ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 465

[WH-FRL 1671-6]

Coil Coating Point Source Category; Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed regulation.

SUMMARY: EPA proposes regulations to limit effluent discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from facilities engaged in coil coating. The purpose of this proposal is to provide effluent limitations guidelines for "best practicable technology," "best available technology," and "best conventional technology," and to establish new source performance standards and pretreatment standards under the Clean Water Act. After considering comments received in response to this proposal, EPA will promulgate a final rule.

DATES: Comments on this proposal must be submitted on or before March 13, 1981.

ADDRESS: Send comments to: Mr. Ernst P. Hall, Effluent Guidelines Division (WH-552), Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460, Attention: EGD Docket Clerk, Proposed Coil Coating Rules (WH-552). The supporting information and all comments on this proposal will be available for inspection and copying at the EPA Public Information Reference Unit, Room 2404 (EPA Library Rear) PM-213. The EPA information regulation (40 CFR Part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Technical information and copies of technical documents may be obtained from Mr. Ernst P. Hall, at the address listed above, or call (202) 426-2726. The economic analysis may be obtained from Ms. Renee Rico, Economic Analysis Staff (WH-586), Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460, or call (202) 755-2484.

SUPPLEMENTARY INFORMATION:

Overview

The Supplementary Information section of this preamble describes the legal authority and background, the technical and economic bases, and other aspects of the proposed regulations. That section also summarizes comments on a draft technical document circulated on September 20, 1979, and solicits comments on specific areas of interest. The abbreviations, acronyms, and other terms used in the Supplementary Information section are defined in Appendix A to this notice.

This proposed regulation is supported by three major documents available from EPA. Analytical methods are discussed in *Sampling and Analysis Procedures for Screening of Industrial Effluents for Priority Pollutants.* EPA's technical conclusions are detailed in the *Development Document for Proposed Effluent Limitations Guidelines, New Source Performance Standards and Pretreatment Standards for the Coil Coating Point Source Category.* The Agency's economic analysis is found in *Economic Analysis of Proposed Effluent Standards and Limitations for the Coil Coating Industry.*

Organization of This Notice

I. Legal Authority

The regulations described in this notice are proposed under 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 USC 1251 *et seq.*, as amended by the Clean Water Act of 1977, P.L. 95-217) (the "Act"). These regulations are also proposed in response to the Settlement Agreement in *Natural Resources Defense Council, Inc.*, v. *Train*, 8 ERC 2120 (D.D.C. 1976), modified March 9, 1979, 12 ERC 1833.

II. Background

A. The Clean Water Act

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

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

The EPA was unable to promulgate many of these regulations by the dates contained in the Act. In 1976, EPA was sued by several environmental groups, and in settlement of this lawsuit EPA and the plaintiffs executed a "Settlement Agreement" which was approved by the Court. This Agreement required EPA to develop a program and adhere to a schedule for promulgating for 21 major industries BAT effluent limitations guidelines, pretreatment standards, and new source performance standards for 65 "priority" pollutants and classes of pollutants. See *Natural Resources Defense Council, Inc.* v. *Train*, 8 ERC 2120 (D.D.C. 1976), modified March 9, 1979.

On December 27, 1977, the President signed into law the Clean Water Act of 1977. Although this law makes several important changes in the Federal water pollution control program, its most significant feature is its incorporation into the Act of several of the basic elements of the Settlement Agreement program for toxic pollution control. Sections 301(b)(2)(A) and 301(b)(2)(C) of the Act now require the achievement by July 1, 1984 of effluent limitations requiring application of BAT for "toxic" pollutants, including the 65 "priority" pollutants and classes of pollutants which Congress declared "toxic" under Section 307(a) of the Act. Likewise, EPA's programs for new source performance standards and pretreatment standards are now aimed principally at toxic pollutant controls. Moreover, to strengthen the toxics 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.

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

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

B. Prior EPA Regulations

EPA has not previously promulgated regulations for the coil coating point source category.

C. Overview of the Industry

The coil coating industry is not specifically included within any of the U.S. Department of Commerce Census Standard Industrial Classifications; however, it could possibly be considered as part of SIC 3479.

"Coil coating" is a term generally used to describe the combination of processing steps involved in converting a coil—a long thin strip of metal rolled into a coil—into a coil of painted metal ready for further industrial use. Three basis materials are commonly used for coil coating: steel, galvanized (steel), and aluminum. Additionally, there is some minor coating of other material such as brass, galvalum and coated steels. There are three major groups or standard process steps used in manufacturing coated coils: (1) cleaning to remove soil, oil, corrosion, and similar dirt; (2) chemical conversion coating in which a coating of chromate, phosphate or complex oxide materials is chemically formed in the surface of the metal; and (3) the application and drying of one or more coats of organic polymeric material such as paint.

Water is used throughout the coil coating processes. The cleaning processes for removing oil and dirt usually employ water-based alkaline cleaners, and acid pickling solutions are sometimes used to remove oxides and corrosion. Water is used to rinse the strip after it has been cleaned. Most of the chemical conversion coating processes are water based and water is used to rinse excess and spent solutions from the strip. After painting, the strip is baked in an oven to dry the paint and then chilled with water to prevent burning or charring of the organic coating. The characteristics of the wasterwater generated by coil coating may vary depending on the basis material and the process options selected for cleaning and chemical conversion coating.

The most important resulting pollutants or pollutant parameters are: (1) toxic pollutants—chromium, zinc, nickel, lead, copper, cyanide; (2) conventional pollutants—suspended solids, pH, and oil and grease, and (3) unconventional pollutants—iron, aluminum, phosphorous, and fluoride. Toxic organic pollutants were not found in large quantities. Because of the amount of toxic metals present, the sludges generated during wastewater treatment generally contain substantial amounts of toxic metals.

EPA estimates that there are more than 75 coil coating plants in the United States, operating over 125 coil coating lines. Sixty-five percent of the coil coating lines are located in six states: Alabama, California, Illinois, Michigan, Ohio, and Pennsylvania. The remaining plants are distributed geographically throughout the United States. Coil coating as a process originated in the mid-1930's and has shown substantial and rapid progress since that time. Because it is an efficient and low cost way of applying a high quality coating to sheet metal, its use is continuing to increase, and there appears to be a high probability of new and enlarged plants in both the merchant and captive segments of the industry.

