ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 467

[WH-FRL 2440-4]

Aluminum Forming Point Source Category; Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; interim rule and request for comment.

SUMMARY: This regulation establishes effluent limitations guidelines and standards limiting the discharge of pollutants into navigable waters and into publicly owned treatment works (POTW) by existing and new sources that conduct aluminum forming operations. The Clean Water Act and a consent decree require EPA to issue this regulation.

This regulation establishes effluent limitations guidelines based on "best practicable technology" (BPT) and "best available technology" (BAT), new source performance standards (NSPS) based on "best demonstrated technology", and pretreatment standards for existing and new indirect dischargers (PSES and PSNS, respectively).

Section 467.01(c) which applies to PSES for plants that extrude less than 1,360,000 kg (3 million pounds) of aluminum per year or draw with emulsions or soaps plants producing less than 453,333 kg (1 million pounds) of aluminum per year is promulgated as an interim rule.

DATES: In accordance with 40 CFR 100.01 (45 FR 26048), this regulation shall be considered issued for purposes of judicial review at 1:00 p.m. Eastern time on November 7, 1983. This regulation shall become effective December 7, 1983.

The compliance date for the BAT regulations is as soon as possible, but in any event, no later than July 1, 1984. The compliance date for new source performance standards (NSPS) and pretreatment standards for new sources (PSNS) is the date the new source begins operations. The compliance date for pretreatment standards for existing sources (PSES) is October 24, 1983.

The information requirements contained in 40 CFR 467.03 have not been approved by the Office of Management and Budget (OMB) and they are not effective until OMB has approved them.

Under Section 509(b)(1) of the Clean Water Act, judicial review of this regulation can be made only by filing a petition for review in the United States Court of Appeals within 90 days after the regulation is considered issued for purposes of judicial review. Under Section 509(b)(2) of the Clean Water Act, the requirements in this regulation may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

Comments on the interim rule (§ 467.01(c)) must be submitted by December 23, 1983.

ADDRESSES: Send comments on the interim final rule to Ms. Janet K. Goodwin, Effluent Guidelines Division (WH-552), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. Attention EGD Docket Clerk, Aluminum Forming Rules (WH-552). The supporting information and all comments on the interim final rule will be available for inspection and copying at the EPA Public Information Reference Unit, Room 2404, [EPA Library Rear] (PM-213). The basis for this regulation is detailed in four major documents. See Supplementary Information (under "XIV. Availability of Technical Information") for a description of each document. Copies of the technical and economic documents may be obtained from the National Technical Information Service, Springfield, Virginia 22161 (703/487-4600). Technical information may be obtained by writing Ms. Janet Goodwin, Effluent Guidelines Division (WH-552), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 or by calling (202) 382-7126. Additional economic information may be obtained by writing Ms. Ellen Warhit, Economic Analysis Staff (WH-586), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 or by calling (202) 382-5381.

The record for the final rule will be available for public review not later than December 28, 1983 in EPA's Public Information Reference Unit, Room 2904 (Rear) (EPA Library), 401 M Street, SW., Washington, D.C. The EPA public information regulation (40 CFR Part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Ernst P. Hall, (202) 382-7126.

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I. Legal Authority

This regulation is being promulgated under the authority of Sections 301, 304, 306, 307, 308, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 *et seq.*, as amended by the Clean Water Act of 1977, Pub L. 95-217), also called "the Act". It is also being promulgated in response to the Settlement Agreement in *Natural Resources Defense Council, Inc.* v. *Train*, 8 ERC 2120 (D.C.C. 1976), *modified*, 12 ERC 1833 (D.D.C. 1979), modified by Orders dated October 26, 1982 and August 2, 1983.

II. Scope of This Rulemaking

This regulation, which was proposed on November 22, 1982 (47 FR 52626), establishes effluent limitations guidelines and standards for existing and new aluminum forming facilities. Aluminum forming is the deformation of aluminum or aluminum alloys into specific shapes by hot or cold working such as rolling, extrusion, forging, and

drawing. Also included are a number of ancillary operations such as casting, heat treatment and surface treatment that are an integral part of aluminum forming processes and that can contribute significantly to the wastewaters discharged from aluminum forming plants. The manufacture of aluminum powders and the forming of parts from aluminum or aluminum alloy powders are regulated under the nonferrous metals forming regulation.

Casting of aluminum is frequently done prior to forming at aluminum forming plants; it is also performed as the final step in the manufacture of primary and secondary aluminum. The equipment and methods of casting used at aluminum forming plants are the same as those employed by primary and secondary plants and the water requirements and waste characteristics are very similar. Casting done at a plant which manufactures aluminum and also does aluminum forming is subject to the casting limitations for the aluminum manufacturing subcategories of the nonferrous metals category if they cast the aluminum without cooling. If the aluminum is a remelted primary aluminum product and is cast at a facility also forming aluminum, then the casting subsequent to the remelting is subject to the aluminum forming limitations. (The limitations for casting in the primary and secondary aluminum subcategories of the nonferrous metals manufacturing category will be promulgated early in 1984.)

Surface treatment of aluminum is any chemical or electrochemical treatment applied to the surface of aluminum. Such surface treatment is considered to be a part of aluminum forming whenever it is performed as an integral part of aluminum forming. For the purposes of this regulation, surface treatment of aluminum is considered to be an integral part of aluminum forming whenever it is performed at the same plant site at which aluminum is formed. When surface treatment operations are covered under the aluminum forming category they are covered by the limitations and standards for cleaning or etching baths, rinses, and scrubbers, and are not subject to regulation under the provisions of 40 CFR Part 433, Metal Finishing. See 40 CFR 433.10(b), 48 FR 32485 (July 15, 1983).

EPA is promulgating BPT, BAT, NSPS, PSES, and PSNS for the aluminum forming category. EPA is promulgating as an interim final rule § 467.01(c), which applies to PSES for plants manufacturing less than 1,360,000 kilograms (3 million pounds) in the extrusion subcategory and for plants manufacturing less than 453,333 kilograms (1 million pounds) in the drawing with emulsions or soaps subcategory.

III. Summary of Legal Background

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)]. To implement the Act, EPA was to issue effluent limitations guidelines, pretreatment standards, and new source performance standards for industry dischargers.

The Act included a timetable for issuing these standards. However, EPA was unable to meet many of the deadlines and, as a result, in 1976, it was sued by several environmental groups. In settling 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 in promulgating effluent limitations guidelines, new source performance standards, and pretreatment standards for 65 "priority" pollutants and classes pollutants for 21 major industries. See *Natural Resources Defense Council, Inc.* v. *Train*, 8 ERC 2120 (D.D.C. 1976), *modified*, 12 ERC 1833 (D.D.C. 1979), modified by Orders dated October 26, 1982 and August 2, 1983.

Many of the basic elements of the Settlement Agreement were incorporated into the Clean Water Act of 1977. Like the Agreement, the Act stressed control of toxic pollutants, including the 65 "priority" pollutants. In addition, to strengthen the toxic control program, Section 304(e) of the Act authorizes 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.

Under the Act, the EPA is to set a number of different kinds of effluent limitations. These are discussed in detail in the preamble to the proposed regulation and in the Development Document. They are summarized briefly below:

1. Best Practicable Control Technology (BPT)

BPT limitations are generally based on the average of the best existing performance by plants of various sizes, ages, and unit processes within the category or subcategory.

In establishing BPT limitations, EPA considers the total cost in relation to the age of equipment and facilities involved, the processes employed, process changes required, engineering aspects of the control technologies, and nonwater quality environmental impacts (including energy requirements). We balance the total cost of applying the technology against the effluent reduction.

2. Best Available Technology (BAT)

BAT limitations, in general, represent the best existing performance in the industrial subcategory or category. The Act establishes BAT as the principal national means of controlling the direct discharge of toxic and nonconventional pollutants to navigable waters.

In arriving at BAT, the Agency considers the age of the equipment and facilities involved, the process employed, the engineering aspects of the control technologies, process changes, the cost of achieving such effluent reduction, and nonwater quality environmental impacts. The Agency retains considerable discretion in assigning the weight to be accorded these factors.

3. Best Conventional Pollutant Control Technology (BCT)

The 1977 Amendments to the Clean Water Act added Section 301(b)(2)(E), establishing "best conventional pollutant control techonology" (BCT) for discharge of conventional pollutants from existing industrial point sources. Section 304(a)(4) designated the following as conventional pollutants: BOD, TSS, fecal coliform, pH, and any additional pollutants defined by the Administrator as conventional. The Administrator designated oil and grease "conventional" on July 30, 1979 (44 FR 44501).

BCT is not an additional limitation but replaces BAT for the control of conventional pollutants. In addition to other factors specified in Section 304(b)(4)(B), the Act requires that BCT limitations be assessed in light of a two part "cost-reasonableness" test. *American Paper Institute* v. *EPA*, 660 F.2d 954 (4th Cir. 1981). The first test compares the cost for private industry to reduce its conventional pollutants with the costs to publicly owned treatment works for similar levels of reduction in their discharge of these pollutants. The second test examines the cost-effectiveness of additional industrial treatment beyond BPT. EPA must find that limitations are "reasonable" under both tests before establishing them as

BCT. In no case may BCT be less stringent than BPT.

EPA published its methodology for carrying out the BCT analysis on August 29, 1979 (44 FR 50732). In the case mentioned above, the Court of Appeals ordered EPA to correct date errors underlying EPA's calculation of the first test, and to apply the second cost test. (EPA argued that a second cost test was not required.)

A revised methodology for the general development of BCT limitations was proposed on October 29, 1982 (47 FR 49176). BCT limits for this industry are accordingly deferred until promulgation of the final methodology for BCT development.

4. New Source Performance Standards (NSPS)

NSPS are based on the best available demonstrated technology (BDT). New plants have the opportunity to install the best and most efficient production processes and wastewater treatment technologies.

5. Pretreatment Standards for Existing Sources (PSES)

PSES are designed to prevent the discharge of pollutants that pass through, interfere with, or are otherwise incompatible with the operation of publicly owned treatment works (POTW). They must be achieved within three years of promulgation. The Clean Water Act of 1977 requires pretreatment from toxic pollutants that pass through the POTW in amounts that would violate direct discharger effluent limitations or interfere with the POTW's treatment process or chosen sludge disposal method. The legislative history of the 1977 Act indicates that pretreatment standards are to be technology-based, analogous to the best available technology for removal of toxic pollutants. EPA has generally determined that pollutants pass through POTW if the nationwide average percentage of pollutants removed by a well operated POTW achieving secondary treatment is less than the percent removed by the BAT model treatment system. The General Pretreatment Regulations, which serve as the framework for the pretreatment regulations are found at 40 CFR Part 403.

6. Pretreatment Standards for New Sources (PSNS)

Like PSES, PSNS are designed to prevent the discharge of pollutants which pass through, interfere with, or are otherwise incompatible with the operation of a POTW. PSNS are to be issued at the same time as NSPS. New indirect dischargers, like new direct dischargers, have the opportunity to incorporate in their plant the best available demonstrated technologies. The Agency considers the same factors in promulgating PSNS as it considers in promulgating PSES.

IV. Methodology and Data Gathering Efforts

The methodology and data gathering efforts used in developing the proposed regulation were summarized in the "Preamble to the Proposed Aluminum Forming Point Source Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards" (47 FR 52626, November 22, 1982), and described in detail in the *Development Document for Effluent Limitations Guidelines and Standards for the Aluminum Forming Point Source Category.*

After proposal, the Agency gathered additional data to clarify comments and to provide further support for the regulation. The Agency performed additional analysis of new and existing data. These additional data and activities are described in the "Notice of Data Availability and Request for Comment" (47 FR 34079, July 27, 1983) and are discussed briefly below. They are also described in substantial detail in the appropriate sections of the development document. The supporting information and additional data are in the public record supporting this final rule.

Under authority of Section 308 of the Clean Water Act, the Agency requested specific additional information and data from 13 commenters to clarify and support their individual comments. The Agency's request for information asked each commenter to provide specific information supporting their particular comments. Responses were received from all of the 13 commenters. The additional data and information received related primarily to wastewater sources not specifically considered by the proposed regulation; space limitations and retrofit problems involved with the installation of two-stage countercurrent rinsing; and the classification and disposal costs of solid wastes generated by model wastewater treatment. We received flow and production data for additional waste streams as well as information on treatment and characteristics of these streams. Plan view diagrams were submitted by two companies to show space availability for countercurrent cascade rinsing. We also received information regarding operating schedules for surface treatment lines. Cost information was submitted for solid waste disposal as well as copies of correspondence with disposal companies and state or local authorities. We also received new technical information on the regeneration of cleaning and etching baths.

To supplement exisiting data regarding treatment-in-place and the long-term performance of that treatment, the Agency collected discharge monitoring report (DMR) data from state or EPA Regional offices for direct dischargers. DMR data are self-monitoring data supplied by permit holders to meet state or EPA permit requirements. These data were available from 30 aluminum forming plants; however, the data vary widely in character and nature due to the dissimilar nature of the monitoring and reporting requirements place on aluminum forming plants by the NPDES permit issuing authority. These data were not used in the actual development of the final limitations but DMR data from 11 plants that have lime and settle treatment were used as a check on the achievability of the treatment effectiveness values used to establish limitations and standards. The results show the final treatment effectiveness values are being achieved consistently at these 11 plants. A discussion on these DMR data and a comparison of them to the treatment effectiveness values used in this regulation is found in the administrative record to this rulemaking.

The existing treatment effectiveness data were reviewed thoroughly following proposal. As a result of this review, minor additions, deletions and corrections were made to the Agency's treatment effectiveness data base. These changes are documented in the record along with responses to comments. Following the changes, statistical analyses performed prior to proposal were repeated. Conclusions reached prior to proposal were unchanged and little or no effect on the final limitations occurred as a result of changes in the data. Revisions to the data base and the results of re-analyzing the data are documented in the record o this rulemaking.

Additional data were obtained from 17 plants that perform anodizing and conversion coating operations as an integral part of their aluminum forming extrusion operations. These data, obtained by site visits, telephone contacts, and letter requests, were used to supplement the process configuration production, and wastewater flow information obtained during the Agency's 1978 data collection effort wit regard to plants which perform anodizing and conversion coating. Thes data were used to characterize

wastewater flows and subsequently perform cost of compliance estimates for these plants.

Since proposal, the Agency made engineering visits to six aluminum forming plants to determine the flow characteristics of 12 wastewater streams (sawing spent lubricant, roll grinding spent lubricant, die cleaning baths, extrusion press hydraulic fluid leakage, detergent cleaning baths and rinses, anodizing baths and rinses, dye baths and rinses, and sealing baths and rinses). Additionally, we collected samples for chemical analysis at five of these plants to determine the nature of the above wastewater streams and the effectiveness of end-of-pipe treatment in removing pollutants, primarily the pollutant aluminum. In addition to the wastewater streams listed above, we sampled a variety of process wastewaters to characterize treatment effectiveness.

New data obtained by the Agency since proposal have been carefully analyzed and, where appropriate, changes have been made to the regulation. Flow allowances for a number of waste streams have been revised as discussed in Section V. The treatment effectiveness value for the pollutant aluminum and the pH range have also been revised.

In response to comments on the proposed regulation, the Agency revised the compliance costs and economic impact analyses, which resulted in revised plant closure estimates. The Agency reviewed the compliance cost estimates and recosted 12 inaccurately costed plants. Compliance costs were also estimated for an additional 27 plants that were not costed prior to proposal. The costing methodology used to estimate plant compliance costs is discussed in Section VIII of the Development Document. The economic impact analysis was also revised by reducing the return on investment for each subcategory based on comments and by revising the market rate of return to include a small risk premium. The economic methodology used to estimate economic impacts is discussed in Chapter Two and Appendix B and C of the *Economic Impact Analysis of Effluent Standards and Limitations for the Aluminum Forming Industry*, EPA (EPA 440/2-83-010).

V. Control Treatment Options and Technology Basis for Final Regulations

A. Summary of Category

The aluminum forming industry is grnerally included within SIC 3353, 3354, 3355, and 3463 of the Standard Industrial Classification Manual, prepared in 1972 and supplemented in 1977 by the Office of Management and Budget, Executive Office of the President.

There are approximately 271 aluminum forming facilities distributed throughout the United States, with the majority located east of the Mississippi River. There are 59 direct dischargers, 72 indirect dischargers, and 140 plants that do not discharge wastewater. Most of the zero discharge plants employ a combination of forming and ancillary operations which do not generate process wastewater. The aluminum forming category employs an estimated 31,200 people with a total production estimated at 5,000,000 kkg (11 billion pounds) per year, with individual production ranging from less than 10kkg (22,000 pounds) to more than 259,000 kkg (570 million pounds) per year.

Aluminum forming has become more widespread since the commercial development of aluminum in the 1880s. The demand for formed aluminum products has increased greatly in the past 30 years. Two of the larger markets for aluminum formed products are in the manufacturing of aeronautical and automobile components where aluminum reduces weight and increases fuel efficiency.

Aluminum forming is the deformation of aluminum into specific shapes by hot or cold working. Many of the products manufactured at aluminum forming facilities are sold to other manufacturers for further fabrication or incorporation into consumer goods. The aluminum forming operations covered by this regulation are rolling, extruding, forging, and drawing of aluminum. Associated operations, such as the casting of aluminum for subsequent forming, heat treatment, and all surface treatment operations performed as an integral part of aluminum forming (called cleaning or etching for the purpose of this regulation), are also included. These operations are discussed in substantial detail in the preamble to the proposed regulation (47 FR 52626).

Aluminum forming operations generate a variety of different waste streams. Lubricants consisting of neat oils, oil-water emulsions, or soap solutions are used for lubrication and cooling in rolling and drawing operations as well as sawing and casting. Contact cooling water is commonly used to quench aluminum products after casting, forming operations, or heat treatment. Wastewater is also generated by the discharge of the baths and rinses used for the cleaning and etching of aluminum products.

The most significant pollutants or pollutant parameters found in wastewater generated by aluminum forming facilities are:

(1) Toxic pollutants—Cadmium, chromium, copper, cyanide, lead, nickel, selenium, and zinc;

(2) Conventional pollutants—Oil and grease, suspended solids, and pH; and

(3) Nonconventional pollutants—aluminum.

Toxic organics were found at very significant concentrations in concentrated oily waste streams, in forging air pollution scrubber wastewater, and in other waste streams.

In developing this regulation, it was necessary to determine whether different effluent limitations guidelines and standards were appropriate for different segments (subcategories) of the industry. The major factors considered in assessing the need for subcategorization and in identifying subcategories included: waste characteristics, raw materials, manufacturing processes, products manufactured, water use, water pollution control technology, treatment costs, solid waste generation, size of plant, age of plant, number of employees, total energy requirements, nonwater quality characteristics, and unique plant characteristics. Section IV of the Development Document contains a detailed discussion of these factors and the rationale for subcategorization.

The aluminum forming manufacturing processes of rolling, extruding, forging, and drawing are universally recognized in the industry. They also provide a convenient basis for normalizing limitations from one plant to another based on mass of aluminum passed through the processes. EPA has subcategorized the aluminum forming industry based primarily on these manufacturing processes. The subcategories are defined as: (1) Rolling with neat oils, (2) rolling with emulsions, (3) extrusion, (4) forging, (5) drawing with neat oils, and (6) drawing with emulsions or soaps.

Each subcategory consists of two segments. The first segment is called the core and includes the specific forming operation and related operations that almost always occur in conjunction with the forming operation. The core also includes operations that are not always found in conjunction with the forming operation, but do not discharge wastewater. The effluent flow from the core for each of the subcategories is production normalized, and the limitations are based on the effluent flow and the treatment effectiveness of the model treatment technology.

The second segment of each subcategory consists of ancillary

operations that generate wastewater and are performed as part of the aluminum forming process. These ancillary operations, such as solution heat treatment, cleaning or etching, and casting, are performed to achieve desired characteristics or finishes on the aluminum products and are characterized by the generation of substantial volumes of wastewater. Because they are not found at every plant in a subcategory and they are not always unique to a specific subcategory, they are not included in the core. Instead, a separate limitation is established for ancillary operations based on the waste streams generated by these operations and normalized by the mass (off-kilogram) of aluminum processed through the ancillary operation. An aluminum forming plant would be permitted to discharge a mass of pollutants equivalent to the sum of the mass limitations established for the core and the individual ancillary operation(s) that are practiced at the plant.

The production normalizing parameter selected for aluminum forming is the off-kilogram (off-pound) of aluminum from an operation. The Agency has found that the generation of pollutants is most closely related to the off-kilograms of aluminum processed. Further, members of the aluminum forming category usually maintain production records in terms of the mass of aluminum produced, thus, this production normalizing parameter is most appropriate from industry's perspective.

