lead	.02438	.00813
Zinc	.1463	.0488
pH—Withing the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

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

Except as provided in 40 CFR §§ 125.30–32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) *Galvanizing.*

(1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001878	0.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002504	0.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0007512	0.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000939	0.000313
Lead	.000939	.000313
Zinc	.000939	.000313

(b) *Terne coating.*

(1) Without fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001878	0.000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

(2) With fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002504	0.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

(c) *Other coatings.*

(1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0001878	0.0000626
Chromium	.0001878	.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

*The limitations for cadmium apply only to cadmium coating operations.

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0002504	0.0000835
Chromium	.0002504	.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

*The limitations for cadmium apply only to cadmium coating operations.

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0007512	0.0002504
Chromium	.0007512	.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504

*The limitations for cadmium apply only to cadmium coating operations.

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	BAT effluent limitations: Maximum for any one day	BAT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.000939	0.000313
Chromium	.000939	.000313
Lead	.000939	.000313
Zinc	.000939	.000313

*The limitations for cadmium apply only to cadmium coating operations.

§ 420.124 New source performance standards.

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) *Galvanizing.*

(1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02504	0.00938
O&G	.00626	
Chromium	.0001878	.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626
pH—Within the range of 6.0 to 9.0.		

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03339	0.0125
O&G	.00835	
Chromium	.0002504	.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835
pH—Within the range of 6.0 to 9.0.		

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (1b/1,000 1b) of product	
TSS	0.1002	0.03752
O&G	.02504	
Chromium	.0007512	.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504
pH—Within the range of 6.0 to 9.0.		

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (1b/1,000 1b) of product	
TSS	0.1252	0.0469
O&G	.0313	
Chromium	.000939	.000313
Lead	.000939	.000313
Zinc	.000939	.000313
pH—Within the range of 6.0 to 9.0.		

(b) Terne coating.

(1) Without fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (1b/1,000 1b) of product	
TSS	0.02504	0.00938
O&G	.00626	
Chromium	.0001878	.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626
pH—Within the range of 6.0 to 9.0.		

(2) With fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (1b/1,000 1b) of product	
TSS	0.03339	0.0125
O&G	.00835	
Chromium	.0002504	.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835
pH—Within the range of 6.0 to 9.0.		

(c) Other coatings.

(1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02504	0.00938
O&G	.00626	
Cadmium*	.0001878	.0000626
Chromium	.0001878	.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626
pH—Within the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03339	0.0125
O&G	.00835	
Cadmium*	.0002504	.0000835
Chromium	.0002504	.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835
pH—Within the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1002	0.03752
O&G	.02504	
Cadmium*	.0007512	.0002504
Chromium	.0007512	.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504
pH—Within the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

(4) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	New source performance standards: Maximum for any one day	New source performance standards: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1252	0.0469
O&G	.0313	
Cadmium*	.000939	.000313
Chromium	.000939	.000313
Lead	.000939	.000313
Zinc	.000939	.000313
pH—Within the range of 6.0 to 9.0.		

*The limitations for cadmium apply only to cadmium coating operations.

§ 420.125 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources.

(a) *Galvanizing.* (1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001878	0.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002504	0.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0007512	0.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000939	0.000313
Lead	.000939	.000313
Zinc	.000939	.000313

(b) *Terne coating.* (1) Without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001878	0.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

(2) With fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002504	0.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

(c) *Other coasting.* (1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0001878	0.0000626
Chromium	.0001878	.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

*The limitations for cadmium apply only to cadmium coating operations.

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0002504	0.0000835
Chromium	.0002504	.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

*The limitations for cadmium apply only to cadmium coating operations.

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0007512	0.0002504
Chromium	.0007512	.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504

*The limitations for cadmium apply only to cadmium coating operations.

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for existing sources: Maximum for any one day	Pretreatment standards for existing sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.000939	0.000313
Chromium	.000939	.000313
Lead	.000939	.000313
Zinc	.000939	.000313

*The limitations for cadmium apply only to cadmium coating operations.

§ 420.126 Pretreatment standards for new sources.

Except as provided in 40 CFR § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for new sources.

(a) *Galvanizing.*

(1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001878	0.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002504	0.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0007512	0.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.000939	0.000313
Lead	.000939	.000313
Zinc	.000939	.000313

(b) *Terne coating.* (1) Without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0001878	0.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

(2) With fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Chromium	0.0002504	0.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

(c) *Other coatings.* (1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0001878	0.0000626
Chromium	.0001878	.0000626
Lead	.0001878	.0000626
Zinc	.0001878	.0000626

[1] The limitations for cadmium apply only to cadmium coating operations.

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0002504	0.0000835
Chromium	.0002504	.0000835
Lead	.0002504	.0000835
Zinc	.0002504	.0000835

[1] The limitations for cadmium apply only to cadmium coating operations.

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.0007512	0.0002504
Chromium	.0007512	.0002504
Lead	.0007512	.0002504
Zinc	.0007512	.0002504

[1] The limitations for cadmium apply only to cadmium coating operations.

(4) Wire products and fasteners with fume scrubbers

Subpart L

Pollutant or pollutant property	Pretreatment standards for new sources: Maximum for any one day	Pretreatment standards for new sources: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
Cadmium*	0.000939	0.000313
Chromium	.000939	.000313
Lead	.000939	.000313
Zinc	.000939	.000313

[1] The limitations for cadmium apply only to cadmium coating operations.

§ 420.127 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

Except as provided in 40 CFR 125.30–.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology.

(a) *Galvanizing.* (1) Strip, sheet, and miscellaneous products without fume scrubbers

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.02504	0.00938
O&G	.00626	
pH—Within the range of 6.0 to 9.0.		

(2) Strip, sheet, and miscellaneous products with fume scrubbers

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03339	0.01251
O&G	.00835	
pH—Within the range of 6.0 to 9.0.		

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1002	0.03752
O&G	.0250	
pH—Within the range of 6.0 to 9.0.		

(4) Wire products and fasteners without fume scrubbers.

Subpart K

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.1252	0.0469
O&G	.0313	
pH—Within the range of 6.0 to 9.0.		

(b) *Terne coating.*

(1) Without fume scrubbers.

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.3750	0.1250
O&G	.1125	.0375
pH—Within the range of 6.0 to 9.0.		

(2) With fume scrubbers.

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.03339	0.01251
O&G	.00835	
pH—Within the range of 6.0 to 9.0.		

(c) *Other coatings.*

(1) Strip, sheet, and miscellaneous products without fume scrubbers.

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1,000 lb) of product	
TSS	0.0376	0.0188
O&G	.00626	
pH—Within the range of 6.0 to 9.0.		

(2) Strip, sheet, and miscellaneous products with fume scrubbers.

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.03339	0.01251
O&G	.00835	
pH—Within the range of 6.0 to 9.0.		

(3) Wire products and fasteners without fume scrubbers.

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	0.1504	0.0752
O&G	0.02504	
pH—Within the range of 6.0 to 9.0.		

(4) Wire products and fasteners with fume scrubbers.

Subpart L

Pollutant or pollutant property	BCT effluent limitations: Maximum for any one day	BCT effluent limitations: Average of daily values for 30 consecutive days
	Kg/kkg (lb/1000 lb) of product	
TSS	2.438	0.8125
O&G	0.731	0.2438
pH—Within the range of 6.0 to 9.0.		

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