III. Scope of This Rulemaking and Summary of Methodology

This proposed regulation is a part of a new chapter in water pollution control requirements. For most industries the 1973–1976 round of rulemaking emphasized the achievement of best practicable technology (BPT) by July 1, 1977. In general, that technology level represented the average of the best existing performances of well known technologies for control of familiar (i.e., "classical") pollutants.

In this round of rulemaking EPA's emphasis is directed toward insuring the achievement by July 1, 1984, of the best available technology economically achievable (BAT) which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants. In general, this technology level represents the very very best economically achievable performance in any industrial category or subcategory. Moreover, as a result of the Clean Water Act of 1977, the emphasis of EPA's program has shifted from "classical" pollutants to the control of a lengthy list of toxic substances.

In its 1977 legislation, Congress recognized that it was dealing with areas of scientific uncertainly when it declared the 65 "priority" pollutants and classes of pollutants "toxic" under Section 307(a) of the Act. The "priority" pollutants have been relatively unknown outside of the scientific community, and those engaged in wastewater sampling and control have had little experience dealing with these pollutants. Additionally, these pollutants ofter appear (and have toxic effects) at concentrations which severely tax current analytical techniques. Even though Congress was aware of the state-of-the-art difficulties and expense of "toxics" control and detection, it directed EPA to act quickly and decisively to detect, measure and regulate these substances.

In developing this regulation, EPA studied the coil coating category to determine whether differences in raw materials, final products, manufacturing processes, equipment, age and size of plants, water use, wastewater constituents, or other factors required the development of separate effluent limitations and standards for different segments (or subcategories) of the industry. This study included the identification of raw waste and treated effluent characteristics, including the sources and volume of water used, the processes employed, and the sources of pollutants and wastewaters. Such analysis enabled EPA to determine the presence and concentration of priority pollutants in wastewater discharges.

EPA also identified both actual and potential control and treatment technologies (including both in-plant and end-of-process technologies). The Agency analyzed both historical and newly generated data on the performance of these technologies, including the performance, operational limitations, and reliability. In addition, EPA considered the non-water quality environmental impacts of these technologies on air quality, solid waste generation, water scarcity, and energy requirements.

The Agency then estimated the costs of each control and treatment technology using a computer program developed using standard engineering cost analysis. EPA derived unit process costs for each of 58 plants using data and characteristics (production and flow) applied to each treatment process (i.e., hexavalent chromium reduction, metals precipitation, sedimentation, multi-media filtration, etc.). These unit process costs were added to yield total cost at each treatment level. After confirming the reasonableness of this methodology by comparing EPA cost estimates to treatment system costs supplied by the industry, the Agency evaluated the economic impacts of these costs.

On the basis of these factors, EPA identified various control and treatment technologies as BPT, BAT, BCT, NSPS, PSES and PSNS. The proposed regulation, however, does not require the installation of any particular technology. Rather, it requires achievement of effluent limiatations equivalent to those achieved by the proper operation of these or equivalent technologies.

Except for pH requirements, the effluent limitations for BPT, BAT, BCT and NSPS are expressed as mass limitations—a mass of pollutant per unit of production (mg/m^2). They were calculated by combining three figures: (1) treated effluent concentrations determined from analysis of control technology performance data; (2) wastewater flow for each subcategory; and (3) any relevant process or treatment variability factor (e.g., mean vs. maximum day). This basic calculation was performed for each regulated pollutant or pollutant parameter and for each subcategory of the industry.

Pretreatment standards—PSES and PSNS—are also expressed as mass limitations rather than concentration limits to assure achieving the benefits of quantification of pollutant reduction.

IV. Data Gathering Efforts

The data gathering program is described in brief summary in Section III and in substantial detail in Section V of the Development Document. At the start of the study, the National Coil Coaters Association was contacted and meetings were held with their technical committee and others to review the data collection program and gain from the experience and insight of the industry. A data collection portfolio (dcp) was developed to collect information about the industry and was mailed, under the authority of section 308, to each company known or believed to perform coil coating in the United States. The list of companies was developed from Dunn & Bradstreet listings, from a previous unpublished study done for the Agency, and from discussions with the industry association. Data were received from 73 plants representing about 125 coil coating lines. In addition to previous studies and the data collection effort for this study, supplemental data were obtained from NPDES permit files and engineering studies on treatment technologies used in coil coating and other categories with similar wastewater characteristics. The data gathering effort solicited all known sources of data and all available pertinent data were used in developing these limitations.

V. Sampling and Analytical Program

As Congress recognized in enacting the Clean Water Act of 1977, the state-of-the-art ability to monitor and detect toxic pollutants is limited. Most of the toxic pollutants were relatively unknown until a few years ago, and only on rare occasions had these unusual pollutants been regulated. Nor had industry monitored or developed methods to monitor most of these pollutants. As a result, analytical methods for many of the toxic pollutants under section 304(h) of the Act are not commonly available and the toxic organics can be monitored only using state-of-the-art analytical procedures.

Faced with these problems, EPA developed a sampling and analytical protocol. This protocol is set forth in "Sampling and Analysis Procedures for Screening of Industrial Effluents for Priority Pollutants" revised April, 1977. Methods promulgated under section 304(h) (40 CFR Part 136) were available and were used to analyze most toxic metals, pesticides, cyanides, and phenols. Thus the new and relatively untried chemical analysis methods applied largely to toxic organics. At the outset of the study EPA expected that the pollutants of greatest concern in coil coating would be toxic metals rather than organics. This has been borne out by the findings of the study.

The sampling and analysis program was carried out in two stages. First, screen sampling was performed at one plant in each subcategory, and this sample was analyzed (screened) for the presence and magnitude of each of the 129 specific toxic pollutants plus conventional and selected non-conventional pollutants. Second, additional (or verification) samples at the same and other plants were analyzed to determine more precisely the magnitude, presence and process source of pollutants determined to be present or believed to be present on the basis of screening analysis and engineering evaluations. Three plants were analyzed for screening and a total of 13 plants were sampled and analyzed during verification. Full details of the sampling and analysis program and the water and wastewater data derived from that program are presented in Section V of the Development Document.