B. Control and Treatment Technologies

Prior to proposal of the aluminum forming regulation, EPA considered a wide range of control and treatment options including both in-process changes and end-of-pipe treatment. These options are discussed in detail in the preamble to the proposed aluminum forming regulation (47 FR 52626). The Agency is promulgating limitations and standards based on the same end-of-pipe model treatment technology used as a basis for the proposed rule. The control and treatment technologies used as the basis for the final limitations and standards are described below.

In-process controls include a variety of flow reduction techniques and process changes such as recycle, countercurrent cascade rinsing, and alternate degassing methods. The regeneration technology included as part of the model treatment technology of the proposed rule has been eliminated from the model treatment technology of the final rule.

End-of-pipe treatment included: Chemical reduction of chromium, cyanide precipitation, chemical emulsion breaking, where applicable; oil skimming, chemical precipitation of metal ions using hydroxides or carbonates, removal of precipitated metals by settling (lime and settle), pH control, and filtration. These treatment technologies are described in detail in Section VII of the Development Document.

The treatment effectiveness of the above technologies has been evaluated by observing the performance of these technologies on aluminum forming and other similar wastewaters. The data base for the performance of lime and settle technology is a composite of data drawn from EPA protocol sampling and analysis of aluminum forming, copper forming, battery manufacturing, porcelain enameling, and coil coating wastewaters. These data, collectively called the combined metals data base, report influent and effluent concentrations for nine pollutants. The wastewaters are judged to be similar in all material respects for treatment because they contain a range of dissolved metals which can be removed by precipitation and solids removal.

We regard the combined metals data base as the best available measure for establishing the concentrations of pollutants attainable with lime and settle. Our determination is based on the similarity of the raw and treated wastewaters among the different categories as determined generally by engineering hypothesis and supported by statistical analysis for homogeneity (a separate study of statistical homogeneity of these wastewaters is part of the record of this rulemaking). The combined metals data base provides a larger quantity of data that are similar from both technical and statistical standpoints than would be available from any one category alone. The larger quantity of data in the combined metals data enhances the Agency's ability to estimate long-term performance and variability through statistical analysis.

The treatment effectiveness of lime and settle technology on the pollutant aluminum was derived from an analysis of the effluent concentrations of the pollutant aluminum at three aluminum forming plants and one aluminum coil coating plant with lime and settle wastewater treatment. (The wastewaters from aluminum coil coating are similar in all material respects to wastewaters from aluminum forming.) A total of 11 data points were available which were used to establish the treatment effectiveness value for the pollutant aluminum. The aluminum limitations were determined on the basis of aluminum measurements taken in wastewater with pH in the range of 7.0 to 10.0 to be consistent with pH requirements on the combined metals data base and limitations.

The Agency also examined the performance of lime, settle, and filter technology based on the performance of full-scale commercial systems treating porcelain enameling. Two aluminum forming plants reported that they are using a filter; thus, this technology is demonstrated on aluminum forming wastewaters. Since no data were available on these systems the Agency examined wastewaters from porcelain enameling and aluminum forming and determined that they are similar in all material respects based on the analysis of the raw waste values in the combined metals data set for lime and settle treatment. Therefore, the performance of lime, settle, and filter can be applied to the aluminum forming wastewaters.

Lime, settle and filter data were also obtained from a primary zinc smelter in the nonferrous metals manufacturing category. The treatment effectiveness values derived from the zinc smelter when compared with the values from the porcelain enameling plants confirmed the appropriateness of these values.

The combined metals data are discussed in more detail in Section IX, Public Participation and Response to Comments, in Section VII of the Development Document and in the document "A Statistical Analysis of the Combined Metals Industries Effluent Data" in the administrative record for this rulemaking.

Flow reduction is a significant part of the overall pollutant reduction technology for this category, ranging from 75 to 82 percent from raw waste flows. The Agency is promulgating mass-based limitations and standards which account for the significant pollutant removal achieved by flow reduction model technology. Mass-based limits ensure reduction of the total quantity of pollutant discharge. The mass-based limitations and standards established for this category are derived as the product of the regulatory flow and the overall treatment effectiveness. The regulatory flows are based on flow data, normalized to production, which were supplied by the industry.

The monitoring provisions of the final rule are the same as those contained in the proposed rule.

C. Technology Basis for Final Regulation

A brief summary of the technology basis for the regulation is presented below. A more detailed discussion is presented in the "Preamble to the Proposed Aluminum Forming Point Source Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards" (47 FR 52626 (November 22, 1982)) and the *Development Document for Effluent Limitations Guidelines and Standards for the Aluminum Forming Point Source Category.*

BPT: EPA is promulgating BTP mass limitations based on end-of-pipe treatment, which consists of oil skimming and lime precipitation and settling, and, where necessary, preliminary treatment consisting of chemical emulsion breaking, and hexavalent chromium reduction. Cyanide removal, where applicable, is also included in the model BPT technology. The cyanide limitations are based on the application of cyanide precipitation technology which is transferred from the coil coating category. Section VII of the Development document contains a complete discussion of the transfer of this technology. However, the Agency recommends product substitution as the most effective means of cyanide control. The end-of-pipe treatment technology basis for the BPT limitations being promulgated is the same as that for the proposed limitations.

In developing BPT limitations, the Agency considered the amount of water used per unit of production (liters per kkg or metric ton) for each wastewater stream. The flow allowances for BPT remain the same as those proposed with the exception of the regulatory flow allowances for cleaning or etching baths, rinses, and scrubbers; miscellaneous waste streams; roll grinding spent lubricant; continuous sheet and rod casting spent lubricant; continuous rod casting contact cooling water; degassing scrubber liquor; and direct chill casting contact cooling water. In addition, we are adding a separate flow allowance for extrusion press leakage. These flow allowances are discussed briefly below and in more detail in Section IX of this preamble and in Section IX of the Development Document. The limitation presented in the final BPT regulation reflect these changes.

The cleaning or etching bath flow allowance decreased by 12 percent as a result of additional information obtained from four sampled plants and one company that submitted written information. The new data added five data points to the middle of the range of existing flow data. These flows are presented in the Development Document and the BPT regulatory flow is based on the average of all the available data including data including the pre-proposal data and is 179 1/kkg (43 gal/ton).

The cleaning or etching rinse flow allowance decreased by 17.5 percent with the addition of data obtained from four sampled plants. The rinse flows reported by these plants were in all cases less than the proposed flow allowance. These flows are presented in the Development Document and the BPT regulatory flow is based on the average of all of the available data including the pre-proposal data and is 13,912 1/kkg (3,341 gal/ton).

Additional flow data for cleaning or etching scrubbers were obtained from one sampled plant. These data were combined with the pre-proposal data to develop the BPT reguatory flow of 15,900 1/kkg (3,819 gal/ton). This flow allowance represents a 7.7 percent decrease from the proposed flow allowance.

The Agency has determined, based on comments and engineering plant visits, that the waste streams generated from extrusion press hydraulic fluid leakage are of sufficient volume to warrant a separate flow and discharge allowance. Five companies submitted data on extrusion press hydraulic fluid leakage in presses that use oil-water emulsions for hydraulic fluid instead of the more common use of pure oil hydraulic fluids. Data and information indicate that a flow allowance for this wastewater source is necessary because emulsion hydraulic fluids tend to leak thereby generating a wastewater source. The BPT reguatory flow of 1,478 1/kkg (355 gal/ton) for this waste stream is based on the average of the production normalized flow data for the three plants that did not perform recycle, and has been included as an ancillary waste stream in the extrusion subcategory.

Three companies submitted data on miscellaneous wastewater streams. The BPT regulatory allowance for miscellaneous nondescript wastewater sources has been increased to 45 1/kkg (11 gal/ton) and is based on the average of the data submitted. The miscellaneous nondescript wastewater flow allowance is production normalized to a plant's core production and covers waste streams generated by maintenance, clean-up, ultrasonic testing, roll grinding of caster rolls, ingot scalping, processing area scrubbers, and dye solution baths and seal baths (along with any other cleaning or etching bath) when not followed by a rinse.

Flow and wastewater characteristics data were obtained from two sampled plants for the roll grinding spent lubricant flow allowance. These new flow data were averaged with the flow data used to calculate the proposed flow allowance resulting in a slight decrease in the regulatory flow to 5.5 1/kkg (1.3 gal/ton).

The flow allowance for continuous sheet casting spent lubricant has been increased by 7 percent to 1.964 1/kkg (0.471 gal/ton) due to the addition of a production normalized flow for this stream submitted after proposal. A corresponding change has been made in the continous rod casting spent lubricant flow allowance.

Updated flow and production data were submitted on the continuous rod casting contact cooling water flow allowance. The BPT flow is based on this new data resulting in a 33 percent increase from that of the proposed rule and is 1,555 1/kkg.

The flow allowance for direct chill casting has been decreased by 34 percent from that of the proposed rule and is 1,329 1/kkg (298 gal/ton). This flow allowance has been changed as a result of the Agency correcting errors in transcription of direct chill casting flow data from dcp's in the primary aluminum and secondary aluminum subcategories of the nonferrous metals manufacturing category. The flow allowance for the degassing scrubber liquor has been increased to 1329 1/kkg (319 gal/ton) based on changes to the normalized flow data base of the primary aluminum subcategory of the nonferrous metals manufacturing category.

The pollutants selected for limitation at BPT are: chromium, cyanide, zinc, aluminum, oil and grease, total suspended solids (TSS), and pH. These are the same pollutants that were selected for regulation in the proposed rule. Additionally, the special monitoring provision for cyanide that allows the owner or operator of a plant to forego periodic analyses for cyanide if certain conditions are met is retained in the final rule.

On the basis of additional information collected during post-proposal sampling efforts, the treatment effectiveness value used to calculate limitations and standards for the pollutant aluminum has been changed. The Agency has also revised the regulatory pH requirements from a range of 7.5 to 10.0 in the proposed rule to 7.0 to 10.0 in the final rule.

Fifty-nine plants are direct dischargers. The Agency estimates that

investment costs in 1982 dollars for these plants would be $84.4 million and that total annual costs would be $37.9 million. Removal of toxic pollutants over estimates of current removals would be 94,250 kg/yr (207,350 lbs/yr). In addition, BPT will result in the removal of 15.6 million kg/yr (34.3 million lbs/yr) of total pollutants including 1.73 million kg/yr (3.8 million lbs/yr) of the pollutant aluminum. The Agency has determined that the effluent reduction benefits associated with compliance with BPT limitations justify the costs.

BAT: EPA is promulgating BAT mass limitations based on the BPT model end-of-pipe common treatment plus flow reduction through the application of recycle, countercurrent cascade rinsing, and alternate degassing methods. The Agency is promulgating BAT limitations based on the same end-of-pipe treatment technology as that of the proposed limitations.

In developing BAT limitations, the Agency considered the amount of water used per unit of production (liters per metric ton or gallons per ton) for each wastewater stream. Regeneration of cleaning or etching baths has been eliminated from the model treatment technology and a discharge allowance equal to BPT is made for these baths. The Agency received numerous comments and new information indicating that regeneration technology is not a proven technology for a number of aluminum forming cleaning or etching baths and that even if the technology is applied, it cannot achieve zero discharge as proposed. Accordingly, the Agency has eliminated regeneration from the model BAT technology and is establishing a BAT regulatory flow allowance equivalent to the BPT regulatory flow allowance of 179 1/kkg (43 gal/ton) for this waste stream.

The cleaning or etching rinse final BAT regulatory flow is based on flow reduction by the application of two-stage countercurrent cascade rinsing. Application of countercurrent cascade rinsing will reduce the BPT flow by 90 percent. Thus the BAT flow is based on the reduction of the revised BPT flow and is 1,391 1/kkg (334 gal/ton).

The BAT flow allowance for continuous rod casting contact cooling water has been reevaluated to include the updated data submitted after proposal and also incorporates data from two primary aluminum plants. The BAT flow allowance based on the application of recycle is increased by 46 percent from the proposed allowance to 193.9 1/kkg (56.4 gal/ton).

The BAT flow allowances for miscellaneous nondescript waste streams, extrusion press hydraulic fluid leakage, continuous sheet or rod casting lubricant, and roll grinding are equivalent to the BPT allowances and are 45 1/kkg (11 gal/ton), 1,230 1/kkg (295 gal/ton), 1,964 1/kkg (0.471 gal/ton) and 5.5 1/kkg (1.3 gal/ton), respectively. These flow allowances are based on current reported industry practice and are not based on in-process flow reduction controls. For the extrusion press hydraulic fluid leakage, the Agency considered basing the flow allowance at BAT on the collection and recycle of hydraulic fluid leakage. However, conversion of existing presses to include recycle requires rebuilding of the entire system. These streams have low flows and will only increase the BAT flow allowance above the proposed levels by less than 15 percent. Further flow reduction would not significantly affect pollutant removal. Therefore BAT flows for these streams are equivalent to BPT. The limitations presented in the final BAT regulation reflect these changes.

The pollutants selected for regulation are: chromium, cyanide, zinc, and aluminum. These are the same pollutants that were selected for regulation in the proposed rule. Toxic organics are not regulated at BAT because the oil and grease limitation at BPT will provide effective removal (approximately 97 percent). As discussed below, the toxic metals cadmium, copper, lead, nickel, and selenium which are not specifically regulated, will be effectively controlled when the regulated toxic metals and aluminum are treated to the levels achievable by the model treatment technology.

The complexity and cost of analyses for toxic pollutants found in the aluminum forming category wastewaters has prompted EPA to develop an alternative method of controlling toxic pollutants. Instead of establishing specific effluent limitations for each of the seven toxic metals found in the category's raw wastewaters above treatability levels, the Agency is establishing effluent limitations for chromium, zinc, and aluminum as "indicator" pollutants. The data available to EPA show that control of the selected "indicator" pollutants will result in the substantial removal of cadmium, copper, lead, nickel, and selenium found in the wastewaters but not specifically limited. By establishing specific limitations and standards for only the "indicator" pollutants, the Agency will reduce the difficulty, cost, and delays of pollutant monitoring and analyses that would result if pollutant limitations were established for each toxic pollutant.

Implementation of the BAT limitations will remove annually an estimated 124,500 kg of toxic metal and organic pollutants (from estimated current discharge) at a capital cost, above equipment in place, of $48.2 million and a total annual cost of $25.1 million. BAT will remove 16,000 kg/yr of toxic pollutants (metals and organics) and 19,400 kg/yr of aluminum incrementally above BPT.

The Agency has decided not to include filtration as part of the model BAT treatment technology. EPA estimates that 29,000 kg/yr (64,000 lb/yr) of toxic metal pollutants will be discharged after the installation of BPT treatment technology; the model BAT treatment technology is estimated to remove an additional 15,000 kg/yr (33,000 lb) of toxic metals. The total removal after BAT is 91 percent of the total current discharge. The addition of filtration would remove approximately 4,300 kg/yr (9,500 lb/yr) of toxic pollutants discharged after BPT or a total removal of 94 percent of the total current discharge. This additional removal of 4,300 kg per year achieved by filtration is equal to an additional removal of approximately 1 kg (2.2 lb) of toxic pollutants per day per discharger. The incremental costs of these effluent reductions are $8.2 million in capital cost and $2.5 million in total annual costs for all direct dischargers. In addition, 18 aluminum forming plants also perform coil coating. The Agency has structured the aluminum forming regulation and coil coating regulation to allow cotreatment of wastewaters at integrated facilities. The BAT limitations for the coil coating category are based on technology not including filtration. Eastablishing aluminum forming limitations based on polishing filters would have the effect of requiring such integrated facilities to install polishing filters. The Agency believes that given all of these factors, the costs involved do not warrant selection of filtration as a part of the BAT model treatment technology.

NSPS: EPA is promulgating NSPS based on the same technology selected in the proposed rule. This technology consists of flow reduction and end-of-pipe treatment including oil skimming, lime precipitation, settling, and filtration, and, where necessary, preliminary treatment consisting of chemical emulsion breaking, chromium reduction, and cyanide removal. This is identical to BAT end-of-pipe treatment technology with the addition of a polishing filter.

In developing NSPS, the Agency considered the amount of water used

per unit of production for each wastewater stream. All new source flow allowances are equivalent to the BAT allowance with the exception of extrusion press hydraulic fluid leakage. The NSPS flow allowance of 298 l/kkg is based on the flows reported by two plants in which the presses have been designed and built to allow for recirculation of the hydraulic press fluid leakage. The NSPS standards presented in the final regulation reflect this regulatory flow. Filtration has been retained in the NSPS model treatment technology because new plants and major modifications to existing plants have the opportunity to design the most efficient process water use and wastewater reduction within their processes, thereby reducing the size and cost of filtration equipment. Economies are available for installation in new plants and in major modifications to existing plants since they will not have to retrofit flow reduction technology and reduced flows will correspondingly allow installation of small end-of-pipe treatment systems.

The pollutants selected for regulation are: chromium, cyanide, zinc, aluminum, oil and grease, TSS, and pH. These are the same pollutants that were selected for regulation in the proposed rule. Toxic organics are not regulated at NSPS because the oil and grease limitation at NSPS will provide effective removal (approximately 97 percent). Similarly, the toxic metals cadmium, copper, lead, nickel, and selenium will be adequately controlled when the regulated toxic metals and aluminum are treated to the levels achievable by the model treatment technology.

In order to estimate pollutant removals and costs for new sources, the Agency developed a "normal" plant for each of the six subcategories. A normal plant is a theoretical plant which has the core and each ancillary operation covered by the subcategory and production that is the average level of production in the subcategory. Section VIII of the development document presents in detail the composition of the aluminum forming "normal" plants. The results of the calculations for each subcategory were combined by a production-weighting technique to produce values representative of an "total category" normal plant.

The total category normal plant described above would generate a raw waste load of 10,615 kg per year (23,300 lb/yr) of toxic metal and 236,021 kg per year (519,200 lb/yr) of aluminum. The NSPS technology is expected to reduce these pollutant levels to 150 kg per year (330 lb/yr) of toxic metal pollutants and 109 kg per year lb/yr) of aluminum. The total capital investment cost for the normal plant to install NSPS treatment technology is estimated at $1.151 million, compared with investment costs of $1.085 million for an existing plant of the same composition to install technology equivalent to BAT. Corresponding figures for total annual costs are $1.089 million for NSPS and $1.039 million for BAT. Since the NSPS costs are approximately the same as the BAT costs which would be incurred by this plant, the new source performance standards will not pose a barrier to entry.

PSES: In the aluminum forming category, the Agency has concluded that the toxic metals regulated under these standards (chromium, cyanide, and zinc) pass through the POTW The nationwide average percentage of these same toxic metals removed by a well operated POTW meeting secondary treatment requirements is about 50 percent (ranging from 20 to 65 percent), whereas the percentage that can be removed by an aluminum forming direct discharger applying the best available technology economically achievable is about 91 percent (ranging from 79 to 97 percent). Accordingly, these pollutants pass through a POTW and are being regulated at PSES.

In addition to pass through of toxic metals, the Agency has concluded that there will be pass through of toxic organic pollutants associated with oil waste streams. The BPT oil skimming technology will remove 97 percent of the toxic organics, whereas the POTW national average removal of these same toxic organics by a well operated POTW meeting secondary treatment requirements is 71 percent. Accordingly, EPA is promulgating a pretreatment standard for toxic organics.

EPA is promulgating PSES based on the application of technology equivalent to BAT, which consists of end-of-pipe treatment comprised of oil skimming and lime precipitation and settling, and preliminary treatment, where necessary, consisting on hexavalent chromium reduction, chemical emulsion breaking, and cyanide removal. In the proposed rule the Agency stated that if BAT was promulgated with filters, then PSES would include filtration to prevent "pass through." BAT model treatment technology does not include filtration for the reasons discussed earlier in this section, and, therefore PSES model treatment technology also does not include filtration.

In developing these standards, the amount of water used per unit of production is considered for each waste stream. The flow allowances established for PSES are the same as those established for BAT based on the same flow reduction technologies.

The final rule retains the approach used in the proposed rule and regulates as total toxic organics (TTO) all those toxic organics that were found to be present in sampled aluminum forming wastewaters at concentrations greater than the quantification level of 0.01 mg/l. Section 467.02 of this regulation presents a list of the toxic organics included in the TTO standard.

The analysis of wastewaters for toxic organics is costly and requires sophisticated equipment, therefore the Agency has retained in the final rule the proposed alternate monitoring parameter for TTO. Data indicate that the toxic organics are much more soluble in oil and grease than in water and that the removal of the oil and grease will substantially remove the toxic organics. The TTO standard is based on the application of oil and grease removal thus if oil and grease is monitored at the given level, compliance with the TTO standard is ensured.

The pollutants selected for regulation are: chromium, cyanide, zinc, and TTO. Aluminum is not limited because aluminum may be used by a POTW as a flocculant to aid in the settling and removal of suspended solids. Because chromium and zinc are used as indicator pollutants for the toxic pollutants cadmium, copper, lead, nickel and selenium removal credits for these toxic pollutants pursuant to 40 CFR 403.7(a)(1) may be granted.

The PSES set forth in this final rule are expressed in terms of mass per unit of production rather than concentration standards. Regulation on the basis of concentration is not appropriate for this category because flow reduction is a significant part of the model treatment technology for pretreatment. Mass-based standards are necessary to reflect the total quantity of pollutants removed by the model treatment technology. For this reason, alternative concentration standards are not being promulgated for indirect dischargers.

Implementation of the PSES will remove annually an estimated 119,500 kg/yr (263,000 lb/yr) of toxic metal and organic pollutants (from estimated current discharge) at a capital cost, above equipment in place, of $26.1 million and a total annual cost of $16.7 million. The Agency has concluded that PSES is economically achievable.

In the preamble to the proposed regulation, the Agency explained that in order to avoid adverse economic affects, it was proposing to exclude from

compliance with these categorical pretreatment standards, plants in the extrusion subcategory that manufacture less than 1,360,000 kilograms (3 million pounds) per year and plants in the drawing with emulsions subcategory that manufacture less than 453,333 kilograms (1 million pounds) per year. In light of comments of the estimated compliance costs and economic impact analysis, the Agency reconsidered the costs and impacts of this regulation on these smaller facilities in the catetory and found that the facilities covered by the proposed exemption are no longer expected to experience disproportionate adverse economic impacts. Thus the exemption does not appear to be warranted. Therefore, these categorical pretreatment standards are applicable to extrusion and drawing plants of all sizes. However, the Agency is promulgating the categorical pretreatment standards for existing plants in the extrusion subcategory that manufacture less than 1,360,000 kilograms (3 million pounds) and plants in the drawing with emulsions or soaps subcategory less than 453,333 kilograms (1 million pounds) per year as in interim final rule. The Agency invites comments from small facilities on the appropriateness of applying these categorical pretreatment standards to them. All comments received before December 23, 1983 will be considered and the Agency will promulgate a final rule as soon as possible.

The Agency has considered the time for compliance for PSES. Few of the indirect discharge aluminum forming plants have installed and are properly operating the treatment technology for PSES. Many plants in this and other industries will be installing the treatment equipment suggested as model technologies for this regulation and this may result in delays in engineering, ordering, installing, and operating this equipment. For these reasons, the Agency has decided to establish the PSES compliance date for all facilities at three years after promulgation of this regulation.

PSNS: EPA is promulgating PSNS based on end-of-pipe treatment and in-process controls equivalent to that used as the basis for NSPS. The flow allowances for PSNS are also the same as those for NSPS. As discussed under PSES, pass through of the regulated pollutants will occur without adequate pretreatment and, therefore, pretreatment standards are required.

The pollutants regulated under PSNS are chromium, cyanide, zinc and TTO. Aluminum is not limited because aluminum may be used by a POTW as a flocculant to aid in the settling and removal of suspended solids. Monitoring for oil and grease has been established as an alternative to monitoring for TTO as discussed under PSES.

In order to estimate costs and pollutant removals for new sources, the Agency used the "normal plant" approach as discussed in this preamble under NSPS. The normal plant described above would generate a raw waste load of 10,600 kg per year (23,300 lb/yr) of toxic metals. The PSNS technology is expected to reduce these pollutant levels to 150 kg per year (330 lb/yr) of toxic pollutants.

The total capital investment cost for the normal plant to install PSNS treatment technology is estimated at $1.151 million, compared with investment costs of $1.085 million for an existing plant of this same composition to install technology equivalent to PSES. Corresponding figures for total annual costs are $1.089 million for PSNS and $1.039 million for PSNS. Since PSES costs are approximately the same as the PSES costs which would be incurred by this plant, the new source pretreatment standards will not pose a barrier to entry.

VI. Economic Consideration

A. Cost and Economic Impact

EPA's economic impact assessment is set forth in *Economic Impact Analysis of Effluent Standards and Limitations for the Aluminum Forming Industry*, EPA (EPA-440/2-83-010). This report details the investment and annual costs for the industry as a whole and for plants covered by the aluminum forming regulation. The report also estimates the probable economic effect of compliance costs in terms of plant closures, production changes, price changes, employment changes, local community impacts, and imports and exports of aluminum forming products.

EPA has identified 271 plants that perform aluminum forming. Of these 271 plants, 140 do not discharge process wastewater, 59 are direct dischargers, and 72 are indirect dischargers. Total investment for BAT and PSES is projected to be $74.3 million with annual costs of $41.8 million, including depreciation and interest. These costs are in 1982 dollars and are based on the determination that plants will build on existing treatment. There are

The costs of implementing the regulations were estimated on a plant-by-plant basis for a sample of 266 plants including 126 dischargers. The cost estimates were derived by a computerized costing program using 1977 plant data resulting in 1978 dollar estimates which have been updated to 1982. The costing program accounted for plant size and for treatment-in-place to develop an estimate of capital and annual costs, which were grouped by subcategory and summed. For purposes of measuring the economic impacts, the industry was subcategorized by the type of product. The economic impacts were estimated through a microeconomic model which projects the price and output behavior of each major industry segment. It is used, in conjunction with compliance cost estimates, to determine postcompliance price and production levels for each industry segment and for each regulatory option.

A financial profile was developed for each of the plants based on average financial ratios for the industry segment in which the plant competes. The primary variables of interest in analyzing individual plants were profitability, as measured by return on sales and return on investment; and the ability of individual plants to raise capital, as measured by the after compliance fixed charge coverage ratio. The fixed charge coverage ratio is defined as earnings before interest and taxes over interest payments. Other factors considered in judging the likelihood of closure include the degree of integration, and market characteristics such as the degree of competition and the existence of specialty markets. Given the plant-specific compliance cost estimates, the industry-segment-specific financial ratios, and other factors, the effect on industrial plants was projected.

There are five potential plant closures projected as a result of this regulation. The potential closures are spread over three different subcategories, including two direct discharging plants and three indirect discharging plants. Both small and medium sized plants are included as potential closures. The production loss for these plants range from 100,000 pounds per year to 12.8 million pounds per year. The Agency does not estimate any disproportionate impact on any specific group of plants. Price increases differ somewhat among the product groups ranging from 0 percent for foil to 0.8 percent for forging. Balance of trade effects are insignificant.

The Economic Impact Analysis assumed a reasonable rate of monitoring, varying by size of plant and flow. However, since the regulatory limits are based on monitoring 10 times a month, we performed a sensitivity analysis including costs associated with the increased monitoring activity. The results showed no significant incremental economic impacts.

In addition, EPA has conducted an analysis of the incremental removal cost per pound equivalent for each of the proposed technology-based options. A pound equivalent is calculated by multiplying the number of pounds of pollutant discharged by a weighting factor for that pollutant. The weighting factor is equal to the water quality criterion for standard pollutant (copper), divided by the water quality criterion for the pollutant being evaluated. The use of "pound equivalent" gives relatively more weight to removal of more toxic pollutants. Thus, for a given expenditure, the cost per pound-equivalent removed would be lower when a highly toxic pollutant is removed than if a less toxic pollutant is removed. This analysis is included in the record of this rulemaking, and is entitled *Cost-Effectiveness Analysis of Effluent Standards and Limitations for the Aluminum Forming Industry*

BPT: Fifty-nine plants are direct dischargers. The cost estimates are based on the regulatory flows and take into account treatment in-place.

Since the BPT regulatory flow is on the whole larger than the BAT flow, and the in-process controls tend to be relatively inexpensive, the cost of BAT was less than BPT for a number of plants. Thus, for the purpose of evaluating the economic impacts it was assumed that the plants would install the least expensive treatment to meet the requirements of BPT. Hence, in those cases where the cost of BAT was less than BPT, it was assumed that the lower BAT costs would be incurred to meet the BPT limits and no incremental cost would be incurred in meeting the BAT limits. For this reason, the costs shown here will be different than those shown in the technical section of the preamble. The BPT regulation is projected to cost $37.6 million in investment costs and $21.2 million in annual costs for these plants. The analysis of economic impact concluded that there are two potential plant closures and 221 job losses associated with the BPT treatment option. Total loss in industry production is expected to be about 0.1 percent, with the cost of production increasing about 0.3 percent. If average compliance costs incurred by the plants in the industry were passed on to consumers, price increases would range from 0 to 0.7 percent.

BAT: Compliance costs and resulting impacts discussed below are based on the total effects of going from the BPT costs to the costs incurred to install BAT. Total investment costs are estimated to be $48.2 million, with annual costs of $25.1 million, including depreciation and interest. The incremental costs over BPT are estimated to be $10.6 million in investment costs and $3.9 million in annual costs. BAT would not result in any additional closures. If the average compliance cost incurred by the plants in the industry were passed on to consumers, price increases would range from 0 to 0.8 percent; not significantly greater than the BPT increases. Thus EPA has determined that BAT is economically achievable.

PSES: Seventy-two plants are identified as indirect dischargers. The pollution control technology for the pretreatment standards is identical to the BAT treatment technology. Investment costs for the 72 indirect dischargers are estimated to be $26.1 million and annual costs are estimated at $16.7 million. The Agency's estimate of potential plant closures in indicates that there are three potential closures associated with PSES. In terms of unemployment, these potential closures could affect approximately 276 employees. Total loss in industry production is expected to be about 0.2 percent, with the cost of production increasing about one percent. Thus the Agency has determined that PSES is economically achievable.

NSPS–PSNS: Aluminum formed products have been available for many years. The versatility of the product has been responsible for its long-term growth. Recent trends in the U.S. economy, especially the increase in energy prices, have increased the use of aluminum formed products. This is especially true in the transportation business. The current recession and the downturn in the automotive industry have reduced the demand for aluminum formed products. However, aluminum's versatility and light weight makes its use desirable for cars and for transportation products in general. EPA believes that this slump in demand is a temporary condition, and that demand for aluminum formed products will continue to increase in the years ahead. This projected increase in demand should result in the opening of new plants.

EPA is promulgating NSPS and PSNS based on the same technologies as for BAT and PSES, plus filters. We analyzed a "normal" plant in each of the six technical subcategories, comparing estimated costs for the treatment technologies to expected revenues. The incremental costs over the cost estimates for the BAT and PSES technologies are less than 0.1 percent of expected revenues for the normal plant. The total costs for NSPS and PSNS range from 0.2 percent of expected revenues for rolling with neat oils to 0.9 percent of expected revenues for drawing with emulsions. EPA does not believe that NSPS and PSNS will continue a barrier to entry for new sources or, prevent major modifications to existing sources or produce other adverse economic effects.

B. Executive Order 12291

Executive Order 12291 requires EPA and other agencies to perform regulatory impacts analyses of major regulations. Major rules are those which impose a cost on the economy of $100 million a year or more or have certain other economic impacts. This regulation is not a major rule because its annualized cost of $41.8 million is less than $100 million and it meets none of the other criteria specified in Section I paragraph (b) of the Executive Order. The economic impact analysis prepared for this rulemaking meets the requirements for non-major rules.

C. Regulatory Flexibility Analysis

Pub. L. 96–354 requires EPA to prepare an Initial Regulatory Flexibility Analysis for all proposed regulations that have a significant impact on a substantial number of small entities. This analysis may be done in conjunction with or as a part of any other analysis conducted by the Agency. The economic impact analysis described above indicates that there will not be a significant impact on any segment of the regulated population, large or small. Therefore, a formal regulatory flexibility analysis is not required.

D. SBA Loans

The Agency is continuing to encourage aluminum formers to use Small Business Administration (SBA) financing as needed for pollution control equipment. The three basic programs are: (1) The Guaranteed Pollution Control Bond Program, (2) the Section 503 Program, and (3) the Regular Guarantee Program. All the SBA loan programs are only open to businesses that have: (a) net assets less than $6 million, (b) an average annual after-tax income of less than $2 million, and (c) fewer than 250 employees. The estimated economic impacts for this category do not include consideration of financing available through these programs.

The Section 503 Program, as amended in July 1980, allows long-term loans to small and medium sized businesses. These loans are made by SBA approved local development companies. For the first time, these companies are

authorized to issue Government-backed debentures that are bought by the Federal Financing Bank, an arm of the U.S. Treasury.

Through SBA's Regular Guarantee Program, loans are made available by commercial banks and are guaranteed by the SBA. This program has interest rates equivalent to market rates.

For additional information on the Regular Guarantee and Section 503 Programs contact your district or local SBA Office. The coordinator at EPA headquarters is Ms. Frances Desselle who may be reached at (202) 382–5373. For further information and specifics on the Guaranteed Pollution Control Bond Program contact: U.S. Small Business Administration, Office of Pollution Control Financing, 4040 North Fairfax Drive, Rosslyn, Virginia 22203 (703) 235–2902.

VII. Nonwater Quality Environmental Impacts

Eliminating or reducing one form of pollution may cause other environmental problems. Sections 304(b) and 306 of the Act require EPA to consider the nonwater quality environmental impacts (including energy requirements) of certain regulations. In compliance with these provisions, we considered the effect of this regulation on air pollution, solid waste generation, water scarcity, and energy consumption. This 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, we believe that this regulation will best serve often competing national goals. The following nonwater quality environmental impacts (including energy requirements) are associated with the final regulation. The Administrator has determined that the impacts identified below are justified by the benefits associated with compliance with the limitations and standards.

A. Air Pollution

Imposition of BPT, BAT, NSPS, PSES, and PSNS will not create any substantial air pollution problems because the wastewater treatment technologies required to meet these limitations and standards do not cause air pollution.

B. Solid Waste

EPA estimates that aluminum forming facilities generated 79,000 kkg (87,000 tons) of solid wastes (wet basis) in 1977 due to the treatment of wastewater. These wastes were comprised of treatment system sludges containing toxic metals, including chromium, zinc, and cyanide; aluminum; and oil removed during oil skimming and chemical emulsion breaking that contains toxic organics.

EPA estimates that BPT will contribute an additional 52 kkg (57 tons) per year of solid wastes over that which is currently being generated by the aluminum forming industry. BAT and PSES will increase these wastes by approximately 77 kkg (85 tons) per year beyond BPT levels. These sludges will necessarily contain additional quantities (and concentrations) of toxic metal pollutants. The normal plant was used to estimate the sludge generated at NSPS and PSNS and is estimated to be a 3 percent increase over BAT and PSES.

The Agency considered the solid wastes that would be generated at aluminum forming plants by lime and settle treatment technologies and believes that they are not hazardous under Section 3001 of the Resource Conservation and Recovery Act (RCRA). This judgment is made based on the recommended technology of lime precipitation. By the addition of a small excess of lime during treatment, similar sludges, specifically toxic metal bearing sludges generated by other industries such as the iron and steel industry, passed the EP toxicity test. See 40 CFR 261.24 (45 FR 33084 (May 19, 1980)).

The Agency requested specific data and information in response to comments from three companies that claimed that aluminum forming lime and settle treatment sludges should be classified as hazardous. The responses did not support their comments that solid wastes generated by treatment of aluminum forming wastewater would be classified as hazardous under RCRA. The Agency believes that the proper treatment of this wastewater through the recommended lime and settle treatment technology would create a nonhazardous sludge. Since these aluminum forming solid wastes are not believed to be hazardous, no estimates were made of costs for disposing of them as hazardous wastes in accordance with RCRA requirements.

Wastes which are not hazardous must be disposed of in a manner that will not violate the open dumping prohibition of Section 4005 of RCRA. The Agency has calculated as part of the costs for wastewater treatment the cost of hauling and disposing of additional wastes generated as a result of these requirements. For more details, see Section VIII of the technical development document.

Only wastewater treatment sludge generated by cyanide precipitation technology is likely to be hazardous under the regulations implementing subtitle C of the Resource Conservation and Recovery Act (RCRA). Under those regulations generators of these wastes must test the wastes to determine if the wastes meet any of the characteristics of hazardous waste (see 40 CFR 262.11, 45 FR 33142–33143, May 19, 1980). Wastewater sludge generated by cyanide precipitation treatment of aluminum forming solution heat treatment contact cooling water may contain cyanides and may exhibit extraction procedure (EP) toxicity. Therefore, these wastes may require disposal as a hazardous waste. Wastewater treatment sludge from cyanide precipitation of a process waste stream is generated separately from lime and settle sludge and may be disposed of separately. We estimate that five plants in the category may need to have cyanide precipitation, generating an estimated 3,200 kkg of potentially hazardous sludge. The additional total annual disposal cost for this sludge is $283,200.

C. Consumptive Water Loss

Treatment and control technologies that require extensive recycling and reuse of water may require cooling mechanisms. Evaporative cooling mechanisms can cause water loss and contribute to water scarcity problems—a primary concern in arid and semi-arid regions. While this regulation assumes water reuse, the overall amount of reuse through evaporative cooling mechanisms is low and the quantity of water involved is not significant. In addition, most aluminum forming plants are located east of the Mississippi where water scarcity is not a problem. We conclude that the consumptive water loss is insignificant and that the pollution reduction benefits of recycle technologies outweigh their impact on consumptive water loss.

D. Energy Requirements

EPA estimates that the achievement of BPT effluent limitations will result in a net increase in electrical energy consumption of approximately 65 million kilowatt-hours per year. The BAT effluent technology should not substantially increase the energy requirements of BPT because reducing the flow reduces the pumping requirements, the agitation requirement for mixing wastewater, and other volume-related energy requirements. Therefore, the BAT limitations are assumed to require an equivalent energy consumption to that of the BPT limitations. To achieve the BPT and BAT effluent limitations, a typical direct discharger will increase total energy

consumption by less than 1 percent of the energy consumed for production purposes.

The Agency estimates that PSES will result in a net increase in electrical energy consumption of approximately 50 million killowatt-hours per year. To achieve PSES, a typical existing indirect discharger will increase energy consumption by less than 1 percent of the total energy consumed for production purposes.

NSPS will not significantly add to total energy consumption of the industry. A normal plant for each subcategory was used to estimate the energy requirements for new sources. A new source wastewater treatment system will add approximately 1 million kilowatt-hours per year to the total industry energy requirements. PSNS, like NSPS, will not significantly add to total energy consumption.

VIII. Pollutants and Subcategories Not Regulated

The Settlement Agreement in *NRDC* v. *Train, supra* contains 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. See *NRDC* v. *Costle,* 12 ERC 1833 (D.D.C. 1979).

A. Exclusion of Pollutants

The Agency has deleted the following three pollutants from the toxic pollutant list: (49) trichlorofluoromethane and (50) dichlorofluoromethane, 46 FR 79692 (January 8, 1981); and (17) bis(chloromethyl)ether, 46 FR 10723 (February 4, 1981).

Paragraph 8(a)(iii) of the 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 notice—first those excluded from all subcategories, then by subcategory those not excluded in all subcategories.

Paragraph 8(a)(iii) also allows the Administrator to exclude from regulation toxic pollutants detected in amounts too small to be effectively reduced by technologies known to the Administrator. Appendix C to this notice lists the toxic pollutants in each subcategory which were detected in the effluent in amounts at or below the nominal limit of analytical quantification, which are too small to be effectively reduced by technologies known to the Administrator and which, therefore, are excluded from regulation.

Paragraph 8(a)(iii) also allows the Administrator to exclude from regulation toxic pollutants detectable in the effluent from only a small number of sources within the subcategory because they are uniquely related to those sources. Appendix D to this notice lists for each subcategory the toxic pollutants which were detected in the effluents of only a small number of plants, are uniquely related to those plants, and are not related to the manufacturing processes under study.

Paragraph 8(a)(iii) also allows the Administrator to exclude from regulation toxic pollutants present in amounts too small to be effectively reduced by technologies known to the administrator. Appendix E lists those toxic pullutants which are above the level of analytical quantification but not treatable using technologies considered applicable to the category. Paragraph 8(a)(iii) also allows the Administrator to exclude from regulation toxic pollutants which will be effectively controlled by the technologies upon which are based other effluent limitations and guidelines, or pretreatment standards. Appendix F lists those metal toxic pollutants which will be effectivley controlled by other regulated pollutants in BAT and NSPS, PSES, and PSNS, even though they are not specifically regulated. Appendix G lists those toxic organic pollutants which are not regulated at BAT because they are effectively controlled by BPT limitations and are not regulated at NSPS because they are effectively controlled by a regulated pollutant parameter.