Analysis for the toxic pollutants is both expensive and time consuming, costing between $650 and $1,000 per sample for a complete analysis. The cost in dollars and time tended to limit the amount of sampling and chemical analysis performed. Although EPA fully believes that the available data support the limitations proposed, the Agency would, of course, have preferred a larger data base and will continue to seek additional data. EPA will periodically review these limitations as required by the Act and make any revisions supported by new data.

VI. Industry Subcategorization

In developing this regulation, it was necessary to determine whether different effluent limitations and standards were appropriate for different segments (subcategories) of the industry. The major factors considered in identifying subcategories included: waste characteristics, basis material used, 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, non-water quality characteristics, and unique plant characterists. Section IV of the Development Document contains a detailed discussion of the factors considered and the rationale for subcategorization.

EPA has subcategorized the coil coating industry based on the basis material coated. The subategories are defined as coil coating on: (1) steel, (2) galvanized (zinc-coated steel either hot dipped or electrolytically coated), and (3) aluminum (including aluminum coated steel). The galvanized subcategory includes copper, (including copper alloys such as brass) and galvalum, a zinc-aluminum alloy. The steel subcategory includes chromium, nickel and tin-coated steels.

In addition to the direct coil coating subcategories, the Agency is considering including limitations and standards for can making as a separate subcategory of coil coating. The reason for this consideration is the very substantial similarity of processes and wastewater generation between coil coating and the production of large volumes of drawn beverage containers. Comments are requested on this possibility.

VII. Available Wastewater Control and Treatment Technology

A. Status of In-Place Technology

Current wastewater treatment practices in the coil coating category range from no treatment to a high level of physical chemical treatment combined with water conservation practices. Of the 73 plants for which data is available, about 15 percent of the plants employ no treatment, 56 percent employ some from of chemical reduction, 59 percent have sedimentation or clarification devices, 54 percent have alkaline pH adjust systems, and 35 percent have acid pH adjust systems. There is no apparent difference between direct or indirect dischargers in the nature or degree of treatment employed.

B. Control Technologies Considered

The control and treatment technologies available for this category include both in-process and end-of-pipe treatments. In-process treatment includes a variety of water flow reduction steps and major process changes such as: cascade rinsing (to reduce the amount of water used to remove unwanted materials from the product surface); cooling and recycling of quench water; and substitution of non-wastewater generating conversion coating processes (no-rinse conversion coating). End-of-pipe treatment includes: cyanide oxidation or precipitation; hexavalent chromium reduction; chemical precipitation of metals using hydroxides, carbonates, or sulfides; and removal of precipitated metals and other materials using settling, sedimentation, filtration, and combinations of these technologies. Because the amount of priority organic materials in the wastewater is small, no specific organic removal wastewater treatment except oil removal has been considered. Similarly, because of high energy costs and low product recovery values, distillation has not been seriously considered as an end-of-pipe treatment.

The effectiveness of these treatment technologies has been evaluated and established by examining the performance of these technologies on coil coating and other similar wastewaters. The data base for hydroxide precipitation-sedimentation technology is a composite of data drawn from EPA sampling and analysis of copper and aluminum forming, battery manufacturing, porcelain enameling, electroplating, metal finishing and coil coating. These 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. Similarly precipitation-sedimentation and filtration technology performance is based on the performance of full scale commercial systems treating multicategory wastewaters which also are essentially similar to coil coating wastewaters. This is discussed fully in Section VII of the development document.

VIII. Best Practicable Technology (BPT) Effluent Limitations

The factors considered in defining best practicable control technology currently available (BPT) include the total cost of applying technology in relation to the effluent reduction benefits derived, the age of equipment and facilities involved, the process employed, non-water quality environmental impacts (including energy requirements) and other factors the Administrator considers appropriate. In general, the BPT level represents the average of the best existing performances of plants of various ages, sizes, processes or other common characteristics. Where existing performance is uniformly inadequate, BPT may be transferred from a different subcategory or category. Limitations based on transfer technology must be supported by a conclusion that the technology is, indeed, transferable and a reasonable prediction that it will be capable of achieving the prescribed effluent limits. See *Tanners' Council of America* v. *Train* (540 F.2d 1188, 4th Circ. 1976). BPT focuses on end-of-pipe treatment rather than process changes or internal controls, except where such are common industry practice.

The cost-benefit inquiry for BPT is a limited balancing, committed to EPA's discretion, which does not require the Agency to quantify benefits in monetary terms. See, e.g., *American Iron and Steel Institute* v. *EPA*, 526 F.2d 1027 (3rd Cir. 1975). In balancing costs in relation to effluent reduction benefits, EPA considers the volume and nature of existing discharges, the volume and nature of discharges expected after application of BPT, the general environmental effects of the pollutants, and the cost and economic impacts of the required pollution control level. The Act does not require or permit consideration of water quality problems attributable to particular point sources or industries, or water quality improvements in particular water bodies. Therefore, EPA has not considered these factors. See *Weyerhaeuser Company* v. *Costle*, 11 ERC 2149 (D.C. Cir. 1978).

In developing the proposed BPT limitations, the Agency first considered the amount of water used per unit area of material coated by each plant which supplied usable dcp data. This data was used to determine the median water use for each subcategory. Next, the treatment technology which appeared to be appropriate for BPT level treatment and which was practiced in some plants throughout the industry was selected. This treatment consists of: hexavalent chromium reduction; oil skimming; pH adjustment; sedimentation to remove the resultant precipitate and other suspended solids and cyanide destruction where cyanides are used. Sludge from the settling tank is concentrated to facilitate landfill disposal. The effluent which would be expected to result from the application of these technologies was evaluated against the known performance of some of the best plants in the subcategory. From this examination, the Agency found that there is uniformly inadequate performance due to improper operating practices throughout the industry. This finding is detailed in Sections 7 and 9 of the development document.