B. Exclusion of Subcategories

Additionally, Paragraph 8(a)(iv) of the Settlement Agreement authorizes the exclusion of subcategories in which the amount and toxicity of each pollutant in the discharge do not justify developing national regulations. The forging subcategory has no direct discharging plants and therefore, meets the requirement of paragraph 8(a)(iv) for direct discharges. Accordingly, not BPT and BAT limitations are established for the forging subcategory.

IX. Public Participation and Response to Major Comments

Industry, government, and environmental groups have participated during the development of these effluent guidelines and standards. Following the publication of the proposed rule on November 22, 1982 in the **Federal Register,** we provided the development document and the economic impact analysis supporting the proposed rule to industry, government agencies, and the public sector. The public record supporting this regulation was available for public use on November 23, 1982. The comment period ended on February 8, 1983. A permit writers workshop was held on the aluminum forming rulemaking in Dallas, Texas on January 14, 1983. On January 17, 1983 in Washington, D.C., a public hearing was held on the proposed pretreatment standards at which one person presented testimony. A notice of data availability and a request for comment on data obtained after proposal was published in the **Federal Register** on July 27, 1983 with the comment period ending on August 11, 1983.

Since proposal, 24 commenters submitted approximately 1,000 individual comments on the proposed regulation. Comments were received from Reynolds Aluminum; Howmet Aluminum Corporation; the Aluminum Association; Cardinal Aluminum; General Extrusion; General Motors Corporation; County Sanitation Districts of Los Angeles County; Hoover Universal; ALCOA; Peerless of America, Inc.; Ethyl Corporation; National Steel Corporation; RJR Archer; Walgren Company; Belden Corporation; Penn Central Corporation; Kaiser Aluminum; Easco Aluminum (Carolina Aluminum Company); Village of Obetz, Ohio; ARCO Metals Company; Resource Consultants; Natural Resources Defense Council, Inc.; General Electric; and the Aluminum Extruders Council.

All comments received have been carefully considered and appropriate changes in the regulation have been made whenever data and information supported those changes. Major issues raised by the comments are addressed in this section of the preamble. All comments received and our detailed responses to these comments are included in a document entitled *Response to Public Comments, Proposed Aluminum Forming Effluent Limitations and Standards* which has been placed in the public record for this regulation.

The following is a discussion of the Agency's responses to the principal comments.

1. Combined Metals Data Base

Comment: Several commenters object to the use of data from other categories to establish the treatment effectiveness of the major technologies. Commenters argue that the primary metals being treated are different and therefore the data cannot be transferred for treatment of metals found in aluminum forming wastewaters.

Comments specifically directed to the combined metals data base (CMDB) contend that: (1) The data is too small (2) data were included improperly (3) data not representative of lime and settle technology were included, and (4) the data used to establish the metal finishing limits should be used instead of the combined metals data base.

Response: The CMDB (revised following proposal of the aluminum forming regulation) includes 162 data points from 20 plants in five industrial categories with similar wastewaters. All plants in the data base have the recommended end-of-pipe treatment technology. Six of the plants in the data base are aluminum forming plants. These data were evaluated and analyzed to establish effluent limitations on the basis of data that represent good operation of the recommended technology. The use of comparable data from several categories enhances the estimates of treatment effectiveness and variability over those that would be obtained from data from any one category alone. The statistical methods used to assess homogeneity among the categories in the CMDB and to determine limitations are appropriate and are well known to statisticians.

(1) The methods used to analyze homogeneity are known generally as analysis of variance. Effluent limitations were determined by fitting the data to a lognormal distribution and using estimation techniques that possess desirable statistical properties. These methods are described in detail in the document entitled "A Statistical Analysis of the Combined Metals Industries Effluent Data" which includes appropriate references to statistical texts, journal articles, and monographs. Following proposal of the aluminum forming rule data were reviewed. This resulted in minor additions, deletions and corrections to the data base. The analyses performed prior to proposal were repeated with the result that the earlier conclusions regarding homogeneity were unchanged. The changes in the data base resulted in slight changes in the final limitations. The revisions to the data base and analysis are described in the record of this rulemaking.

To supplement existing data regarding treatment-in-place and the long-term Performance of the treatment, we collected discharge monitoring report (DMR) data from state or EPA Regional offices for direct discharges. DMR data are self-monitoring data supplied by permit holders to meet state or EPA permit requirements. These data were available from 30 aluminum forming plants; however, the data vary widely in character and nature due to the dissimilar nature of the monitoring and reporting requirements placed on aluminum forming plants by the NPDES permit issuing authority. These data were not used in the actual development of the final limitations but DMR data from 11 plants that have lime and settle treatment were used as a check on the achievability of the treatment effectiveness values used to establish limitations and standards. The results show the limitations values are being achieved consistently at these 11 plants. A discussion on these DMR data and a comparison of them to the treatment effectiveness values used in this regulation is in the administrative record to this rulemaking.

(2) The Agency carefully re-examined the specific data points that commenters identified as being improperly included in the combined metals data base. These data points fall into two categories, effluent points associated with low pH readings and effluent points associated with larger influent measurements made on the same day (so called "inverted values"). Detailed responses to each data point referred to by commenters are provided in the response to comments documents. In eliminating data from use in the data base, EPA used a pH editing rule which generally excludes data in cases where the pH is below 7.0 for extended periods of time (i.e. over two hours). The rationale for this rule was that low pH over a long period of time often indicates improper functioning of the treatment system. The time periods of low pH for the points in question cannot be determined from existing data; however, because large amounts of metals were removed and low effluent concentrations were being achieved, the pH at the point of precipitation necessarily had to be well above pH 7.0. The reason for the effluent pH falling below 7.0 cannot be determined from the available data, but it is resumed to be a pH rebound. This phenomenon is often encountered when a slow reacting acidic material is neutralized or reacts late in the treatment cycle. The Agency believes that the data in question are representative of a lime and settle treatment process which is being operated in an acceptable manner. Accordingly, the data have been retained in the CMDB.

The occurrence of an influent value less than an effluent value measured on the same day may be an indication of system malfunction. However, such values can also occur in the course of normal operation. In general, where there was no indication of treatment malfunction or mislabelling of the sample the values were retained in the data base.

(3) The Agency carefully re-examined the specific data points indentified in comments as being from plants without appropriate lime and settle technology. Each plant identified was reviewed carefully to ensure all data used came from plants with treatment that qualified as lime and settle technology. Detailed discussions on each plant referred to in the comments are provided in the response to comments document.

(4) The Agency at one time considered including metal finishing data in the CMDB, however, statistical analysis indicated that these data were not homogeneous with other metals industries' data including aluminum forming data. Differences between electroplating and the other categories were suspected on the basis of engineering assessment. The results of the analysis showed there were statistically discernible differences among electroplating and the other categories. Therefore, metal finishing data were removed from the CMDB. Consistent with this analysis, the use of the electroplating data alone is not an appropriate means of determining lime and settle treatment effectiveness for the aluminum forming category.

2. Anodizing Wastewaters

Comment: Several commenters contend that since anodizing is regulated under the metal finishing category and, as these effluent limitations are less stringent than the proposed aluminum forming limits, free standing facilities will have a competitive advantage over those anodizing operations integrated with aluminum forming facilities. Commenters also questioned the use of the CMDB to set anodizing limits when both electroplating data and metal finishing data which include anodizing, were eliminated from the data base used to establish aluminum forming guidelines.

Response: Wastewater discharges from aluminum forming operations are specifically excluded from the metal finishing regulation (40 CFR 433.10(b); 48 FR 32485, July 15, 1983). The aluminum forming regulation specifically includes surface treatment operations such as cleaning, etching, anodizing, and conversion coating when performed at the same plant site at which aluminum is formed.

The Clean Water Act directs EPA to establish effluent limitations guidelines and standards for specific industrial

categories of point source discharges. In several instances, particular types of discharges could fall within two or more categories, as anodizing falls within the definition of both the metal finishing and aluminum forming categories. Thus, for the purpose of regulatory coverage, the Agency must determine which discharge limits are most appropriate for each operation. The Agency has included under the aluminum forming regulation (Part 467) those anodizing operations performed as an integral part of aluminum forming. The inclusion of anodizing in Part 467 is appropriate because aluminum anodizing wastewaters display pollutant characteristics similar to other aluminum forming process wastewaters and are effectively treated by technologies found applicable to the aluminum forming category as a whole. In addition, the Agency has considered the economic and practical impacts on those anodizing facilities covered by the aluminum forming regulation as compared to those covered by the metal finishing regulation. As discussed below, the Agency concludes that no significant economic effects will be caused by this regulatory allocation of anodizing operations common to both the aluminum forming and metal finishing categories.

Although the treatment effectiveness concentrations are different for aluminum forming and metal finishing, the aluminum forming regulation, like the metal finishing regulation, is based on lime and settle end-of-pipe treatment. Since model treatment technologies with similar costs are the basis for both guidelines, EPA believes that plants regulated under the aluminum forming guidelines would not be placed at a significant competitive disadvantage. The aluminum forming model BAT-PSES technology also includes flow reduction through countercurrent rinsing. Many aluminum formers that anodize now have countercurrent cascade rinsing installed; more are planning to install this technology and, during post-proposal plant visits we observed countercurrent cascade rinse tanks awaiting installation. After a careful examination of all available data, we have concluded that the installation of this technology is technically feasible and will not cause a competitive hardship.

For new plants or plants that do not have treatment in place, the costs of the flow reduction technologies are often more than balanced by a reduced cost for smaller end-of-pipe treatment equipment. The available data clearly indicate that aluminum forming anodizers will not be at a competitive disadvantage to those anodizers covered by the metal finishing regulation.

Two aluminum forming plants that perform anodizing are included in the combined metals data base. The raw and treated wastewaters from these plants have been found to be homogeneous with the other raw and treated wastewaters in the combined metals data base. Thus it has been demonstrated that anodizing facilities can comply with the limitations and standards derived from the combined metals data base.

3. Filtration

Comment: Several commenters objected to the inclusion of filtration in the model technology used as a basis for BAT and PSES. They stated that the addition of filtration to the treatment train would not substantially reduce the metals content of the effluent and that the cost of filtration is not justified by the additional pollutant removal it provides. One commenter, however, supports the inclusion of filtration in BAT model treatment technology because it will provide additional pollutant removals and is not anticipated to inflict any significant economic hardships on the industry.

Response: The Agency is not promulgating BAT and PSES based on model treatment technology including filtration for the reasons stated earlier in Section V of this preamble.

4. Countercurrent Cascade Rinsing Space Limitations,

Comment: Several comments were made on the issue of space limitations for countercurrent cascade rinsing. The commenters contend that the majority of existing facilities do not have enough space to install multiple stage countercurrent cascade rinsing which is a technology basis for the BAT flow allowances on cleaning and etching rinses. In addition to simple lack of space, severe retrofitting problems are claimed to occur due to limitations in crane height and the configurations of existing tanks. Also, installation will interrupt production as the related operations are not truly intermittent. Several commenters took the position that the Agency lacked sufficient documentation or support for the contention that space is available and that installation will not cause interruptions in production.

Response: After the close of the comment period, the Agency requested specific information from commenters as to space limitations, and made plant visits to assess particular problems asserted to be caused by space limitations. The additional information indicates that only one existing facility in the Agency's data base does not have sufficient space to install countercurrent rinsing on one etch line. However, this plant currently meets the BAT regulatory flow and will not need to install countercurrent cascade rinsing technology. On this basis and after review of all applicable data we conclude that the installation of countercurrent cascade rinse technology and the reduction of process flows to the BAT regulatory levels can be achieved by existing facilities.

For the plants that have not installed countercurrent cascade rinsing, process interruptions are primarily a matter of engineering planning and scheduling. Survey information and information solicited after receipt of comments indicates that these surface treatment lines are usually in operation one shift per day, five days per week. Thus preliminary work can be done during the regularly scheduled non-operational periods such as weekends and evenings. Final installation can be accomplished during weekends or scheduled maintenance or vacation shutdowns. Properly planned and scheduled, the installation of countercurrent cascade rinsing should not result in any serious interruptions in production.

The Agency estimated costs for the additional tanks and plumbing necessary to install two-stage countercurrent cascade rinsing. Plant layout and other site-specific factors were not addressed on a plant-by-plant basis in the estimation of compliance costs; however, the Agency's overall compliance costs include a reasonable estimate of the costs that aluminum forming plants will incur to install this technology.

5. Limitations and Standards for Cyanide

Comment: Several commenters object to the regulation of cyanide in the aluminum forming category. The commenters contend that this compound is not present at significant concentrations in aluminum forming wastewaters. Additionally, it is asserted that the complexed cyanides which are present in these waste streams are not toxic.

It is asserted that transfer of cyanide precipitation treatment data from the aluminum subcategory of the coil coating category is inappropriate because wastewater matrix differences exist between the two categories. Further commenters contend that the Agency has overestimated the

capability of cyanide precipitation technology for removing the complexed ferro/ferri cyanides found in aluminum forming wastewaters. Commenters have submitted laboratory and full-scale performance data from the coil coating category and the primary aluminum subcategory of the nonferrous metals manufacturing category in support of their contention that the cyanide limits are too stringent and unachievable by the proposed technology.

Response: Limitations and standards for cyanide are included in the aluminum forming regulation because cyanide was found in the raw wastewater of two sampled plants in significant concentrations.The Agency is regulating total cyanide because it is well known and widely demonstrated that all cyanides, even the most stable, revert to highly toxic free cyanide when exposed to sunlight.

Although cyanide was found and is known to be present, the Agency does not believe that it is a necessary process chemical in aluminum forming operations. Therefore, the Agency suggests that the most effective way to control cyanide is to employ process chemical substitution. This will eliminate the need for any preliminary treatment for cyanide.

The model treatment technology used to develop limitations on cyanide is cyanide precipitation. No aluminum forming facility currently practices cyanide removal. Thus it is necessary to transfer this technology from the aluminum subcategory of the coil coating category as described in Section VII of the development document. Wastewaters from the aluminum coil coating operations have the same pollutants and species of ions in the same concentration ranges as aluminum forming wastewaters. Since these two waste streams have similar characteristics, the Agency believes that this technology can be transferred from the coil coating category and that it will perform as indicated in the aluminum forming category.

The cyanide concentration values were derived from cyanide removal data from three coil coating plans. The coil coating data submitted by commenters to support their contention that the cyanide limits cannot be achieved were previously submitted for the coil coating regulation. These data were found to be unreliable for the reasons discussed in Section VII of the Development Document for the Coil Coating Point Source Category. The data submitted on cyanide removal from primary aluminum cannot be applied to aluminum forming wastewaters because of significant wastewater matrix differences between the two categories.

6. Treatment Effectiveness for the Pollutant Aluminum

Comment: Several comments were received objecting to the establishment of effluent limitations for the pollutant aluminum because: (1) Aluminum is not a toxic or conventional pollutant; (2) control of aluminum is assured by control of chromium and zinc; (3) the aluminum limit is unachievable by the proposed technology especially when operated for removal of the other regulated metals.

Response: (1) The Agency is regulating the pollutant aluminum because it was found in significant concentrations (ranging up to 70,000 mg/l) in nearly every aluminum forming wastewater stream. Aluminum is a nonconventional pollutant and is appropriately regulated at BAT since BAT limitations are the principal national means of controlling nonconventional pollutants. In that the Clean Water Act is a technology based statute and the model treatment technologies remove aluminum, the Agency is regulating the discharge of aluminum.

(2) Control of aluminum is not necessarily assured by the control of chromium and zinc which are the only two toxic metals specifically limited in this regulation. Nearly every aluminum forming waste stream contains aluminum in significant concentrations. However, a particular waste stream may not necessarily contain chromium and zinc at treatable levels and may contain treatable levels of the other non-regulated toxic metals. If such a waste stream is treated for aluminum removal in the pH range suggested, the other toxic metals that may be present will be effectively treated. Further, when aluminum is removed it acts as an excellent co-precipitant and increases the level of removal achievable for the other metal hydroxides.

(3) The Agency visited and sampled four aluminum forming plants since proposal which employ lime and settle treatment technology. The additional effluent concentration data for the pollutant aluminum were combined with the sampling data used at proposal to derive new treatment effectiveness values for aluminum removal. The Agency has increased the allowable discharge levels of aluminum from 4.45 μg/l to 6.43 μg/l maximum for any one day.

7. Additional Wastewater Streams

Comment: Several comments were received claiming that the Agency had failed to include flow and discharge allowances for significant wastewater sources. The commenters' position is that flow and discharge allowances should be established for the following wastewater sources:

(a) Extrusion press hydraulic system leakage;
(b) Boiler blowdown;
(c) Stormwater runoff;
(d) Noncontact cooling water;
(e) Deionized water systems;
(f) Ultrasonic testing; and
(g) Others —vulcanizing and plastics wastewaters, grinding caster rolls, etch baths when not followed by a rinse, maintenance shop wastewaters, wet scrubbers associated with bright dip anodizing, dye solution tanks and seal tanks.

The commenters indicate that uniform flow allowances cannot be established for many of these flows, particularly stormwater runoff, and hence, the Agency should identify these sources and provide for flow allowances on a case-by-case basis.

Response: After proposal the Agency collected additional information and data on some of the wastewater sources listed above. The additional data support the commenters contentions that a separate discharge allowance should be provided for extrusion press hydraulic leakage from hydraulic systems which use an oil emulsion. The flow allowance for this stream at BPT, BAT, and PSES is based on the average of all the data supplied by plants not employing recycle. The flow allowance for new sources (NSPS and PSNS) is based on the average of all the data supplied by plants employing recycle.

The Agency has decided not to regulate waste streams such as boiler blowdown, noncontact cooling water, and stormwater run-off. These wastewaters are not process wastewaters and do not have a direct relationship to the production operations. Also, they occur only intermittently and vary from plant-to-plant. Thus, the Agency believes these wastewater sources must be regulated on a case-by-case basis at the permit writing stage.

The Agency has reevaluated the flow allowance for miscellaneous wastewater sources that is included in the core allowance for each subcategory. Additional data support an increase in the discharge allowance from the proposed allowance of 3 l/kkg to 45 l/kkg. This allowance applies to discharges from maintenance and miscellaneous cleanup, ultrasonic testing bath, process area scrubber ingot scalping, roll grinding for caster rolls,

and dye solution and seal baths when not followed by a rinse. These wastewater sources are charcterized by low flows and occur only intermittently at some plants in the category, thus they are appropriately grouped in a single allowance which the permit writer will include in each core allowance.

Plastics wastewaters are covered under the plastics molding and forming point source category. Vulcanizing wastewaters are covered under the Rubber Processing Category (40 CFR 428). Wet scrubbers associated with bright dip anodizing are considered to be etch line scrubbers and are covered by that allowance. Deionized water systems, when used to treat a plant's service water (fresh water coming into the plant), do not have any relation to the amount of production or to the amounts or types of pollutants generated by the forming process. Therefore, the wastewater resulting from regeneration of these systems is not covered by this regulation and may be regulated by the permit writer on a case-by-case basis.

8. Mass-Based Limitations and Standards

Comment: Several commenters oppose mass-based limitations and standards and recommend that, as it did for other industries, the Agency should establish concentration-based limits instead. It is contended that production normalized flows, necessary for mass-based limits, have not and cannot be properly established and that, the standards should therefore be based on concentration. Additionally, mass-based limits make compliance determinations unnecessarily complex, if not impossible. One commenter recommends that representative values for flow and production be used in setting permit limits with revision for major process changes only; this would alleviate the problem of noncompliance due to minor variations in production and flow. One commenter supports the mass-based limitations as the best method to ensure a total reduction of pollutants and to prevent dilution as an alternative to compliance.

For pretreatment standards, commenters contend that mass-based limits are especially inappropriate as most POTW sewer ordinances are concentration-based and as compliance determinations will depend on industry supplied data.

Response: The Agency is promulgating mass-based limitations and standards because flow reduction is an important part of the model treatment technology. In developing the aluminum forming regulation, the Agency examined the sources and amounts of water used in the various manufacturing operations. EPA found that for all process operations a significant number of plants used more waste than the process required, and further, that for a number of processes, water was being recycled by many plants in the category. Accordingly, flow reduction was incorporated as part of the model treatment technology for aluminum forming. (The total BPT flow is reduced by 60 percent at BAT.) Mass-based limitations are necessary for this category to adequately control the total discharge of pollutants and reflect the total pollutant removal achieved by the model treatment technology.

The production normalized flows are based on industry flow and production data which were then used to calculate mass-based limitations. In determining an individual plants discharge allowances, the facility will provide historical production information. The permitting or municipal authority will apply the mass limitations presented in the regulation using an average rate of production as reported by the facilities. The average rate of production should represent a reasonable measure of actual operation production.