The BPT technology outlined above applies to all of the coil coating subcategories and the final effluent concentrations resulting from the application of the technology are identical for all three subcategories. However, the mass limitations for each subcateogry vary due to different water uses among the subcategories and the absence of some pollutants in some subcategories. Also, certain treatment technologies and limitations such as cyanide oxidation may not be required in all subcategories since cyanides are used in only one subcategory.

Thirty-two plants would incur additional costs to comply with the BPT limitations. EPA estimates that total capital investment would be $3.5 million and that annual costs would be $1.6 million, including interest and depreciation. EPA expects no plant closures, unemployment, or changes in industry production capacity as a result of this effluent limitation.

IX. Best Available Technology (BAT) Effluent Limitations

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

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

Despite this consideration of costs, the primary determinant of BAT is effluent reduction capability. As a result of the Clean Water Act of 1977, the achievement of BAT has become the principal national means of controlling toxic water pollution. The coil coating process discharges over twenty different toxic pollutants and EPA has selected among three available BAT technology options which will reduce this toxic pollution by a significant amount.

The Agency has considered three major sets of technology options which might be applied at the BAT level. Each of these options would substantially reduce the discharge of toxic pollutants. These options, were set forth in a draft development document and presented to the technically interested public for preliminary comment. They are described in detail in Section X of the Development Document and are outlined below.

Option 1—BAT Option 1 utilizes the same in-process wastewater flow control and all of the end-of-pipe treatment technology required for BPT. In addition, a polishing filter such as a mixed media filter is added to remove additional metals and incidentally remove more suspended solids from the clarifier overflow.

Thirty-two direct dischargers would incur additional costs to comply with this option. EPA estimates that total capital investment would be $6.2 million and that annual costs would be $2.5 million, including interest and depreciation. Nine plants responded that they had both direct and indirect discharged status and are included in the above total investment and annual costs. EPA expects no plant closures, unemployment, or changes in production capacity as a result of this option.

Option 2—BAT Option 2 as originally outlined would combine the end-of-pipe treatment system of BAT Option 1 with in-process control technology to substantially reduce the flow of wastewater and reduce the generation of pollutants. These in-process technology changes would include:

1. recirculation and reuse of quench water;
2. counter-current rinsing to reduce the amount of process wastewater generated by rinsing the coil; and
3. substitution of no rinse conversion coating for the present phosphate or chromate coatings; or
4. the use of cyanide-free treatment chemical systems.

Thirty-two direct dischargers would incur additional costs to comply with this option. EPA estimates that total capital investment (above equipment now in place) would be $5.9 million and that annual costs would be $2.4 million, including interest and depreciation. Nine plants responded that they had both direct and indirect discharge status and are included in the above total investment and annual costs. EPA expects no plant closures, unemployment, or changes in industry production capacity as a result of this option.

The capital costs of BAT Option 2 are less than BAT Option 1. This is caused by the savings in reduced treatment equipment size when wastewater flows are substantially reduced. This is a direct economic benefit from water reuse.

Option 3—BAT Option 3 builds on BAT Option 2, substituting an ultrafilter system in place of the end-of-pipe mixed media filter to enhance the removal of metals and incidentally remove more suspended solids.

Thirty-two dischargers would incur additional costs to comply with this option. EPA estimates that total capital investment would be $14.9 million and that annual costs would be $6.3 million, including interest and depreciation. Nine plants responded that they had both direct and indirect discharge status, and are included in the above total investment and annual costs. EPA expects no plant closures, unemployment, or changes in industry production capacity as a result of this option.

The effectiveness and costs of the BAT options were evaluated and considered in making a selection of

BAT. BAT-2 reduces wastewater generation from an estimated 7,647 million liters per year (raw waste basis) (2,020 million gal) to 2,814 million 1/yr (743 million gal/yr), and removes substantial amounts of toxic metals. With no treatment (raw waste) 361 metric tons of toxic metals would be released (annually) from coil coating. BPT would remove 352.7 metric tons of toxic metals per year and the BAT Options 1, 2 (as modified, see below) and 3 would remove 357.9, 359.7 and 360.0 metric tons, respectively.

The development of these costs is detailed in Section VIII of the development document and treatment effectiveness is displayed in Section X. The high cost of BAT Option 3 plus the low additional removal of toxic metals contributed to the EPA decision that BAT Option 3 was inappropriate.

BAT SELECTION AND DECISION CRITERIA—EPA has selected a modified Option 2 as the basis for proposed BAT effluent limitations. This option was selected because it removes significant amounts of the toxic pollutants of concern in this category (primarily toxic metals) by in-plant control, pretreatment, and end-of-pipe treatment. Although the Act does not require a balancing of costs against effluent reduction benefits, the Agency considered the costs of the technology options (see Section X of the Development Document for detailed discussion). A modified version of BAT Option 2 was selected for technical reasons. This choice was confirmed by industry comments and further Agency analysis indicating that Option 1 does not achieve as high a level of effluent control as is achievable at a reasonable cost through Option 2.

A careful examination of Option 2 indicates that some aspects of it may not be implementable at this time. Specifically, the total cost of installing either counter current rinsing or no rinse conversion coating cannot be adequately estimated. The cost of equipment and mechanical work can be estimated; however, the installation of this equipment would require almost a complete rebuilding of each process line and would require each line to be shut down for substantial periods with resultant production loss and costs. This loss of production and related costs cannot, in the Agency's opinion, be adequately estimated for existing plants at this time. Thus these technology options are ot further considered for existing sources.

The Agency considered a requirement which would essentially ban the use of cyanide chemical systems for processing. This was reconsidered, however, because of comment that the non-cyanide coating systems operate at substantially reduced production speeds and produced reduced quality products. The Agency cannot adequately evaluate these claims at this time. For these reasons, the Agency has revised Option 2 to allow the continued use of cyanide containing metal treatment chemical systems. The Agency believes that this limitation can best be met by changing to non-cyanide chemical systems and expects most if not all coil coating establishments to meet the cyanide requirement by changing chemical systems rather than by effluent treatment.

The Agency is also establishing limitations on oil and grease as an indicator to control polynuclear aromatic hydrocarbons and certain organic solvents. The use of indicators is discussed below under regulated pollutants and in Section X of the development document.