The permit writer or control authority establishes production levels once, at the time the limitation and standards are calculated for the facility. A facility's limitations or standards may be revised if the average rate of production as reported by the facility no longer represents a reasonable measure of actual production for that operation due to substantial changes in production. The other two parameters necessary to calculate limitations, i.e. production normalized flow and treatment effectiveness concentration, are established by this regulation.

9. Classification of Solid Waste

Comment: The commenters contend that the Agency has underestimated the quantity of solid wastes generated as a result of this regulation. Additionally, the commenters challenge the assumption that solid wastes generated by the model treatment technologies are not hazardous under RCRA. The commenters's major concern is the impact that these assumptions have on compliance cost estimates.

Response: The Agency has based estimates of the quantity of sludge generation on the assumption that the sludge will be dewatered to 20 percent solids. This value is lower than what many metal processing plants are achieving, but the Agency believes it is a reasonable estimate to apply to a variety of situations. Because we have assumed that the sludge contains a large amount of water, our estimates of its volume and weight will be, if not accurate, slightly high.

As discussed in Section VII of this preamble one wastewater treatment sludge from aluminum forming might be considered hazardous under the regulations implementing subtitle C of the Resource Conservation and Recovery Act (RCRA). Wastewater sludge generated from cyanide precipitation treatment of aluminum forming solution heat treatment contact cooling water may contain cyanide and may exhibit extraction procedure (EP) toxicity. Therefore, these wastes may require disposal as a hazardous waste. We have estimated the added cost above the cost of disposing an equivalent mass of nonhazardous waste at $284,200 per year. This added cost does not change conclusions reached regarding the economic impact of this regulation.

The Agency collected additional data and information from the industry on sludges generated by lime and settle treatment. The new data and information support the Agency's determination that these solid wastes will not be considered hazardous under RCRA. Thus the disposal cost of $.40 per gallon ($1982) used by the Agency for costing this type of sludge is appropriate.

10. Limitations and Standards for pH

Comment: Several commenters have expressed concern that the regulatory range for pH and the metals limitations are incompatible. Optimum operating levels in lime and settle treatment are different for the various metals regulated. Therefore, if the system is operated within the proposed range of optimum metals removal, individual metals will not be removed to the same extent as if the system were operated for removal of a single metal uniquely. The commenters express concern that the performance data used by the Agency to establish these limits have not been documented as actually having a pH within the proposed regulatory range.

Additionally, commenters contend that a more reasonable range of pH control is within 3 units as opposed to the 2.5 units proposed. They recommend that the limits be changed to 7 to 10. Some commenters state that since most industries have a lower pH limit of 6.0 and because some facilities do not employ lime and settle technology, the pH limits should be changed to 6 to 10 or handled on a case-by-case basis.

Response: The Agency has revised the pH range from 7.5 to 10 to 7.0 to 10.0. Comments and additional sampling data gathered after proposal indicate that the optimum pH level for aluminum removal is lower than the regulated toxic metals. The revised pH range of 7.0 to 10.0 will facilitate meeting the aluminum limits and ensure the removal of other toxic metals. Since the limitations were derived from actual performance data at treatment plants that were operating their treatment systems within the range set forth as indicative of proper operation, we believe the limits are achievable using the recommended technology. The Agency is not establishing a pH range of 6 to 10 because data indicate that metals are present in all aluminum forming wastestreams and effective metals removal will not occur at a pH of 6.

11. Regeneration of Cleaning or Etch Baths

Comment: Several commenters object to the zero discharge limit for cleaning or etching baths based on regeneration or hauling of the wastes. It is contended that (1) Regeneration processes have not been proven or demonstrated effective for aluminum forming wastewaters and cannot be universally applied, and (2) even when regeneration processes are employed, some wastewater is generated due to the recovery process itself or to periodic dumping of the baths due to pollutant buildups.

Response: The comments and data provided concerning regeneration technology for cleaning or etching baths indicate that this technology is not at present a proven technology with which to achieve zero discharge. Therefore, the Agency is allowing a discharge from this wastewater source at BAT, PSES, PSNS, and NSPS that is equivalent to the allowance at BPT.

12. Economic Impacts

Comment: Some commenters stated that the economic analysis understated the economic impacts for the following reasons: (1) EPA overestimated baseline profits by omitting General Administration and Selling Expenses and, in particular, overestimated the profit for the extrusion subcategory which they characterized as very competitive; (2) EPA assumed a market rate of return which was too low, thus understating the return available from alternative investments; (3) EPA neglected to consider the depressed state of the industry.

Response: EPA has revised the economic analysis, using a profit estimate based on the Federal Trade Commission Line of Business reports which take full account of General Administrative and Selling Expenses. A single rate of return on assets is used for all aluminum forming product segments. This estimate is lower than the profit rates estimated in the proposal, considerably so for extrusion.

EPA revised the market rate of return in the proposal, basing it on the lower bond rates forecast for 1977 instead of forecasts for the 1983 to 1984 periods. We also included a small risk premium based on experienced returns.

In response to the comment on the depressed state of the industry in 1982, the Agency has performed a business cycle analysis. Based on the capacity utilization in the industry, 1977 appears to be a normal year for earnings and we anticipate that the industry will have recovered to a normal rate of capacity utilization and earnings by 1985 to 1986. A copy of the business cycle analysis, "Macroeconomic Conditions and Performance of Regulated Industries," is in the public record for this rulemaking.

EPA believes that the revised Economic Impact Analysis shows that both BAT and PSES are economically achievable.

X. Best Management Practices

Section 304(e) of the Clean Water Act gives the Administrator authority to prescribe "best management practices" (BMP). EPA is not promulgating BMP specific to aluminum forming.

XI. Upset and Bypass Provisions

A recurring issue of 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 an unintentional noncompliance occurring for reasons beyond the reasonable control of the permittee. It has been argued that an upset provision in EPA's effluent limitations is necessary because such upsets will inevitably occur even in properly operated control equipment. Because technology-based limitations require only what technology can achieve, it is claimed that liability for such situations is improper. When confronted with this issue, courts have disagreed on whether an explicit upset or excursion exemption is necessary, or whether upset or excursion incidents may be handled through exercise of EPA's enforcement discretion. Compare *Marathon Oil Co.* v. *EPA*, 564 F.2d 1253 (9th Cir. 1977) with *Wayerhaeuser Co.* v. *Costle, supra*, and *Corn Refiners Association, et al.* v. *Costle*, No. 78–1069 (8th Cir., April 2, 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).

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

We determined that both upset and bypass provisions should be included in NPDES permits and have promulgated permit regulations that include upset and bypass permit provisions. See 40 CFR 122.41. The upset provision 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. Consequently, although permittees in the aluminum forming industry will be entitled to upset and bypass provisions in NPDES permits, this final regulation does not address these issues.

XII. Variances and Modifications

Upon the promulgation of this regulation, the appropriate effluent limitations must be applied in all Federal and State NPDES permits thereafter issued to direct dischargers in the aluminum forming industry. In addition, on promulgation, the pretreatment limitations are directly applicable to any indirect dischargers.

For the BPT effluent limitations, the only exception to the binding limitations is EPA's "fundamentally different factors" variance. See *E. I. duPont deNemours & Co.* v. *Train*, 430 U.S. 112 (1977); *Weyerhaeuser Co.* v. *Costle, supra*. This variance recognizes factors concerning a particular discharger that are fundamentally different from the factors considered in this rulemaking. However, the economic ability of the individual operator to meet the compliance cost for BPT standards is not a consideration for granting a variance. See *National Crushed Stone Association* v. *EPA*, 449 U.S. 64 (1980). Although this variance clause was set forth in EPA's 1973 to 1976 industry regulations, it is now included in the NPDES regulations and will not be included in the aluminum forming or other industry regulations. See the NPDES regulations at 40 CFR Part 125, Subpart D.

The BAT limitations in this regulation also are subject to EPA's "fundamentally different factors"

variance. In addition, BAT limitations for nonconventional pollutants are subject to modifications under Sections 301(c) and 301(g) of the Act. These statutory modifications do not apply to toxic or conventional pollutants. According to Section 301(j)(1)(B), applications for these modifications must be filed within 270 days after promulgation of final effluent limitations guidelines.

The economic modification section of the Act (Section 301(c)) gives the Administrator authority to modify BAT requirements for nonconventional pollutants for dischargers who file a permit application after July 1, 1978, upon a showing that such modified requirements will (1) represent the maximum use of technology within the economic capability of the owner or operator and (2) result in reasonable further progress toward the elimination of the discharge of pollutants. The environmental modification section (301(g)) allows the Administrator, with the concurrence of the State, to modify BAT limitations for nonconventional pollutants from any point source upon a showing by the owner or operator of such point source satisfactory to the Administrator that:

(a) Such modified requirements will result at a minimum in compliance with BPT limitations or any more stringent limitations necessary to meet water quality standards;

(b) Such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

(c) Such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

Section 301(j)(1)(B) of the Act requires that application for modifications under Section 301 (c) or (g) must be filed within 270 days after the promulgation of an applicable effluent guideline. Initial applications must be filed with the Regional Administrator and, in those States that participate in the NPDES Program, a copy must be sent to the Director of the State program. Initial applications to comply with 301(j) must include the name of the permittee, the permit and outfall number, the applicable effluent guideline, and whether the permittee is applying for a 301(c) or 301(g) modification or both.

Indirect dischargers subject to PSES and PSNS are eligible for credits for toxic pollutants removed by POTW. See 40 CFR § 403.7 48 FR 9404 (January 28, 1981). New sources subject to NSPS are not eligible for any other statutory or regulatory modifications. See, *E. I. duPont de Nemours & Co.* v. *Train*, supra.

Indirect dischargers subject to PSES have, in the past, been eligible for the "fundamentally different factors" variance. See 40 CFR 403.13. However, on September 20, 1983, the United States Court of Appeals for the Third Circuit held that "FDF variances for toxic pollutants are forbidden by the Act," and remanded § 403.13 to EPA. *NAMF et al* v. *EPA*, Nos. 79–2256 et al. (3rd Cir., September 20, 1983). EPA is considering the effect of that decision.

In a few cases, information which would affect these PSES may not have been available to EPA or affected parties in the course of this rulemaking. As a result it may be appropriate to issue specific categorical standards for such facilities, treating them as a separate subcategory with more, or less, stringent standards as appropriate. This will only be done if a different standard is appropriate because of unique aspects of the factors listed in Section 304(b)(2)(B) of the Act: the age of equipment and facilities involved, the process employed, the engineering aspects of applying control techniques, nonwater quality environmental impacts (including energy requirements) or the cost of required effluent reductions (but not of ability to pay that cost).

Indirect dischargers and other affected parties may petition the Administrator to examine those factors and determine whether these PSES are properly applicable in specific cases or should be revised. Such petitions *must* contain specific and detailed support data, documentation, and evidence indicating why the relevant factors justify a more, or less, stringent standard, and must also indicate why those factors could not have been brought to the attention of the Agency in the course of this rulemaking. The Administrator will consider such rulemaking petitions and determine whether a rulemaking should be initiated.

XIII. Implementation of Limitations and Standards

A. Relationship to NPDES Permits

The BPT/BAT limitations and NSPS in this regulation will be applied to individual aluminum forming plants through NPDES permits issued by EPA or approved state agencies, under Section 402 of the Act. As discussed in the preceding section of this preamble, these limitations must be applied in all Federal and State NPDES permits except to the extent that variances and modifications are expressly authorized. Other aspects of the interaction between these limitations and NPDES permits are discussed below.

One issue that warrants consideration 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 permitting authority to act in any manner consistent with law or these or any other EPA regulations, guidelines, or policy. For example, even if this regulation does not control a particular pollutant, the permit issuer may still limit such pollutant on a case-by-case basis when limitations are 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.

A second topic that warrants discussion is the operation of EPA's NDPES enforcement program, many aspects of which were considered in developing this regulation. We emphasize that although the Clean Water Act is a strict liability statute, the initiation of enforcement proceedings by EPA is discretionary. We have exercised and intend to exercise that discretion in a manner that recognizes and promotes good-faith compliance efforts.

B. Indirect Dischargers

For indirect dischargers, PSES and PSNS are implemented under National Pretreatment Program procedures outlined in 40 CFR Part 403. The table below may be of assistance in resolving questions about the operation of that program. A brief explanation of some of the submissions indicated on the table follows:

A "request for category determination" is a written request, submitted by an indirect discharger or its POTW, for a determination of which categorical pretreatment standard

applies to the indirect discharger. This assists the indirect discharger in knowing which PSES or PSNS limits it will be required to meet. See 40 CFR 403.6(a).

A "baseline monitoring report" is the first report an indirect discharger must file following promulgation of an applicable standard. The baseline report includes: an identification of the indirect discharger; a description of its operation; a report on the flows of regulated streams and the results of sampling analyses to determine levels of regulated pollutants in those streams; a statement of the discharger's compliance or noncompliance with the standard; and a description of any additional steps required to achieve compliance. See 40 CFR 403.12(b).

A "report on compliance" is required of each indirect discharger within 90 days following the date for compliance with an applicable categorical pretreatment standard. The report must indicate the concentration of all regulated pollutants in the facility's regulated process wastestreams; the average and maximum daily flows of the regulated stream; and a statement of whether compliance is consistently being achieved, and if not, what additional operation and maintenance or pretreatment is necessary to achieve compliance. See 40 CFR 403.12(d).

A "periodic compliance report" is a report on continuing compliance with all applicable categorical pretreatment standards. It is submitted twice per year (June and December) by indirect dischargers subject to the standards. The report shall provide the concentrations of the regulated pollutants in its discharge to the POTW; the average and maximum daily flow rates of the facility; the methods used by the indirect discharger to sample and analyze the data, and a certification that these methods conform to the methods outlined in the regulations. See 40 CFR 403.12(e).

INDIRECT DISCHARGERS SCHEDULE FOR SUBMITTAL AND COMPLIANCE

Item	Applicable sources	Date or time period	Measured from	Submitted to
Request for category determination.	Existing	60 days or	From effective date of standard	Director [1].
		60 days	From Federal Register Development Document Availability.	
	New	Prior to commencement of discharge to POTW.		
Baseline monitoring	All	180 days	From effective date of standard of final decision or category determination.	Control authority [2].
Report on compliance	Existing	90 days	From date for final compliance	Control authority [2].
	New	90 days	From commencement of discharge to POTW.	
Periodic compliance reports	All	June and December.		Control authority [2].

[1] Director = (a) Chief Administrative Officer of a state water pollution control agency with an approved pretreatment program, or (b) EPA Regional Water Division Director, if state does not have an approved pretreatment program.
[2] Control Authority = (a) POTW if its pretreatment program has been approved, or (b) Director of state water pollution control agency with an approved pretreatment program, or (c) EPA Regional Administrator, if state does not have an approved pretreatment program.

XIV. Availability of Technical Information

The basis for this regulation is detailed in four major documents. Analytical methods are discussed in "Sampling and Analysis Procedures for Screening of Industral Effluents for Priority Pollutants." EPA's technical conclusions are detailed in the "Development Document for Effluent Guidelines, New Source Performance Standards and Pretreatment Standards for the Aluminum Forming Point Source Category." The Agency's economic analysis is presented in "Economic Impact Analysis of Effluent Limitations and Standards for the Aluminum Forming Industry." A summary of the public comments received on the proposed regulation is presented in a report "Responses to Public Comments, Proposed Aluminum Forming Effluent Limitations Guidelines and Standards," which is a part of the public record for this regulation. Copies of the technical and economic documents may be obtained from the National Technical Information Service, Springfield, Virginia 22161, (703) 487-4600. Additional information concerning the economic impact analysis may be obtained from Ms. Ellen Warhit, Economic Analysis Staff (WH-586), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 or by calling (202) 382-5381. Technical information may be obtained by writing to Ms. Janet Goodwin, Effluent Guidelines Division (WH-552), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 or by calling (202) 382-7126.

This regulation was submitted to the Office of Management and Budget for review as required by Executive Order 12291. The information collection requirements in this rule will be submitted for approval in the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* They are not effective until OMB approves them and a technical amendment to that effect is published in the **Federal Register.**

XV. List of Subjects in 40 CFR Part 467

Aluminum forming, water pollution control, waste treatment and disposal.

Dated: September 30, 1983.

William D. Ruckelshaus,

Administrator.

XVI. Appendices

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.

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

BPT—The best practicable control technology currently available under Section 304(b)(10) 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 (Pub. L. 95-217).

DCP—Data collection portfolio.

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

Indirect discharger—A facility which discharges or may discharge 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) and (c) of the Act.

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

Appendix B—Toxic Pollutants not Detected in Aluminum Forming Wastewater

(a) Subpart A—Rolling With Neat Oils Subcategory.

003 acrylonitrile
005 benzidine
008 1,2,4,-trichlorobenzene
009 hexachlorobenzene
012 hexachloroethane
013 1,1-dichloroethane
016 chloroethane
017 deleted
018 bis(chloroethyl) ether
019 2-chloroethyl vinyl ether
020 2-chloronaphthalene
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3'-dichlorobenzidene
032 1,2-dichloropropane
033 1,3-dichloropropylene
036 2,6-dinitrotoluene
040 4-chlorophenyl phenyl ether
041 -bromophenyl phenyl ether
042 bis(2-chloroisopropyl) ether
043 bis(2-chloroethoxy) methane
045 methyl chloride
046 methyl bromide
049 deleted
050 deleted.
052 hexachlorobutadiene
053 hexachlorocyclopentadiene
056 Nitrobenzene
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
063 N-nitrosodi-n-propylamine
113 toxaphene
116 asbestos
129 2,3,7,8-tetrachlorodibenzo-p-dioxin

(b) Subpart B—Rolling With Emulsions Subcategory.

003 acylonitrile
005 benzidene
008 1,2,4,-trichlorobenzene
009 hexachlorobenzene
012 hexachloroethane
013 1,1-dichloroethane
016 chloroethane
017 deleted
018 bis(chloroethyl) ether
019 2-chloroethyl vinyl ether
020 2-chloronaphthalene
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3'-dichlorobenzidene
032 1,2-dichloropropane
033 1,3-dichloropropylene
036 2,6-dinitrotoluene
040 4–chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 bis(2–chloroisopropyl) ether
043 bis(2-chloroethoxy) methane
045 methyl chloride
046 methyl bromide
049 deleted
050 deleted
052 hexachlorobutadiene
053 hexachlorocyclopentadiene
056 nitrobenzene
061 N-nitrosodimethylamine
063 N-nitrosodi-n-propylamine
113 toxaphene
116 asbestos
129 2,3,7,8,-tetrachlorodibenzo-p-dioxin

(c) Subpart C—Extrusion Subcategory.

003 acrylonitrile
005 benzidine
008 1,2,4,-trichlorobenzene
009 hexachlorobenzene
012 hexachloroethane
013 1,1-dichloroethane
016 chloroethane
017 deleted
018 bis(chloroethyl) ether
019 2-chloroethyl vinyl ether
020 2-chloronaphthalene
025 1,2-dichlorobenzene
026 1,3–dichlorobenzene
027 1,4–dichlorobenzene
028 3,3'-dichlorobenzidene
032 1,2-dichloropropane
033 1,3-dichloropropylene
036 2,6-dinitrotolune
040 4-chlorophenyl phenyl ether
041 4–bromophenyl phenyl ether
042 bis(2-chloroisopropyl) ether
043 bis(2–chloroethoxy) methane
045 methyl chloride
046 methyl bromide
049 deleted
050 deleted
052 hexachlorobutadiene
053 hexachlorocyclopentadiene
056 nitrobenzene
061 N-nitrosodimethylamine
063 N-nitrosodi-n-propylamine
088 vinyl chloride
113 toxaphene
116 asbestos
129 2,3,7,8,-tetrachlorodibenzo-p-dioxin.

(d) Subpart D—Forging Subcategory.

003 acrylonitrile
005 benzidine
006 carbon tetrachloride
008 1,2,4–trichlorobenzene
009 hexachlorobenzene
012 hexachloroethane
013 1,1-dichloroethane
016 chloroethane
017 deleted
018 bis(chloroethyl) ether
019 2–chloroethyl vinyl ether
020 2-chloronaphthalene
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3 ¹-dichlorobenzene
032 1,2-dichloropropane
033 1,3-dichloropropoylene
036 2,6-dinitrotoluene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 bis(2-chloroisopropyl) ether
043 bis(2-chloroethoxy) methane
045 methyl chloride
046 methyl bromide
049 deleted
050 deleted
052 hexachlorobutadiene
053 hexachlorocyclopentadiene
056 nitrobenzene
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
063 N-nitrosodi-n-propylamine
113 toxaphene
116 asbestos
129 2,3,7,8-tetrachlorodibenzo-p-dioxin

(e) Subpart E—Drawing With Neat Oils Subcategory.