The Agency rejected Option 3 because it is relatively unproven and because it has a far greater cost with little environmental gain. Further development of this kind of process water treatment to remove metals and to promote recycle could possibly allow its requirement at some later revision of this regulation.

X. New Source Performance Standards (NSPS)

The basis for new source performance standards (NSPS) under Section 306 of the Act is the best available demonstrated technology. New plants have the opportunity to design the best and most efficient coil coating processes and wastewater treatment technologies, and, therefore, Congress directed EPA to consider the best demonstrated process changes, inplant controls, and end-of-pipe treatment technologies which reduce pollution to the maximum extent feasible. EPA considered three options for selection of NSPS technology.

Originally, NSPS Options 1 and 2 were identical to BAT options 2 and 3 and NSPS option 3 added more sophisticated final filtration. As discussed under BAT Option 2, some of the requirements appear to be infeasible as BAT because of the costs of required major modifications and downtime to existing plants. These costs are not a factor in a new plant under construction. The greater benefits and operability of NSPS options 2 and 3 have not been adequately demonstrated. Hence, the Agency has selected NSPS Option 1 (equivalent to unmodified BAT Option 2) as the best available demonstrated technology. This option relies upon the achievement of no discharge of process wastewater pollutants from conversion coating through the use of no rinse conversion coating technique.

EPA estimates that for NSPS Option 1, the average plant investment cost is $200,000. This level of cost comprises 1.3 percent of the estimated equipment costs for one new coil coating line. This proportion of capacity expansion costs accounted for by NSPS Option 1 is not on the order of magnitude that should cause significant adverse impact on the addition of new lines. For NSPS Option 2, the average plant investment cost is $450,000. This level of cost comprises 3.0 percent of the estimated equipment costs for one new coil coating line.

XI. Pretreatment Standards for Existing Sources (PSES)

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

The four pretreatment options considered are parallel to BPT and to the BAT 1, 2, and 3 options previously described. Most of the pollutants regulated are toxic metals wich are not degraded in POTW. These metals either pass through a POTW or are concentrated in the sludge, thereby limiting sludge management alternatives. The small amount of toxic organic pollutants present are not regulated. The combination of incidental oil and grease removal in the treatment train for metals and further oil and grease removal in the POTW, provides effluent loadings equal to or less than BAT. Pretreatment Option 0 (BPT) does not provide reasonable protection of the environment. The rationale for rejection of BAT Option 1 as preteatment, the modification of BAT Option 2 which was seleced as pretreatment, and the rejection of BAT Option 3 as pretreatment are identical to the rationale set forth in the BAT Options discussion.

The equipment required for the selected preteatment option is of reasonable size, appropriate for installation within an urban plant which discharges to POTW. The mass limitations set forth for BAT Option 2 have been presented here as the only method of designating pretreatment standards because the water flow reductions specified at BAT are major features of the treatment and control system. To regulate on the basis of concentration only is not adequate because it will not adequately control the release of persistent toxics to POTW. The Agency has considered the possible complications which mass based limitations might cause when applied as pretreatment standards. Since coil coating facilities are usually separate rather than part of a larger complex and since production records are routinely maintained the complications of applying a mass based standard appear to be minimal. Therefore, the policy that concentration be used to express pretreatment standards (40 CFR Part 403.6(c); and Appendix A, B.2.e) as it applies to PSES in this part is set aside. The Agency is considering establishing minimum requirements for monitoring to insure compliance with the standards, but no requirements are proposed at this time.

Thirty-eight indirect dischargers would incur additional costs to comply with the preteatment options. EPA estimates that for the pretreatment option parallel to BPT (pretreatment Option O), total capital investment would be $5.7 million and that annual costs would be $1.7 million, including interest and depreciation. EPA estimates that for pretreatment Option 1, total capital investment would be $9.3 million and that annual costs would be $2.5 million, including interest and depreciation. For pretreatment Option 2, the additional total investment and annual costs would be $9.0 million and $2.5 million, respectively. EPA estimates that for pretreatment Option 3, total capital investment would be $17.9 million and that annual costs would be $5.1 million. EPA expects no plant closures, unemployment, or changes in industry production capacity as a result of any of the pretreatment options.

XII. Pretreatment Standards For New Sources (PSNS)

Section 307(c) of the Act requires EPA to promulgate pretreatment standards for new sources (PSNS) at the same time that it promulgates NSPS. New indirect discharges will produce wastes having the same pass through problems that existing discharge have. New indirect dischargers, like new direct dischargers, have the opportunity to incorporate the best available demonstrated technologies including process changes, in-plant controls, and end-of-pipe treatment technologies, and to use plant site selection to ensure adequate treatment system installation.

The PSNS treatment options considered are identical to the NSPS options. As in the case of existing sources, the majority of pollutants regulated are toxic metals which are not degraded in a POTW. The small amount of toxic organic pollutants present are not regulated. The combination of incidental oil and grease removal in the treatment train for metals, and further oil and grease removal in the POTW, provides effluent loadings equal to or less than BAT. Option 1 of NSPS is selected as the most appropriate pretreatment technoloy option for PSNS. This option encourages new plants to treat their own wastewaters, thereby reducing the hydraulic loading on POTW and limiting the amount of toxic metals which would be introduced to a POTW.

The mass limitations set forth as NSPS Option 1 are presented here as the only method of designating pretreatment standards. The water flow reductions specificed at NSPS are the major features of the treatment and control system. Therefore, to regulate on the basis of concentration only is not adequate because it will not adequately control the release of persistent toxics to POTW. The requirement that concentration be used to express pretreatment standards (40 CFR Part 403.6(c); and Appendix A, B.2.e) as it applies to PSNS in this part is set aside for the reasons discussed in Section XI, above. The Agency is considering establishing minimum requirements for monitoring to insure compliance with the standards, but no requirements are proposed at this time.

EPA estimates that for PSNS Option 1, the average plant investment cost is $200,000, which comprises 1.3 percent of the estimated equipment cost for one new coil coating line. This order of magnitude should not create significant negative impact on the construction of new lines. For PSNS Option 2, the average plant investment cost is $45,000. This level of cost comprises 3.0 percent of the estimated equipment costs for one new coil coating line.

XIII. Best Conventional Technology (BCT) Effluent Limitations

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

BCT is not an additonal limitation, but replaces BAT for the control of conventional pollutants. BCT requires that each limitation for conventional pollutants be assessed in light of a new "cost reasonableness" test, which involves a comparison of the cost and level of reduction of conventional pollutants from the discharge of publicly owned treatment works with the cost and level of reduction of such pollutants from a class or category of industrial source. In its review of BAT for "secondary" industries, the Agency promulgated BCT levels based on a methodology described at 44 FR 50732 (Aug. 29, 1979). A BCT option will be considered "cost reasonable" under this methodology if its incremental cost (dollars per pound of pollutant measuring BPT to BCT) is less than or equal to the costs for an average POTW. In 1978 dollars the POTW comparison figure is $1.27 per pound.

Only three conventional pollutant parameters—pH, TSS and oil and grease—were considered under the BCT limitation. They were assessed at levels that are achievable through the use of technology analyzed for modified BAT Option 2. The limitation on oil and grease has been established as an indicator at BAT to limit the amount of PAH's discharged and is considered to be an indicator of the probable effectivenesss of technology in removing polynuclear aromatic hydrocarbon (PAH) compounds. The pH limitations at BCT is the same as at BPT.

Inasmuch as the technology would be installed and operated to meet other requirements, it can be argued that BCT limitations in fact have no cost. However, EPA has taken a more generous approach in its BCT methodology. The total cost of adding technology beyond BPT to meet BCT is calculated and assessed against the amount of suspended solids and oil and grease removed by that technology. When this is done, the CCT costs for the steel subcategory are $0.54 per pound of conventional pollutant removed. $0.05

for the galvanized subcategory, and $1.43 for the aluminum subcategory. These apparently erratic costs are numerically correct. The unusual pattern is caused by the effect of the BAT flow reductions on the size of equipment needed for the end-of-pipe part of the treatment technology.

The cost of removal of conventional pollutants by BCT does meet the cost test for the steel and galvanized subcategories. Therefore, the BCT limitations for the steel and galvanized subcategories will be equal to BAT. Since the aluminum subcategory fails the cost test the BCT limitations based on BAT technology will not be applied. Since the intermediate technology standards assessed as BAT Option 1 are even less cost-efficient, they too cannot be applied. EPA therefore will set the BCT limit for the aluminum subcategory at performance standards achievable with BPT technology. However the oil and grease limitation for the alumunim subcategory is independently set under BAT since it is used as an indicator of control for organic toxics regulated under BAT.

XIV. Regulated Pollutants

The basis upon which the controlled pollutants were selected, as well as the general nature and environmental effects of these pollutants, is set out in Sections V, VI, IX and X of the Development Document. Some of these pollutants are designated toxic under Section 307(a) of the Act, and no evidence has been found to warrant removal of any pollutant from the toxics list.

A. BPT—The pollutants controlled by the BPT limitations are aluminum, cadmium, chromium, copper, cyanide, iron, lead, nickel, zinc, TSS, oil and grease, and pH. Not all of these pollutants are controlled in all subcategories; regulation is established only where the pollutant appears in significant concentration in the raw waste. The discharge is controlled by maximum daily and monthly average mass effluent limitations stated in milligrams of each pollutant per square meter of metal processed (lbs/1,000,000 sq ft).

B. BAT and NSPS—The pollutants specifically limited by BAT and NSPS are the same as those limited by BPT. There are, however, different rationales for limiting these pollutants.

C. BCT—The pollutants specifically limited by BCT are pH, TSS and oil and grease.

D. PSES and PSNS—The pollutants regulated at PSES and PSNS are the same as those limited by BAT and NSPS respectively except that iron, aluminum, TSS, and oil and grease are not limited in pretreatment.

1. Toxic Pollutants—The toxic pollutants expressly controlled for direct dischargers in each subcategory are cadmium, chromium, copper, cyanide, lead, nickel and zinc. These toxic pollutants represent the highest concentrations of toxic materials in each of the subcategories. There are a number of other pollutants in the raw waste which are present at low concentrations but which might be considered for control through the use of other pollutants used as indicators. The Agency is soliciting comments on the monitoring of selected pollutants to indicate compliance or the determination of requiring plants to monitor each pollutant. Should each plant be able to make its own choice about this?

2. Indicator Pollutants—The difficulties of analyses for many toxic organic pollutants have prompted EPA to propose a new method of regulating certain toxic pollutants. For toxic pollutants for which historical data is limited and relatively inexpensive analytical methods are not well developed, EPA is proposing numerical limitations on an "indicator" pollutant—oil and grease. The coil coating data available to EPA generally show that when this "indicator" pollutant is controlled, the concentrations of toxic organic pollutants is significantly lower than when the "indicator" pollutant is present in high concentrations. This may be due to the preferential solubility of many toxic organics in oil and grease. While the relationships between "indicator" pollutants and toxic pollutants are not quantifiable on a one-to-one basis, control of an "indicator" will reasonably assure control of toxics with similar physical and chemical properties responsive to similar treatment mechanisms. This method of toxics regulation obviates the difficulties, high costs, and delays of monitoring and analyses that would result from limitations solely on the toxic pollutants.

Appendix B to this notice contains a tabulation for each subcategory of the toxic pollutants which were considered for specific limitation. EPA concludes that the not-specifically regulated group of these toxic organic pollutants will be effectively controlled by limitation of the "indicator" pollutant even though these toxics are not expressly regulated by numerical limitations.

The toxic pollutants regulated by indicator pollutants include volatile (purgeable) organics and polynuclear aromatic hydrocarbon (PAH) compounds. Toxic pollutants such as PAH compounds and phthalate esters are partially treated by oil-water separation because they are immiscible in water. Thus, control of oil and grease as an "indicator" will provide control of these toxic pollutants.

The Agency also considered using TSS as an indicator for the control of low levels of toxic metals but is not proposing this at this time. Instead, limits have been proposed on all toxic metals not eligible for exclusion under Paragraph 8. The use of TSS as an indicator would eliminate the need for analysis of some metals in each subcategory. Also the use of TSS plus some metals rather than all of the metals listed of control has been considered for possible use as an alternate control procedure on a permit by permit basis. EPA invites comments on this issue.