003 acrylonitrile
005 benzidine
008 1,2,4-trichlorobenzene
009 hexachlorobenzene
012 hexachloroethane
013 1,1-dichloroethane
016 chloroethane
017 deleted
018 bis(chloroethyl) ether
019 2-chloroethyl vinyl ether
020 2-chloronaphthalene
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3'-dichlorobenzidene
032 1,2-dichloropropane
033 1,3-dichloropropylene
036 2,6-dinitrotoluene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 bis(2-chloroisopropyl) ether
043 bis(2-chloroethoxy) methane
045 methyl chloride
046 methyl bromide
049 deleted
050 deleted
052 hexachlorobutadiene
053 hexachlorocyclopentadiene
056 nitrobenzene
061 N-nitrosodimethylamine
063 N-nitrosodi-n-propylamine
113 toxaphene
116 asbestos
129 2,3,7,8-tetrachlorodibenzo-p-dioxin

(f) Subpart F—Drawing With Emulsions or Soaps Subcategory.

003 acrylonitrile
005 benzidine
008 1,2,4-trichlorobenzene
009 hexachlorobenzene
012 hexachloroethane
013 1,1-dichloroethane
016 chloroethane
017 deleted
018 bis(chloroethyl) ether
019 2-chloroethyl vinyl ether
020 2-chloronaphthalene
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene

028 3,3'-dichlorobenzidene
032 1,2-dichloropropane
033 1,3-dichloropropylene
036 2,6-dinitrotoluene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 bis(2-chloroisopropyl) ether
043 bis(2-chloroethoxy) methane
045 methyl chloride
046 methyl bromide
049 deleted
050 deleted
052 hexachlorobutadiene
053 hexachlorocyclopentadiene
056 nitrobenzene
061 N-nitrosodimethylamine
063 N-nitrosodi-n-propylamine
113 toxaphene
116 asbestos
129 2,3,7,8-tetrachlorodibenzo-p-dioxin

Appendix C—Toxic Pollutants Detected Below the Analytical Quantification Limit

(a) Subpart A—Rolling With Neat Oils Subcategory.

006 carbon tetrachloride
010 1,2-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
029 1,1-dichloroethylene
031 2,4-dichlorophenol
057 2-nitrophenol
072 benzo(a)anthracene (1,2-benzanthracene)
089 aldrin
090 dieldrin
092 4,4'-DDT
094 4,4'-DDD
104 gamma-BHC
105 delta-BHC
127 thallium

(b) Subpart B—Rolling With Emulsions Subcategory.

006 carbon tetrachloride
010 1,2-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
029 1,1-dichloroethylene
031 2,4-dichlorophenol
057 2-nitrophenol
072 benzo(a)anthracene (1,2-benzanthracene)
089 aldrin
090 dieldrin
092 4,4'-DDT
094 4,4'-DDD
104 gamma-BHC
105 delta-BHC
127 thallium

(c) Subpart C—Extrusion Subcategory.

006 carbon tetrachloride
010 1,2-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
029 1,1-dichloroethylene
031 2,4-dichlorophenol
037 1,2-diphenylhydrazine
057 2-nitrophenol
089 aldrin
090 dieldrin
092 4,4'-DDT
094 4,4'-DDD
104 gamma-BHC
105 delta-BHC
127 thallium

(d) Subpart D—Forging Subcategory.

006 carbon tetrachloride
010 1,2-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
029 1,1-dichloroethylene
031 2,4-dichlorophenol
057 2-nitrophenol
089 aldrin
090 dieldrin
092 4,4'-DDT
094 4,4'-DDD
104 gamma-BHC
105 delta-BHC
127 thallium

(e) Subpart E—Drawing With Neat Oils Subcategory.

006 carbon tetrachloride
010 1,2-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-trichloroethane
029 1,-dichloroethylene
031 2,4-dichlorophenol
037 1,2-diphenylhydrazine
057 2-nitrophenol
072 benzo(a)anthracene (1,2-benzanthracene)
089 aldrin
090 dieldrin
092 4,4'-DDT
094 4,4'-DDD
104 gamma-BHC
105 delta-BHC
127 thallium

(f) Subpart F—Drawing With Emulsions or Soaps Subcategory.

006 carbon tetrachloride
010 1,2-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
029 1,1-dichloroethylene
031 2,4-dichlorophenol
057 2-nitrophenol
072 benzo(a)anthracene (1,2-benzanthracene)
089 aldrin
090 dieldrin
092 4,4'-DDT
094 4,4'-DDD
104 gamma-BHC
105 delta-BHC
127 thallium

Appendix D—Toxic Pollutants Detected in the Effluent From Only a Small Number of Sources

(a) Subpart A—Rolling With Neat Oils Subcategory

004 benzene
011 1,1,1-trichloroethane
023 chloroform
030 1,2-*trans*-dichloroethylene
047 bromoform
048 dichlorobromomethane
058 4-nitrophenol
059 2,4-dinitrophenol
064 pentachlorophenol
067 butyl benzyl phthalate
069 di-n-octyl phthalate
071 dimethyl phthalate
091 chlordane
093 4,4'-DDE
095 alpha-endosulfan
096 beta-endosulfan
100 heptachlor
101 heptachlor epoxide
102 alpha-BHC
103 beta-BHC
114 antimony
115 arsenic
117 beryllium
126 silver

(b) Subpart B—Rolling With Emulsions Subcategory.

004 benzene
011 1,1,1-trichloroethane
023 chloroform
030 1,2-*trans*-dichloroethylene
047 bromoform
048 dichlorobromomethane
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
064 pentachlorophenol
067 butyl benzyl phthalatey
069 di-n-octyl phthalate
071 dimethyl phthalate
091 chlordane
093 4,4'-DDE
095 alpha-endosulfan
096 beta-endosulfan
100 heptachlor
101 heptachlor epoxide
102 alpha-BHC
103 beta-BHC
114 antimony
115 arsenic
117 beryllium
126 silver

(c) Subpart C—Extrusion Subcategory

004 bnezene
011 1,1,1-trichloroethane
023 chloroform
030 1,2-*trans*-dichloroethylene
047 bromoform
048 dichlorobromomethane
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
064 pentachlorophenol
067 butyl benzyl phthalate
069 di-n-octyl phthalate
071 dimethyl phthalate
091 chlordane
093 4,4'-DDE
095 alpha-endosulfan

096 beta-endosulfan
100 heptachlor
101 heptachlor epoxide
102 alpha-BHC
103 beta-BHC
114 antimony
115 arsenic
117 beryllium
126 silver

(d) Subpart D—Forging Subcategory.

004 benzene
011 1,1,1-trichloroethane
023 chloroform
030 1,2-*trans*-dichloroethylene
047 bromoform
048 dichlorobromomethane
058 4-nitrophenol
059 2,4-dinitrophenol
064 pentachlorophenol
067 butyl benzyl phthalate
069 di-n-octyl phthalate
071 dimethyl phthalate
091 chlordane
093 4,4'-DDE
095 alpha-endosulfan
096 beta-endosulfan
100 heptachlor
101 heptachlor epoxide
102 alpha-BHC
103 beta-BHC
114 antimony
115 arsenic
117 beryllium
126 silver

(e)Subpart E—Drawing With Neat Oils Subcategory.

004 benzene
011 1,1,1-trichloroethane
023 chloroform
030 1,2-*trans*-dichloroethylene
047 bromoform
048 dichlorobromomethane
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
064 pentachlorophenol
067 butyl benzyl phthalate
069 di-n-octyl phthalate
071 dimethyl phthalate
091 chlordane
093 4,4'-DDE
095 alpha-endosulfan
096 beta-endosulfan
100 heptachlor
101 heptachlor epoxide
102 alpha-BHC
103 beta-BHC
114 antimony
115 arsenic
117 beryllium
126 silver

(f) Subpart F-Drawing With Emulsions or Soaps Subcategory.

004 benzene
011 1,1,1-trichloroethane
023 chloroform
030 1,2-*trans*-dichloroethylene
047 bromoform
048 dichlorobromomethane
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
064 pentachlorophenol
067 butyl benzyl phtholate
069 di-n-octyl phthalate
071 dimethyl phthalate
091 chlordane
093 4,4'-DDE
095 alpha-endosulfan
096 beta-endosulfan
100 heptachlor
101 heptachlor epoxide
102 alpha-BHC
103 beta-BHC
114 antimony
115 arsenic
117 beryllium
126 silver

Appendix E—Toxic Pollutants Detected in Amount too Small To Be Effectively Treated by Technologies Considered in Preparing This Guideline

(a) Subpart A—Rolling With Neat Oils Subcategory.

002 acrolein
007 chlorobenzene
021 2,4,6-trichlorophenol
034 2,4-dimethylphenol
044 methylene chloride
051 chlorodibromomethane
123 mercury

(b) Subpart B—Rolling With Emulsions Subcategory.

002 acrolein
007 chlorobenzene
021 2,4,6-trichlorophenol
034 2,4-dimethylphenol
044 methylene chloride
051 chlorodibromomethane
123 mercury

(c) Subpart C—Extrusion Subcategory.

002 acrolein
007 chlorobenzene
021 2,4,6-trichlorophenol
034 2,4-dimethylphenol
044 methylene chloride
051 chlorodibromomethane
123 mercury

(d) Subpart D—Forging Subcategory.

002 acrolein
007 chlorobenzene
021 2,4,6-trichlorophenol
034 2,4-dimethylphenol
044 methylene chloride
051 chlorodibromomethane
123 mercury

(e) Subpart E—Drawing With Neat Oils Subcategory.

002 acrolein
004 benzene
007 chlorobenzene
021 2,4,6-trichlorophenol
034 2,4-dimethylephenol
044 methylene chloride
051 chlorodibromomethane
123 mercury

(f) Subpart F—Drawing With Emulsions or Soaps Subcategory.

002 acrolein
007 chlorobenzene
021 2,4,6-trichlorophenol
034 2,4-dimethylphenol
044 methylene chloride
051 chlofodibromomethane
123 mercury

Appendix F—Toxic Pollutants Effectively Controlled by BAT, PSES, NSPS, and PSNS Even Though They Are Not Specifically Regulated Limitations and Guidelines

(a) Subpart A—Rolling With Neat Oils Subcategory.

118 cadmium
120 copper
122 lead
124 nickel
125 selenium

(b) Subpart B—Rolling With Emulsions Subcategory.

118 cadmium
120 copper
122 lead
124 nickel
125 selenium

(c) Subpart C—Extrusion Subcategory.

118 cadmium
120 copper
122 lead
124 nickel
125 selenium

(d) Subpart D—Forging Subcategory.

118 cadmium
120 copper
122 lead
124 nickel
125 selenium

(e) Subpart E—Drawing With Neat Oils Subcategory.

118 cadmium
120 copper
122 lead
124 nickel
125 selenium

(f) Subpart F—Drawing With Emulsions or Soaps Subcategory.

118 cadmium
120 copper
122 lead
124 nickel
125 selenium

Appendix G—Toxic Organic Pollutants Which Are Not Regulated at BAT and NSPS Because They Are Effectively Controlled by Other Limitations and Standards

(a) Subpart A—Rolling With Neat Oils-Subcategory.

001 acenaphthene
022 p-chloro-m-cresol
024 2-chlorophenol
035 2,4-dinitrotoluene
037 1,2-diphenylhydrazine
038 ethylbenzene
039 fluoranthene
054 isophorone
055 naphthalene
062 N-nitrosodiphenylamine
065 phenol
066 bis(2-ethylhexyl)phthalate
068 di-n-butyl phthalate
070 diethyl phthalate
073 benzo(a)pyrene
074 3,4-benzofluoranthene
075 benzo(k)fluoranthene
076 chrysene
077 acenaphthylene
078 anthracene
079 benzo(ghi)perylene
080 fluorene
081 phenanthrene
082 dibenzo(a,h)anthracene
083 indeno(1,2,3-c,d)pyrene
084 pyrene
085 tetrachloroethylene
086 toluene
087 trichloroethylene
088 vinyl chloride
097 endosulfan sulfate
098 endrin
099 endrin aldehyde
106 PCB–1242
107 PCB–1254
108 PCB–1221
109 PCB–1232
110 PCB–1248
111 PCB–1260
112 PCB–1016

(b) Subpart B—Rolling With Emulsions.

001 acenaphthene
022 p-chloro-m-cresol
024 2-chlorophenol
035 2,4-dinitrotoluene
037 1,2-diphenylhydrazine
038 ethylbenzene
039 fluoranthene
054 isophorone
055 naphthalene
062 N-nitrosodiphenylamine
065 phenol
066 bis(2-ethylhexyl)phthalate
068 di-n-butyl phthalate
070 diethyl phthalate
072 benzo(a)pyrene
074 3,4-benzofluoranthene
075 benzo(k)fluoranthene
076 chrysene
077 acenaphthylene
078 anthracene
079 benzo(ghi)perylene
080 fluorene
081 phenanthrene
082 dibenzo(a,h)anthracene
083 indeno(1,2,3-c,d)pyrene
084 pyrene
085 tetrachloroethylene
086 toluene
087 trichloroethylene
088 vinyl chloride
097 endosulfan sulfate
098 endrin
099 endrin aldehyde
106 PCB–1242
107 PCB–1254
108 PCB–1221
109 PCB–1232
110 PCB–1248
111 PCB–1260
112 PCB–1016

(c) Subpart C—Extrusion Subcategory.

001 acenaphthene
022 p-chloro-m-cresol
024 2-chlorophenol
035 2,4-dinitrotoluene
037 1,2-diphenylhydrazine
038 ethylbenzene
039 fluoranthene
054 isophorone
055 naphthalene
062 N-nitrosodiphenylamine
065 phenol
066 bis(2-ethylhexyl)phthalate
068 di-n-butyl phthalate
070 diethyl phthalate
072 benzo(a)pyrene
074 3,4-benzofluoranthene
075 benzo(k)fluoranthene
076 chrysene
077 acenaphthylene
078 anthracene
079 benzo(ghi)perylene
080 fluorene
081 phenanthrene
082 dibenzo(a,h)anthracene
083 indeno(1,2,3-c,d)pyrene
084 pyrene
085 tetrachloroethylene
086 toluene
087 trichloroethylene
088 vinyl chloride
097 endosulfan sulfate
098 endrin
099 endrin aldehyde
106 PCB–1242
107 PCB–1254
108 PCB–1221
109 PCB–1232
110 PCB–1248
111 PCB–1260
112 PCB–1016

(d) Subpart D—Forging Subcategory.

001 acenaphthene
022 p-chloro-m-cresol
024 2-chlorophenol
035 2,4-dinitrotoluene
037 1,2-diphenylhydrazine
038 ethylbenzene
039 fluoranthene
054 isophorone
055 naphthalene
062 N-nitrosodiphenylamine
065 phenol
066 bis(2-ethylhexyl)phthalate
068 di-n-butyl phthalate
070 diethyl phthalate
072 benzo(a)pyrene
074 3,4-benzofluoranthene
075 benzo(k)fluoranthene
076 chrysene
077 acenaphthylene
078 anthracene
079 benzo(ghi)perylene
080 fluorene
081 phenanthrene
082 dibenzo(a,h)anthracene
083 indeno(1,2,3-c,d)pyrene
084 pyrene
085 tetrachloroethylene
086 toluene
087 trichloroethylene
088 vinyl chloride

(e) Subpart E—Drawing With Neat Oils Subcategory.

001 acenaphthene
022 p-chloro-m-cresol
024 2-chlorophenol
035 2,4-dinitrotoluene
037 1,2-diphenylhydrazine
038 ethylbenzene
039 fluoranthene
054 isophorone
055 naphthalene
062 N-nitrosodiphenylamine
065 phenol
066 bis(2-ethylhexyl)phthalate
068 di-n-butyl phthalate
070 diethyl phthalate
072 benzo(a)pyrene
074 3,4-benzofluoranthene
075 benzo(k)fluoranthene
076 chrysene
077 acenaphthylene
078 anthracene
079 benzo(ghi)perylene
080 fluorene
081 phenanthrene
082 dibenzo(a,h)anthracene
083 indeno(1,2,3-c,d)pyrene
084 pyrene
085 tetrachloroethylene
086 toluene
087 trichloroethylene
088 vinyl chloride

097 endosulfan sulfate
098 endrin
099 endrin aldehyde
106 PCB–1242
107 PCB–1254
108 PCB–1221
109 PCB–1232
110 PCB–1248
111 PCB–1260
112 PCB–1016

(f) Subpart F—Drawing With Emulsions or Soaps Subcategory.

001 acenaphthene
022 p-chloro-m-cresol
024 2-chlorophenol
035 2,4-dinitrotoluene
038 ethylbenzene
039 fluoranthene
054 isophorone
055 naphthalene
062 N-nitrosodiphenylamine
065 phenol
066 bis(2-ethylhexyl)phthalate
068 di-n-butyl phthalate
070 diethyl phthalate
074 3,4-benzofluoranthene
075 benzo(k)fluoranthene
076 chrysene
077 acenaphthylene
078 anthracene
079 benzo(ghi)perylene
080 fluorene
081 phenanthrene
082 dibenzo(a,h)anthracene
083 indeno(1,2,3-c,d)pyrene
084 pyrene
085 tetrachloroethylene
086 toluene
087 trichloroethylene
088 vinyl chloride
097 endosulfan sulfate
098 endrin
099 endrin aldehyde
106 PCB–1242
107 PCB–1254
108 PCB–1221
109 PCB–1232
110 PCB–1248
111 PCB–1260
112 PCB–1016

A new Part 467 is added to 40 CFR to read as follows:

PART 467—ALUMINUM FORMING POINT SOURCE CATEGORY

General Provisions

Sec.
467.1 Applicability.
467.2 General definitions.
467.3 Monitoring and reporting requirements.
467.4 Compliance date for PSES.

Subpart A—Rolling With Neat Oils Subcategory

467.10 Applicability; description of the rolling with neat oils subcategory.
467.11 Specialized definitions.
467.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.14 New source performance standards.
467.15 Pretreatment standards for existing sources.
467.16 Pretreatment standards for new sources.
467.17 Effluent limitations representating the degree of effluent reduction attainable by the application of the best conventional pollutant control technology [Reserved].

Subpart B—Rolling With Emulsions Subcategory

467.20 Applicability; description of the rolling with emulsions subcategory.
467.21 Specialized definitions.
467.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.24 New source performance standards.
467.25 Pretreatment standards for existing sources.
467.26 Pretreatment standards for new sources.
467.27 Effluent limitations representing the degree of effluent reduction attainable by the applicaton of the best conventional pollutant control technology [Reserved].

Subpart C— Extrusion subcategory.

467.30 Applicability; description of the extrusion subcategory.
467.31 Specialized definitions.
467.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.34 New source performance standards.
467.35 Pretreatment standards for existing sources.
467.36 Pretreatment standards for new sources.
467.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology [Reserved].

Subpart D—Forging Subcategory

467.40 Applicability; description of forging subcategory.
467.41 Specialized definitions.
467.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available [Reserved].
467.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable [Reserved].
467.44 New source performance standards.
467.45 Pretreatment standards for existing sources.
467.46 Pretreatment standards for new sources.
467.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology [Reserved].

Subpart E—Drawing With Neat Oils Subcategory

467.50 Applicability; description of the drawing with neat oils subcategory.
467.51 Specialized definitions.
467.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.54 New source performance standards.
467.55 Pretreatment standards for existing sources.
467.56 Pretreatment standards for new sources.
467.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology [Reserved].

Subpart F—Drawing With Emulsions or Soaps Subcategory

467.60 Applicability; description of the drawing with emulsions or soaps subcategory.
467.61 Specialized definitions.
467.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.64 New source performance standards.
467.65 Pretreatment standards for existing sources.
467.66 Pretreatment standards for new sources.
467.67 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology [Reserved].

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

General Provisions

§ 467.01 Applicability.

(a) Aluminum forming includes commonly recognized forming operations such as rolling, drawing, extruding, and forging and related operations such as heat treatment, casting, and surface treatments. Surface treatment of aluminum is any chemical

or electrochemical treatment applied to the surface of aluminum. Such surface treatment is considered to be a part of aluminum forming whenever it is performed as an integral part of aluminum forming. For the purposes of this regulation, surface treatment of aluminum is considered to be an integral part of aluminum forming whenever it is performed at the same plant site at which aluminum is formed and such operations are not considered for regulation under the Metal Finishing provisions of 40 CFR Part 433. Casting aluminum when performed as an integral part of aluminum forming and located on-site at an aluminum forming plant is considered an aluminum forming operation and is covered under these guidelines. When aluminum forming is performed on the same site as primary aluminum reduction the casting shall be regulated by the nonferrous metals guidelines if there is no cooling of the aluminum prior to casting. If the aluminum is cooled prior to casting then the casting shall be regulated by the aluminum forming guidelines.