XV. Pollutants and Subcategories Not Regulated

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

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

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

Paragraph 8(a)(iii) of the Revised Settlement Agreement allows the Administrator to exclude from regulation toxic pollutants detected in the effluent in only trace amounts and not likely to cause toxic effects. Appendix E to this notice lists for each subcategory the toxic pollutants which were detected in the effluents of only one plant, and are uniquely related to that plant, are not related to the manufacturing process under study, are not treatable using technologies considered or which were found in environmentally insignificant amounts and which therefore are excluded from regulation.

No subcategories or subsets of the coil coating industry meet these criteria for the absence of toxic pollutants. Thus none are excluded from this regulation.

XVII. Costs, Effluent Reduction Benefits, and Economic Impacts

Executive Order 12044 requires EPA and other agencies to perform Regulatory Analyses of certain regulations. 43 FR 12661 (March 23, 1978). EPA's proposed regulations for implementing Executive Order 12044 require a Regulatory Analysis for major significant regulations involving annualized compliance costs of $100 million or meeting other specified criteria. 44 FR 30988 (May 29, 1979). Where these criteria are met, the proposed regulations require EPA to prepare a formal Regulatory Analysis, including an economic impact analysis and an evaluation of regulatory alternatives. The proposed regulations for the coil coating industry do not meet these criteria and thus do not require a formal Regulatory Analysis. Nonetheless, this proposed rulemaking satisfies the formal Regulatory Analysis requirements.

EPA's economic impact assessment is set forth in Economic Impact Analysis of Proposed Effluent Standards and Limitations for the Coil Coating Industry, May 1980, EPA. This report details the capital investment and annual costs for the industry as a whole and for the subcategories covered by the proposed coil coating regulation. The report also assesses the impact of compliance costs in terms of plant closures, production changes, price change, employment effects, community impacts and balance of trade effects.

EPA estimates that the total capital investment costs for the coil coating industry will be $14.9 million and that the annual compliance costs will be $4.9 million. This level of annual compliance costs is 0.7 percent of industry revenues and will be responsible for minimal industry-wide price and quantity changes of 0.8 percent and 0.4 percent, respectively. No plant closures are projected for either the baseline (without this regulation) or for the proposed regulation. Other impacts on the coil coating industry such as product substitution, foreign trade effects and changes in discharge status are negligible. Also, secondary impacts on employment and the community are not anticipated.

The economic analysis basically utilizes plant-specific production data and compliance costs estimated by EPA for 58 sample plants to determine the impact of the proposed regulation. However, the first step of the analytical procedure was to determine the industry-wide price change and resulting quantity change at each compliance level. Those estimates served as the basis for the screening analysis which identified plants that may potentially incur significant costs and economic impacts. The criterion for determining high impact potential plants was a significant decrease in their profit margins after compliance with the regulation. The screening analysis identified fifteen coil coating plants (twenty-six percent of the sample) as potentially facing adverse economic impact.

The potentially vulnerable plants were then subjected to further financial analysis to quantify the level of anticipated impact and to assess the likelihood of plant closure. Financial profiles were developed and subsequently used to calculate financial ratios in order to analyze plant profitability and the magnitude of capital investment requirements. The plant-specific ratios were compared to threshold values established at levels at which closures became likely. The plant closure threshold values differed among three categories developed for the economic analysis: (1) toll coaters, which coat customer-owned metal on a service basis; (2) captive operations, which coat metal as part of a proprietary product manufacturing process; and (3) adjunct operations, which are performed in plants with rolling mills on the plant site. The differences in the threshold levels were established to account for differences in the financial characteristics of the plants within the three sectors. However, in general, the conclusions of the study are relatively insensitive to the economic categorization.

BPT—EPA estimates that the BPT effluent limitation will cause the coil coating industry to incur additional total capital investment and annual compliance costs (including interest and depreciation) of $3.5 million and $1.6 million, respectively. The economic analysis based on the profitability and capital investment requirement ratios, indicates that the plants will not face noticeable reductions in profitability, therefore no plant closures are estimated.

BAT—EPA estimates that the coil coating industry will incur additional capital investment and annual compliance costs of $5.9 million and $2.4 million, respectively. These figures were extrapolated from the plant-specific cost data for 27 direct dischargers to the projected universe of 32 plants. The costs reflect the original treatment level, not the revised proposed regulation. The proposed regulation requires fewer in-process technology changes than the BAT Option 2 studied in the economic report. The compliance costs for the proposed regulation will be approximately 20 to 25 percent less than the figures cited above. These lower costs will be analyzed for economic impacts during the period between proposal and promulgation of the regulation.

The economic analysis based on the profitability and capital investment requirement ratios indicates that a few coil coating plants may incur noticeable decreases in profitability but will not face closure. The projected price increases resulting from compliance costs were found to be minimal for direct discharging coil coating plants. Therefore, other impacts upon this segment of the industry such as product substitution, foreign trade effects and changes in discharge status will be negligible.

PSES—EPA estimates that the indirect discharging segment of the coil coating industry will incur additional capital investment and annual compliance costs of $9.0 million and $2.5 million, respectively. These figures were extrapolated from the plant-specific cost data for 31 indirect dischargers to the projected universe of 38 plants. As with the costs for the BAT limitations, the above figures reflect the original treatment level, not the modified treatment option. The proposed regulation requires fewer in-process technology changes than the option analyzed in the economic study. The compliance costs will be approximately 20 to 25 percent less than the figures cited above. These lower costs will be assessed for economic impacts during the period between proposal and promulgation.

The economic analysis based on the profitability and capital investment requirement ratios indicates that three indirect discharging plants may incur noticeable decreases in profitability but will not face closure. The projected price increases resulting from compliance costs were found to be minimal for this segment of the industry. Therefore, other impacts such as product substitution, foreign trade effects and changes in discharge status will be negligible.