(b) This part applies to any aluminum forming facility, except for plants identified under paragraph (c) of this section, which discharges or may discharge pollutants to waters of the United States or which introduces or may introduce pollutants into a publicly owned treatment works.

(c) This part is applicable to indirect discharging aluminum forming plants that extrude less than 3 million pounds of product per year and draw, with emulsions or soaps, less than 1 million pounds per year.

Note.—This paragraph is promulgated as an Interim Rule.

§ 467.02 General definitions.

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

(a) *Aluminum forming* is a set of manufacturing operations in which aluminum and aluminum alloys are made into semifinished products by hot or cold working.

(b) *Ancillary operation* is a manufacturing operation that has a large flow, discharges significant amounts of pollutants, and may not be present at every plant in a subcategory, but when present is an integral part of the aluminum forming process.

(c) *Contact cooling water* is any wastewater which contacts the aluminum workpiece or the raw materials used in forming aluminum.

(d) *Continuous casting* is the production of sheet, rod, or other long shapes by solidifying the metal while it is being poured through an open-ended mold using little or no contact cooling water. Continuous casting of rod and sheet generates spent lubricants and rod casting also generates contact cooling water.

(e) *Degassing* is the removal of dissolved hydrogen from the molten aluminum prior to casting. Chemicals are added and gases are bubbled through the molten aluminum. Sometimes a wet scrubber is used to remove excess chlorine gas.

(f) *Direct chill casting* is the pouring of molten aluminum into a water-cooled mold. Contact cooling water is sprayed onto the aluminum as it is dropped into the mold, and the aluminum ingot falls into a water bath at the end of the casting process.

(g) *Drawing* is the process of pulling metal through a die or succession of dies to reduce the metal's diameter or alter its shape. There are two aluminum forming subcategories based on the drawing process. In the drawing with neat oils subcategory, the drawing process uses a pure or neat oil as a lubricant. In the drawing with emulsions or soaps subcategory, the drawing process uses an emulsion or soap solution as a lubricant.

(h) *Emulsions* are stable dispersions of two immiscible liquids. In the aluminum forming category this is usually an oil and water mixture.

(i) *Cleaning or etching* is a chemical solution bath and a rinse or series of rinses designed to produce a desired surface finish on the workpiece. This term includes air pollution control scrubbers which are sometimes used to control fumes from chemical solution baths. Conversion coating and anodizing when performed as an integral part of the aluminum forming operations are considered cleaning or etching operations. When conversion coating or anodizing are covered here they are not subject to regulation under the provisions of 40 CFR Part 433, Metal Finishing.

(j) *Extrusion* is the application of pressure to a billet of aluminum, forcing the aluminum to flow through a die orifice. The extrusion subcategory is based on the extrusion process.

(k) *Forging* is the exertion of pressure on dies or rolls surrounding heated aluminum stock, forcing the stock to change shape and in the case where dies are used to take the shape of the die. The forging subcategory is based on the forging process.

(l) *Heat treatment* is the application of heat of specified temperature and duration to change the physical properties of the metal.

(m) *In-process control technology* is the conservation of chemicals and water throughout the production operations to reduce the amount of wastewater to be discharged.

(n) *Neat oil* is a pure oil with no or few impurities added. In aluminum forming its use is mostly as a lubricant.

(o) *Rolling* is the reduction in thickness or diameter of a workpiece by passing it between lubricated steel rollers. There are two subcategories based on the rolling process. In the rolling with neat oils subcategory, pure or neat oils are used as lubricants for the rolling process. In the rolling with emulsions subcategory, emulsions are used as lubricants for the rolling process.

(p) The term *Total Toxic Organics (TTO)* shall mean the sum of the masses or concentrations of each of the following toxic organic compounds which is found in the discharge at a concentration greater than 0.010 mg/1:

p-chloro-m-cresol	trichloroethylene
2-chlorophenol	vinyl chloride
2,4-dinitrotoluene	endosulfan sulfate
1,2-diphenylhydrazine	bis(2-ethyl hexyl)phthalate
ethyblenzene	diethylphthalate
fluoranthene	3,4-benzofluoranthene
isophorone	benzo(k)fluoranthene
napthalene	chrysene
N-nitrosodiphenylamine	acenaphthylene
phenol	anthracene
benzo(a)pyrene	di-n-butyl phthalate
benzo(ghi)perylene	endrin
fluorene	endrin aldehyde
phenanthrene	PCB–1242, 1254, 1221
dibenzo(a,h)anthracene	PCB–1232, 1248, 1260, 1016
indeno(1,2,3-c,d)pyrene	acenaphthene
pyrene	
tetrachloroethylene	
toluene	

(q) *Stationary casting* is the pouring of molten aluminum into molds and allowing the metal to air cool.

(r) *Wet scrubbers* are air pollution control devices used to remove particulates and fumes from air by entraining the pollutants in a water spray.

(s) *BPT* means the best practicable control technology currently available under Section 304(b)(1) of the Act.

(t) *BAT* means the best available technology economically achievable under Section 304(b)(2)(B) of the Act.

(u) *BCT* means the best conventional pollutant control technology, under Section 304(b)(4) of the Act.

(v) *NSPS* means new source performance standards under Section 306 of the Act.

(w) *PSES* means pretreatment standards for existing sources, under Section 307(b) of the Act.

(x) *PSNS* means pretreatment standards for new sources, under Section 307(c) of the Act.

(y) The production normalizing mass (/kkg) for each core or ancillary

operation is the mass (off-kkg or off-lb) processed through that operation.

(z) The term *off-kilogram (off-pound)* shall mean the mass of aluminum or aluminum alloy removed from a forming or ancillary operation at the end of a process cycle for transfer to a different machine or process.

§ 467.03 Monitoring and reporting requirements.

The following special monitoring and reporting requirements apply to all facilities controlled by this regulation.

(a) Periodic analyses for cyanide as may be required under Part 122 or 403 of this chapter are not required when both of the following conditions are met:

(1) The first wastewater sample of each calender year has been analyzed and found to contain less than 0.07 mg/l cyanide.

(2) The owner or operator of the aluminum forming plant certifies in writing to the POTW authority or permit issuing authority that cyanide is not and will not be used in the aluminum process.

(b) As an alternative to monitoring procedure for pretreatment, the POTW user may measure and limit oil and grease to the levels shown in pretreatment standards in lieu of measuring and regulating total toxic organics (TTO).

(c) The "monthly average" regulatory values shall be the basis for the monthly average discharge limits in direct discharge.

§ 467.04 Compliance date for PSES.

The compliance date for Pretreatment Standards for Existing Sources (PSES) is October 24, 1983.

Subpart A—Rolling With Neat Oils Subcategory

§ 467.10 Applicability; description of the rolling with neat oils subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the core and the ancillary operations of the rolling with neat oils subcategory.

§467.11 Specialized definitions

For the purpose of this subpart:

(a) The "core" of the rolling with neat oils subcategory shall include rolling using neat oils, roll grinding, sawing, annealing, stationary casting, homogenizing artificial aging, degreasing, and stamping.

(b) The term "ancillary operation" shall mean any operation not previously included in the core, performed on-site, following or preceding the rolling operation. The ancillary operations shall include continuous rod casting, continuous sheet casting, solution heat treatment, cleaning or etching.

§ 467.12 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the core operation and for the ancillary operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

Subpart A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per/million off-pounds) of aluminum rolled with neat oils	
Chromium	0.0360	0.0147
Cyanide	0.0237	0.0098
Zinc	0.119	0.0498
Aluminum	0.525	0.257
Oil and Grease	1.634	0.980
Suspended Solids	3.348	1.593
pH	(1)	(1)

(1) Within the range of 7.0 to 10 at all times.

Subpart A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per/million off-pound) of aluminum rolled with neat oils	
Chromium	0.0244	0.010
Cyanide	0.0161	0.0067
Zinc	0.0808	0.0338
Aluminum	0.356	0.174
Oil and Grease	1.11	0.664
Suspended Solids	2.27	1.079
pH	(1)	(1)

(1) Within the range of 7.0 to 10 at all times.

Subpart A

Continuous Sheet Casting Spent Lubricant

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per/million off-pound) of aluminum sheet cast by continuous methods	
Chromium	0.00086	0.00035
Cyanide	0.00057	0.00024
Zinc	0.0029	0.0012
Aluminum	0.0127	0.0062
Oil and Grease	0.0393	0.0236
Suspended Solids	0.0805	0.0383
pH	(1)	(1)

(1) Within the range of 7.0 to 10 at all times.

Subpart A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per/million off-pound) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.20
Oil and Grease	154.10	92.46
Suspended Solids	315.91	150.25
pH	(1)	(1)

(1) Within the range of 7.0 to 10 at all times.

Subpart A

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for montly average
	Mg/off-kg (pounds per/million off-pound) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.110
Aluminum	1.15	0.562
Oil and Grease	3.58	2.15
Suspended Solids	7.34	3.49
pH	(1)	(1)

(1) Within the range of 7.0 to 10 at all times.

Subpart A

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	43.69
Oil and Grease	278.24	166.95
Suspended Solids	670.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	49.93
Oil and Grease	318.00	190.80
Suspended Solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

§ 467.13 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 §§ 125.30–125.32, 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. The mass of pollutants in the core and ancillary operations' process wastewater shall not exceed the following values:

Subpart A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with neat oils	
Chromium	0.036	0.015
Cyanide	0.024	0.0098
Zinc	0.119	0.050
Aluminum	0.525	0.257

Subpart A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with neat oils	
Chromium	0.025	0.010
Cyanide	0.016	0.0067
Zinc	0.081	0.034
Aluminum	0.356	0.174

Subpart A

Continuous Sheet Casting Spent Lubricant

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum sheet cast	
Chromium	0.00086	0.00035
Cyanide	0.00057	0.00024
Zinc	0.00287	0.0012
Aluminum	0.0127	0.0062

Subpart A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	0.897	0.367
Cyanide	0.591	0.245
Zinc	2.974	1.243
Aluminum	13.10	6.396

Subpart A

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.151	0.562

Subpart A

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.031	0.849
Aluminum	8.944	4.368

Subpart A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.822	1.179
Aluminum	12.43	6.070

§ 467.14 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The mass of pollutants in the core and ancillary operations' process wastewater shall not exceed the following values:

Subpart A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with neat oils	
Chromium	0.030	0.0123
Cyanide	0.016	0.0065
Zinc	0.084	0.0343
Aluminum	0.499	0.221
Oil and grease	0.817	0.817
Suspended solids	1.225	0.980
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with neat oils	
Chromium	0.021	0.0083
Cyanide	0.011	0.0044
Zinc	0.057	0.023
Aluminum	0.338	0.150
Oil and grease	0.553	0.553
Suspended solids	0.830	0.664
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart A

Continuous Sheet Casting Spent Lubricant

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast	
Chromium	0.00073	0.00029
Cyanide	0.00039	0.00016
Zinc	0.0020	0.00082
Aluminum	0.012	0.0053
Oil and grease	0.0197	0.019
Suspended solids	0.0295	0.022
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart A

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart A

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.70
Oil and grease	13.91	13.91
Suspended solids	20.87	16.69
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.715	0.29
Cyanide	0.387	0.16
Zinc	1.97	0.81
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

§ 467.15 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. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the following values:

Subpart A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with neat oils	
Chromium	0.036	0.015
Cyanide	0.024	0.010
Zinc	0.119	0.050
TTO	0.057	
Oil and grease (alternate monitoring parameter)	1.64	0.98

Subpart A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds of aluminum rolled with neat oils	
Chromium	0.025	0.010
Cyanide	0.016	0.007
Zinc	0.081	0.034
TTO	0.038	
Oil and grease (alternate monitoring parameter)	1.11	0.67

Subpart A

Continuous Sheet Casting Lubricant

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast	
Chromium	0.00086	0.00035
Cyanide	0.00057	0.00024
Zinc	0.0029	0.0012
TTO	0.0014	
Oil and grease (alternate monitoring parameter)	0.040	0.024

Subpart A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	0.090	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
TTO	1.41	

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
Oil and grease (alternate monitoring parameter)	40.74	24.45

Subpart A

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
TTO	0.124	
Oil and grease (alternate monitoring parameter)	3.58	2.15

Subpart A

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
TTO	0.96	
Oil and grease (alternate monitoring parameter)	27.82	16.69

Subpart A

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
TTO	1.34	
Oil and grease (alternate monitoring parameter)	38.7	23.20

§ 467.16 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. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the following values:

Subpart A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with neat oils	
Chromium	0.030	0.013
Cyanide	0.017	0.007
Zinc	0.084	0.035
TTO	0.057	
Oil and grease (alternate monitoring parameter)	0.817	0.817

Subpart A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with neat oils	
Chromium	0.021	0.009
Cyanide	0.011	0.005
Zinc	0.057	0.024
TTO	0.038	
Oil and grease (alternate monitoring parameter)	0.54	0.54

Subpart A

Continuous Sheet Casting Lubricant

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast	
Chromium	0.00073	0.00029
Cyanide	0.00039	0.00016
Zinc	0.0020	0.00082
TTO	0.0014	
Oil and grease (alternate monitoring parameter)	0.020	0.020

Subpart A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg pounds per million off-pounds) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	
Oil and grease (alternate monitoring parameter)	20.37	20.37

Subpart A

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	
Oil and grease (alternate monitoring parameter)	1.79	1.79

Subpart A

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	
Oil and grease (alternate monitoring parameter)	13.91	13.91

Subpart A

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.15
Zinc	1.97	0.81
TTO	1.34	
Oil and grease (alternate monitoring parameter)	19.33	19.33

§ 467.17 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology [Reserved].

Subpart B—Rolling With Emulsions Subcategory

§ 467.20 Applicability; description of the rolling with emulsions subcategory.

This subpart applies to dischargers of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core and the ancillary operations of the rolling with emulsions subcategory.

§ 467.21 Specialized definitions.

For the purpose of this subpart:

(a) The "core" of the rolling with emulsions subcategory shall include rolling using emulsions, roll grinding, stationary casting, homogenizing, artificial aging, annealing, and sawing.

(b) The term "ancillary operation" shall mean any operation not previously included in the core, performed on-site, following or preceding the rolling operation. The ancillary operations shall include direct chill casting, solution heat treatment, cleaning or etching, and degassing.

§ 467.22 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 125.30–125.32, 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

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with emulsions	
Chromium	0.057	0.024
Cyanide	0.038	0.016
Zinc	0.19	0.079
Aluminum	0.84	0.408
Oil and grease	2.60	1.56
Suspended solids	5.33	2.53
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
Aluminum	8.55	4.18
Oil and grease	26.58	15.95
Suspended solids	54.49	25.92
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.20
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.15	0.562
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	43.69
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	103.24	49.93
Oil and grease	318.00	190.80
Suspended solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

§ 467.23 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 125.30–125.32, 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. The discharge of process wastewater pollutants from the core shall not exceed the values set forth below:

Subpart B

Core

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with emulsions	
Chromium	0.057	0.024
Cyanide	0.038	0.016
Zinc	0.19	0.079
Aluminum	0.84	0.41

Subpart B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
Aluminum	8.55	4.18

Subpart B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million pounds) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
Aluminum	13.10	6.40

Subpart B

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.109
Aluminum	1.15	0.573

Subpart B

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
Aluminum	8.95	4.37

Subpart B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
Aluminum	12.43	6.07

§ 467.24 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of process wastewater pollutants from the core shall not exceed the values set forth below:

Subpart B

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with emulsions	
Chromium	0.048	0.020
Cyanide	0.026	0.010
Zinc	0.133	0.055
Aluminum	0.80	0.35
Oil and grease	1.30	1.30
Suspended solids	1.95	1.56
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast by semicontinuous methods	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
Aluminum	8.12	3.60
Oil and grease	13.29	13.29
Suspended solids	19.94	15.95
ph	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per billion off-pounds) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.77
Oil and grease	13.91	13.91
Suspended solids	20.87	16.70
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

§ 467.25 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. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the following values:

Subpart B

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with emulsions	
Chromium	0.057	0.024
Cyanide	0.038	0.016
Zinc	0.190	0.079
TTO	0.090	
Oil and grease (alternate monitoring parameter)	2.60	1.56

Subpart B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast by semi-continuous methods	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
TTO	0.92	
Oil and grease (alternate monitoring parameter)	26.58	15.95

Subpart B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.56	0.25
Zinc	2.98	1.24
TTO	1.41	
Oil and grease (alternate monitoring parameter)	40.74	24.44

Subpart B

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
TTO	0.124	
Oil and grease (alternate monitoring parameter)	3.58	2.15

Subpart B

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
TTO	0.96	
Oil and grease (alternate monitoring parameter)	27.82	16.69

Subpart B

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.83	1.18
TTO	1.34	
Oil and grease (alternate monitoring parameter)	38.66	23.20

§ 467.26 Pretreatment standards for new sources.

Except as provided in § 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. The mass of process wastewater pollutants from the core and ancillary operations introduced into a POTW shall not exceed the values set forth below:

Subpart B

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum rolled with emulsions	
Chromium	0.048	0.020
Cyanide	0.026	0.011
Zinc	0.133	0.055
TTO	0.090	
Oil and grease (alternate monitoring parameter)	1.30	1.30

Subpart B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast by semicontinuous methods	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
TTO	0.92	
Oil and grease (alternate monitoring parameter)	13.29	13.29

Subpart B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	
Oil and grease (alternate monitoring parameter)	20.37	20.37

Subpart B

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	
Oil and grease (alternate monitoring parameter)	1.79	1.79

Subpart B

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	
Oil and grease (alternate monitoring parameter)	13.91	13.91

Subpart B

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
TTO	1.34	
Oil and grease (alternate monitoring parameter)	19.33	19.33

§ 467.27 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart C—Extrusion Subcategory

§ 467.30 Applicability; description of the extrusion subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core and the ancillary operations of the extrusion subcategory.

§ 467.31 Specialized definitions.

For the purpose of this subpart:

(a) The "core" of the extrusion subcategory shall include extrusion die cleaning, dummy block cooling, stationary casting, artificial aging, annealing, degreasing, and sawing.

(b) The term "extrusion die cleaning" shall mean the process by which the steel dies used in extrusion of aluminum are cleaned. The term includes a dip into a concentrated caustic bath to dissolve the aluminum followed by a water rinse. It also includes the use of a wet scrubber with the die cleaning operation.

(c) The term "ancillary operation" shall mean any operation not previously included in the core, performed on-site, following or preceding the extrusion operation. The ancillary operations shall include direct chill casting, press or solution heat treatment, cleaning or etching, degassing, and extrusion press hydraulic fluid leakage.

§ 467.32 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 125.30–125.32, 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 C

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum extruded	
Chromium	0.16	0.066
Cyanide	0.11	0.044
Zinc	0.53	0.22
Aluminum	2.34	1.16
Oil and grease	7.28	4.37
Suspended solids	14.92	7.10
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart C

Extrusion Press Leakage

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum extruded	
Chromium	0.65	0.27
Cyanide	0.43	0.18
Zinc	2.18	0.90
Aluminum	9.51	4.64
Oil and grease	29.56	17.74
Suspended solids	60.60	28.82
pH	(1)	(1)

[1] With the range of 7.0 to 10.0 at all times.

Subpart C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cast	
Chromium	0.59	0.27
Cyanide	0.39	0.18
Zinc	1.94	0.90
Aluminum	8.55	4.64
Oil and grease	26.58	17.74
Suspended solids	60.60	28.82
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.20
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.20
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart C

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.109
Aluminum	1.15	0.562
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart C

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	43.69
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	103.24	49.93
Oil and grease	318.00	190.80
Suspended solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Supart C

Degassing Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum degassed	
Chromium	1.15	0.47
Cyanide	0.76	0.32
Zinc	3.81	1.59
Aluminum	16.78	8.20
Oil and grease	52.18	31.31
Suspended solids	106.97	50.88
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

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

(a) Except as provided in 40 CFR §§ 125.30–125.32, 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:

(b) There shall be no discharge of wastewater pollutants from the degassing operation.

(c) The discharge of wastewater pollutants from the core and ancillary operation except those in (b) of this section, shall not exceed the values set forth below:

Subpart C

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum extruded	
Chromium	0.15	0.061
Cyanide	0.098	0.041
Zinc	0.49	0.21
Aluminum	2.18	1.08

Subpart C

Extrusion Press Leakage

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum extruded	
Chromium	0.65	0.27
Cyanide	0.43	0.18
Zinc	2.16	0.90
Aluminum	9.51	4.73

Subpart C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
Aluminum	8.55	4.18

Subpart C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
Aluminum	13.10	6.40

Subpart C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
Aluminum	13.10	6.40

Subpart C

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.15	0.56

Subpart C

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
Aluminum	8.95	4.37

Subpart C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
Aluminum	12.43	6.07

§ 467.34 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards.

(a) There shall be no discharge of wastewater pollutants from the degassing operation.

(b) The discharge of wastewater pollutants from the core shall not exceed the values set forth below:

Subpart C

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.13	0.057
Cyanide	0.068	0.027
Zinc	0.35	0.14
Aluminum	2.07	0.92
Oil and grease	3.39	3.39
Suspended solids	5.08	4.07
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

Subpart C

Extrusion Press Leakage

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.11	0.045
Cyanide	0.060	0.024
Zinc	0.31	0.126
Aluminum	1.82	0.81
Oil and grease	2.98	2.98
Suspended solids	4.47	3.58
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

Subpart C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cast by semicontinuous methods	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
Aluminum	8.12	3.60
Oil and grease	13.29	13.29
Suspended solids	19.94	15.95
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

Subpart C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

Subpart C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

Subpart C

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

Subpart C

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.77
Oil and grease	13.91	13.91
Suspended solids	20.87	16.70
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

Subpart C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times.

§ 467.35 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. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the following values:

Subpart C

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of extruded	
Chromium	0.15	0.061
Cyanide	0.098	0.041
Zinc	0.49	0.21
TTO	0.23	
Oil and grease (alternate monitoring parameter)	6.78	4.07

Subpart C

Extrusion Press Leakage

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of extruded	
Chromium	0.65	0.27
Cyanide	0.43	0.18
Zinc	2.16	0.90
TTO	1.02	
Oil and grease (alternate monitoring parameter)	29.56	17.74

Subpart C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
TTO	0.92	
Oil and grease (alternate monitoring parameter)	26.58	15.95

Subpart C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
TTO	1.41	
Oil and grease (alternate monitoring parameter)	40.74	24.45

Subpart C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
TTO	1.41	
Oil and grease (alternate monitoring parameter)	40.74	24.45

Subpart C

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.109
Aluminum	1.15	0.59
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart C

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
TTO	0.96	
Oil and grease (alternate monitoring parameter)	27.82	16.69

Subpart C

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
TTO	1.34	
Oil and grease (alternate monitoring parameter)	38.66	23.20

§ 467.36 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. The mass of wastewater pollutants in the aluminum forming process wastewater shall not exceed the values set forth below:

Subpart C

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of extruded	
Chromium	0.13	0.05
Cyanide	0.07	0.03
Zinc	0.35	0.14
TTO	0.23	
Oil and Grease (alternate monitoring parameter)	3.40	3.40

Subpart C

Extrusion Press Leakage

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of hard alloy aluminum extruded	
Chromium	0.11	0.05
Cyanide	0.06	0.03
Zinc	0.31	0.13
TTO	0.21	
Oil and Grease (alternate monitoring parameter)	2.98	2.98

Subpart C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
TTO	0.92	
Oil and Grease (alternate monitoring parameter)	13.29	13.29

Subpart C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	
Oil and Grease (alternate monitoring parameter)	20.37	20.37

Subpart C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million-off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	
Oil and Grease (alternate monitoring parameter)	20.37	20.37

Subpart C

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million-off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.038	0.015
Zinc	0.183	0.075
TTO	0.124	
Oil and Grease (alternate monitoring parameter)	1.79	1.79

Subpart C

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million-off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	
Oil and Grease (alternate monitoring parameter)	139.10	139.10

Subpart C

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million-off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
TTO	1.34	
Oil and Grease (alternate monitoring parameter)	19.33	19.33

§ 467.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart D—Forging Subcategory

§ 467.40 Applicability; description of the forging subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core of the forging subcategory and the ancillary operations.

§ 467.41 Specialized definitions

For the purpose of this subpart:

(a) The "core" of the forging subcategory shall include forging, artificial aging, annealing, degreasing, and sawing.

(b) The term "ancillary operation" shall mean any operation not previously included in the core, performed on-site, following or preceding the forging operation. The ancillary operations shall include forging air pollution scrubbers, solution heat treatment, and cleaning or etching.

§ 467.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. [Reserved]

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

§ 467.44 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of wastewater pollutants from the core shall not exceed the values set forth below:

Subpart D

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
Aluminum	0.305	0.135
Oil and Grease	0.50	0.50
Suspended Solids	0.75	0.60
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart D

Forging Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.035	0.014
Cyanide	0.019	0.008
Zinc	0.096	0.40
Aluminum	0.576	0.256
Oil and Grease	0.943	0.95
Suspended Solids	1.42	1.13
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart D

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.163
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and Grease	20.37	20.37

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Suspended Solids	30.56	24.45
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart D

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	0.772	0.376
Oil and Grease	1.79	1.79
Suspended Solids		
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart D

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.00	2.92
Oil and grease	13.91	13.91
Suspended solids	20.87	16.69
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart D

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.155
Zinc	1.97	0.812
Aluminum	8.33	4.06
Oil and grease	19.33	19.33
Suspended solids	[1] 29.00	[1] 23.20
pH		

[1] Within the range of 7.0 to 10 at all times.

§ 467.45 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduced pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

Subpart D

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.022	0.009
Cyanide	0.015	0.006
Zinc	0.073	0.031
TTO	0.035	
Oil and grease (alternate monitoring parameter)	1.00	0.60

Subpart D

Forging Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.042	0.017
Cyanide	0.028	0.011
Zinc	0.14	0.058
TTO	0.065	
Oil and grease (alternate monitoring parameter)	1.89	1.13

Subpart D

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.896	0.37
Cyanide	0.591	0.25
Zinc	2.98	1.24
TTO	1.41	
Oil and grease (alternate monitoring parameter)	40.74	24.45

Subpart D

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.11
TTO	1.23	
Oil and grease (alternate monitoring parameter)	3.58	2.15

Subpart D

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.40	0.17
Zinc	2.03	0.85
TTO	0.96	
Oil and grease (alternate monitoring parameter)	27.82	16.70

Subpart D

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.35
Cyanide	0.561	0.23
Zinc	2.82	1.18
TTO	1.34	
Oil and grease (alternate monitoring parameter)	38.66	23.20

§ 467.46 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. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

Subpart D

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
TTO	0.035	
Oil and grease (alternate monitoring parameter)	0.50	0.50

Subpart D

Forging Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.035	0.014
Cyanide	0.019	0.008
Zinc	0.096	0.040
TTO	0.065	
Oil and grease (alternate monitoring parameter)	0.95	0.95

Subpart D

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.18
Zinc	2.08	0.86
TTO	1.41	0.86
Oil and grease (alternate monitoring parameter)	20.37	20.37

Subpart D

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	
Oil and grease (alternate monitoring parameter)	1.79	1.79

Subpart D

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	
Oil and grease (alternate monitoring parameter)	13.91	13.91

Subpart D

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.812
TTO	1.34	
Oil and grease (alternate monitoring parameter)	19.33	19.33

§ 467.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart E—Drawing With Neat Oils Subcategory

§ 467.50 Applicability; description of the drawing with neat oils subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core of the drawing with neat oils subcategory and the ancillary operations.

§ 467.51 Specialized definitions

For the purpose of this subpart:

(a) The "core" of the drawing with neat oils subcategory shall include drawing using neat oils, stationary casting, artificial aging, annealing, degreasing, sawing, and swaging.

(b) The term "ancillary operation" shall mean any operation not previously included in the core, performed on-site, following or preceding the drawing operation. The ancillary operation shall include continuous rod casting, solution heat treatment, and cleaning or etching.

§ 467.52 Effluent limitations representing the degree of effluent reduction attainable by the application of 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 technology currently available:

Subpart E

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/ per million off-lbs) of aluminum drawn with neat oils	
Chromium	0.022	0.0090
Cyanide	0.015	0.0050
Zinc	0.073	0.031
Aluminum	0.32	0.160
Oil and grease	0.97	0.598
Suspended solids	2.04	0.971
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lbs/million off-lbs) of aluminum rod-cast	
Chromium	0.86	0.35
Cyanide	0.57	0.24
Zinc	2.87	1.20
Aluminum	12.63	6.28
Oil and grease	39.28	23.57
Suspended solids	80.52	38.30
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.684	0.28
Cyanide	0.451	0.187
Zinc	2.271	0.949
Aluminum	10.00	4.978
Oil and Grease	31.10	18.66
Suspended Solids	63.76	30.322
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.20
Oil and Grease	154.10	92.46
Suspended Solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.11
Aluminum	1.150	0.57
Oil and Grease	3.58	2.15
Suspended Solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	44.52
Oil and Grease	278.24	166.95
Suspended Solids	570.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	50.88
Oil and Grease	318.00	198.80
Suspended Solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

§ 467.53 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 125.30–125.32, 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. The discharge of wastewater pollutants from the core and ancillary operations shall not exceed the values set forth below:

Subpart E

Core

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum drawn with neat oils	
Chromium	0.022	0.009
Cyanide	0.015	0.006
Zinc	0.073	0.031
Aluminum	0.321	0.16

Subpart E

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs of aluminum rod cast	
Chromium	0.00086	0.0004
Cyanide	0.0006	0.0002
Zinc	0.0029	0.0012
Aluminum	0.0127	0.0063

Subpart E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs of aluminum rod cast	
Chromium	0.086	0.035
Cyanide	0.056	0.023
Zinc	0.283	0.118
Aluminum	1.247	0.621

Subpart E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs pounds of aluminum quenched	
Chromium	0.896	0.367
Cyanide	0.591	0.245
Zinc	2.974	1.243
Aluminum	13.10	6.519

Subpart E

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs pounds of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.151	0.563

Subpart E

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.031	0.849
Aluminum	8.944	4.451

Subpart E

Cleaning or Etching Scrubber liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.179

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
Aluminum	12.43	6.19

§ 467.54 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of wastewater pollutants from the core and ancillary operations shall not exceed the values set forth below:

Subpart E

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs of aluminum drawn with neat oils	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
Aluminum	0.304	0.135
Oil and Grease	0.498	0.498
Suspended Solids	0.747	0.598
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0008	0.0003
Cyanide	0.0004	0.0002
Zinc	0.0002	0.0008
Aluminum	0.012	0.006
Oil and Grease	0.02	0.02
Suspended Solids	0.03	0.03
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.072	0.029
Cyanide	0.039	0.016
Zinc	0.198	0.082
Aluminum	1.185	0.526
Oil and Grease	1.939	1.939
Suspended Solids	2.909	2.327
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.754	0.306
Cyanide	0.408	0.163
Zinc	2.08	0.856
Aluminum	12.45	5.52
Oil and Grease	20.37	20.37
Suspended Solids	30.56	24.45
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and Grease	1.79	1.79
Suspended Solids	2.69	2.15
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.515	0.209
Cyanide	0.278	0.111
Zinc	1.42	0.584
Aluminum	8.50	3.77
Oil and Grease	13.91	13.91
Suspended Solids	20.67	16.70
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart E

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum monthl averag
	Mg/off-kg (lb/million off- of aluminum cleaned etched	
Chromium	0.715	0.
Cyanide	0.387	0.
Zinc	1.97	0.
Aluminum	11.81	5.
Oil and Grease	19.33	19.
Suspended Solids	29.00	23.
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

§ 467.55 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 followin pretreatment standards for existing sources. The mass of wastewater pollutants in aluminum forming proces wastewater introduced into a POTW shall not exceed the values set forth below:

Subpart E

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximun month averag
	Mg/off-kg (lb/million off of aluminum drawn neat oils	
Chromium	0.022	0
Cyanide	0.015	0
Zinc	0.073	0
TTO	0.035	
Oil and Grease (alternate monitoring parameter)	1.00	0

Subpart E

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximur month avera
	Mg/off-kg (lb/million off of aluminum rod cas	
Chromium	0.0009	0.
Cyanide	0.0006	0.
Zinc	0.0029	0.
TTO	0.0014	
Oil and Grease (alternate monitoring parameter)	0.040	0.

Subpart E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.853	0.035
Cyanide	0.562	0.023
Zinc	0.283	0.118
TTO	0.133	
Oil and Grease (alternate monitoring parameter)	3.878	2.327

Subpart E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.896	0.367
Cyanide	0.591	0.245
Zinc	2.98	1.24
TTO	1.41	
Oil and Grease (alternate monitoring parameter)	40.74	24.45

Subpart E

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.033
Cyanide	0.052	0.022
Zinc	0.262	0.109
TTO	0.13	
Oil and Grease (alternate monitoring parameter)	3.58	2.15

Subpart E

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.17
Zinc	2.03	0.85
TTO	0.96	
Oil and Grease (alternate monitoring parameter)	27.82	16.70

Subpart E

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.18
TTO	1.33	
Oil and Grease (alternate monitoring parameter)	38.66	23.20

§ 467.56 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.

The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

Subpart E

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/per million off-lbs) of aluminum drawn with neat oils	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
TTO	0.035	
Oil and Grease (alternate monitoring parameter)	0.50	0.50

Subpart E

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0007	0.0003
Cyanide	0.0004	0.0002
Zinc	0.0020	0.0008
TTO	0.0014	
Oil and Grease (alternate monitoring parameter)	0.020	0.020

Subpart E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.039	0.016
Cyanide	0.021	0.0084
Zinc	0.106	0.044
TTO	0.072	
Oil and Grease (alternate monitoring parameter)	1.04	1.04

Subpart E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.306
Cyanide	0.41	0.163
Zinc	2.08	0.856
TTO	1.41	
Oil and Grease (alternate monitoring parameter)	20.37	20.37

Subpart E

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	
Oil and grease (alternate monitoring parameter)	1.79	1.79

Subpart E

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	
Oil and grease (alternate monitoring parameter)	13.91	13.91

Subpart E

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.812
TTO	1.34	
Oil and grease (alternate monitoring parameter)	19.33	19.33

§ 467.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart F—Drawing With Emulsions or Soaps Subcategory

§ 467.60 Applicability; description of the drawing with emulsions or soaps subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introduction of pollutants into publicly owned treatment works from the core and the ancillary operations of the drawing with emulsions or soaps subcategory.

§ 467.61 Specialized definitions.

For the purpose of this subpart:

(a) The "core" of the drawing with emulsions or soaps subcategory shall include drawing using emulsions or soaps, stationary casting, artificial aging, annealing, degreasing, sawing, and swaging.

(b) The term "ancillary operation" shall mean any operation not previously included in the core, performed on-site, following or preceding the drawing operation. The ancillary operations shall include continuous rod casting, solution heat treatment and cleaning or etching.

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

Except as provided in 40 CFR 125.30–125.32, 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

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.205	0.084
Cyanide	0.135	0.056
Zinc	0.680	0.285
Aluminum	3.00	1.47
Oil and grease	9.33	5.60
Suspended solids	19.12	9.10
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart F

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.0009	0.0004
Cyanide	0.0006	0.0002
Zinc	0.0029	0.001
Aluminum	0.013	0.006
Oil and grease	0.040	0.024
Suspended solids	0.081	0.038
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.684	0.28
Cyanide	0.450	0.187
Zinc	2.27	0.949
Aluminum	10.00	4.976
Oil and grease	31.10	18.66
Suspended solids	63.76	30.323
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.54	24.19
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart F

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.15	0.573
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart F

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	44.519
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

Subpart F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	50.88
Oil and grease	318.00	190.80
Suspended solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

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

Except as provided in 40 CFR 125.30–125.32, 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. The discharge of wastewater pollutants from the core shall not exceed the volumes set forth below:

Subpart F

Core

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.205	0.084
Cyanide	0.135	0.056
Zinc	0.681	0.285
Aluminum	3.00	1.49

Subpart F

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0009	0.0004
Cyanide	0.0006	0.0003
Zinc	0.0029	0.0012
Aluminum	0.013	0.0063

Subpart F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.085	0.035
Cyanide	0.056	0.023
Zinc	0.283	0.118
Aluminum	1.25	0.62

Subpart F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.896	0.37
Cyanide	0.591	0.25
Zinc	2.98	1.24
Aluminum	13.10	6.52

Subpart F

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.11
Aluminum	1.15	0.57

Subpart F

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.03	0.849
Aluminum	8.95	4.45

Subpart F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.18
Aluminum	12.43	6.19

§ 467.64 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of wastewater pollutants from the core shall not exceed the values set forth below:

Subpart F

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.173	0.070
Cyanide	0.093	0.038
Zinc	0.476	0.196
Aluminum	2.85	1.26
Oil and grease	4.67	4.67
Suspended solids	7.00	5.60
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart F

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0008	0.0003
Cyanide	0.0004	0.0002
Zinc	0.0020	0.0008
Aluminum	0.012	0.0051
Oil and grease	0.020	0.020
Suspended solids	0.030	0.024
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.072	0.029
Cyanide	0.039	0.016
Zinc	0.198	0.081
Aluminum	1.184	0.526
Oil and grease	1.940	1.940
Suspended solids	2.91	2.33
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-pounds) of aluminum quenched	
Chromium	0.760	0.31
Cyanide	0.405	0.16
Zinc	2.08	0.86
Aluminum	12.450	5.52
Oil and grease	20.37	20.37
Suspended solids	20.56	24.45
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart F

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.49
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart F

Cleaning or Etching Rinse

Pollutant or pollutant property	USPS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.515	0.21
Cyanide	0.278	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.77
Oil and grease	13.911	13.91
Suspended solids	20.87	16.70
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

Subpart F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mMg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Cnromium	0.72	0.290
Cyanide	0.387	0.155
Zinc	1.97	0.812
Aluminum	1.18	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

§ 467.65 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. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

Subpart F

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.205	0.84
Cyanide	0.135	0.056
Zinc	0.681	0.285
TTO	0.32	
Oil and grease (alternate monitoring parameter)	9.33	5.60

Subpart F

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0009	0.0004
Cyanide	0.0006	0.0003
Zinc	0.0029	0.0012
TTO	0.0014	
Oil and grease (alternate monitoring parameter)	0.040	0.024

Subpart F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.085	0.035
Cyanide	0.056	0.023
Zinc	0.283	0.118
TTO	0.134	
Oil and Grease (alternate monitoring parameter	3.88	2.33

Subpart F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.896	0.367
Cyanide	0.591	0.245
Zinc	2.98	1.24
TTO	1.41	
Oil and grease (alternate monitoring parameter)	40.74	24.44

Subpart F

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.11
TTO	0.124	
Oil and grease (alternate monitoring parameter)	3.58	2.15

Subpart F

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	Mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.03	0.849
TTO	0.96	
Oil and grease (alternate monitoring parameter)	27.82	16.69

Subpart F

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (pounds per million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.18
TTO	1.33	
Oil and grease (alternate monitoring parameter)	38.66	23.20

§ 467.66 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. The mass of wastewater pollutants in aluminum forming process wastewaters introduced into a POTW shall not exceed the values set forth below:

Subpart F

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.173	0.070
Cyanide	0.094	0.038
Zinc	0.48	0.196
TTO	0.32	
Oil and Grease (alternate monitoring parameter)	4.67	4.67

Subpart F

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0008	0.0003
Cyanide	0.0004	0.0002
Zinc	0.0020	0.0008
TTO	0.0014	
Oil and Grease (alternate monitoring parameter)	0.020	0.020

Subpart F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.039	0.016
Cyanide	0.021	0.0084
Zinc	0.106	0.044
TTO	0.072	
Oil and Grease (alternate monitoring parameter)	1.04	1.04

Subpart F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	Mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.306
Cyanide	0.41	0.163
Zinc	2.08	0.856
TTO	1.41	
Oil and Grease (alternate monitoring parameter)	20.37	20.37

Subpart F

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum monthly average
	Mg/off-kg (lb/million off-l of aluminum cleaned etched	
Chromium	0.067	0.0
Cyanide	0.036	0.0
Zinc	0.183	0.0
TTO	0.124	
Oil and Grease (alternate monitoring parameter)	1.79	1.7

Subpart F

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximu for monti averag
	Mg/off-kg (lb/million lbs) of alumin cleaned or etched	
Chromium	0.52	0
Cyanide	0.28	0
Zinc	1.42	0
TTO	0.96	
Oil and Grease (alternate monitoring parameter)	13.91	13

Subpart F

Cleaning or Etching Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum monthl averag
	Mg/off-kg (lb/million off- of aluminum cleaned etched	
Chromium	0.715	0.
Cyanide	0.387	0.
Zinc	1.97	0.
TTO	1.34	
Oil and Grease (alternate monitoring parameter)	19.33	19.

§ 467.67 Effluent limitations representin the degree of effluent reduction attainabl by the application of the best convention pollutant control technology. [Reserved]

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