NSPS—PSNS—The coil coating industry experienced strong growth in the period from 1962 to 1978 and this trend is forecast to continue through 1985. EPA estimates that the industry will require $400 million to $600 million of capital investment in coil coating equipment (not including the plant site or building construction costs) to provide the expected increase in production from 1980 through 1985. For comparison, the average plant investment cost for complying with the proposed regulation will be $200,000. This amount represents 1.3 percent of the estimated equipment costs for one new line. Because of this high growth rate and the relatively low capital investment required by the NSPS and PSNS regulation, the construction of new coil coating lines is not expected to be adversely impacted. The competitive advantages of coated coil over other products combined with the forecasted growth and expanded end-product uses through 1985 shoud allow the plants to earn a level of profits sufficient to attract needed capital funding.

Economic Impact: The Agency estimates that total capital investment to bring 70 existing coil coating plants into compliance with the proposed BAT limitations will be $14.9 million. The annual costs of compliance may reach $4.9 million, including depreciation and interest. This level of annual costs represents 0.7 percent of industry revenues and may be responsible for minimal industry-wide price and quantity changes of 0.8 percent and 0.4 percent, respectively. No plant closures are projected as a result of complying with proposed regulation. Other impacts on the coil coating industry status are negligible. Also, secondary impacts on employment and the community are not anticipated.

This proposed regulation does not require a regulatory analysis because annual compliance costs are less $100 million and the other criteria for performing a regulatory analysis are not met. This determination is in accordance with the Agency's procedures for improving environmental regulations, published in 44 FR 30988 (May 29, 1979). Nevertheless, this proposed regulation satisfies the formal regulatory analysis requirements.

XVIII. Non-Water Quality Aspects of Pollution Control

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

The following are the non-water quality environmental impacts (including energy requirements) associated with the proposed regulations:

A. Air Pollution—Imposition of BPT, BAT, BCT, NSPS, PSES, and PSNS will not create any substantial air pollution problems.

B. Solid Waste—EPA estimates that coil coating facilities generate 43,900 metric tons of solid wastes (wet basis) per year (1976). These wastes were comprised of treatment system sludges containing toxic metals, including chromium, copper, lead, nickel and zinc.

EPA estimates that the proposed BPT limitations will contribute an additional 45,700 metric tons per year of solid wastes. Proposed BAT and PSES will increase these wastes by approximately 8,100 metric tons per year beyond BPT levels. These sludges will necessarily contain additional quantities (and concentrations) of toxic metal pollutants.

On the other hand, EPA estimates that implementation of proposed pretreatment standards will result in POTW sludges having commensurately lesser quantities and concentrations of toxic pollutants. POTW sludges will become more amenable to a wider range of disposal alternatives, possibly including beneficial use on agricultural lands. Moreover, disposal of these vastly greater quantities of adulterated POTW sludges would be significantly more difficult and costly than disposal of smaller quantities of wastes generated at individual plant sites.

These wastewater treatment sludges may furthermore be identified as 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)). The Agency may also list these sludges as hazardous pursuant to 40 CFR § 261.11 (45 FR at 33121 (May 19, 1980), and is likely to do so based upon high concentrations of cadmium in these wastes and the large quantity of wastes generated.

If these wastes are identified as hazardous, they come within the scope of RCRA's "cradle to grave" hazardous waste management program, requiring regulations from the point of generation to point of final disposition. EPA's generator standards would require generators of coil coating wastes to meet containerization, labeling, recordkeeping and reporting requirements; if they dispose of wastes off-site, coil coaters would have to prepare a manifest which will track the movement of the wastes from the generator's premises to a permitted off-site treatment, storage, or disposal facility. See 45 FR 33143 (May 19, 1980). The transporter regulations require transporters of coil coating wastes to comply with the manifest system to assure that the wastes are delivered to a permitted facility. See 45 FR 33151–33152 (May 19, 1980). Finally, RCRA regulations establish standards for hazardous waste treatment, storage and disposal facilities allowed to receive such wastes. Final standards for permitted hazardous waste disposal are expected to be promulgated during the fall of 1980. See 45 FR 33154 (May 19, 1980).

Even if these wastes are not identified as hazardous, they still must be disposed of in compliance with the subtitle D open dumping standards, implementing § 4004 of RCRA. See 44 FR 53438 (Sept. 13, 1979).

EPA's Office of Solid Waste recently completed a pilot analysis of the solid waste management and disposal cost required for coil coating to comply with RCRA. The costs of compliance with proposed RCRA regulations were not specifically included in the economic impact analysis for these proposed regulations. However, EPA considered estimated RCRA compliance costs for coil coating when it selected the technology options for these proposed regulations.

C. Consumptive Water Loss—Treatment and control technologies which require extensive recycling and reuse of water may, in some cases, require cooling mechanisms. Where evaporative cooling mechanisms are used, water loss may result and contribute to water scarcity problems, a concern primarily in arid and semi-arid regions. This proposed regulation envisions the evaporative cooling and recycling of relatively small quantities of cooling water. For the average size coil coating plant, this could result in evaporative loss of about 2000 gal/day of water. This is an insignificant quantity of water which does not constitute a significant consumptive water loss.

D. Energy Requirements—EPA estimates that the achievement of proposed BPT effluent limitations will result in a net increase in electrical energy consumption of approximately 0.55 million kilowatt-hour per year. Proposed BCT and BAT limitations are projected to add another 2.84 million kilowatt-hours to electrical energy consumption. To achieve the proposed BPT, BCT and BAT effluent limitations, a typical direct discharger will increase total inergy consumption by less than one percent of the energy consumed for production purposes.

The Agency estimates that proposed PSES will result in a net increase in electrical energy consumption of approximately 3.54 million kilowatt-hours per year. To achieve proposed PSES, a typical existing indirect discharger will increase energy consumption less than one percent of the total energy consumed for production purposes.

The energy requirements for NSPS and PSNS are estimated to be similar to energy requirements for BAT. However, this can only be quantified in kwh/year after projections are made for new plant construction.

XIX. Best Management Practices (BMP)

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

EPA is not now considering promulgating BMP specific to coil coating.

XX. Upset and Bypass Provisions

An issue of recurrent concern has been whether industry guidelines should include provisions authorizing noncompliance with effluent limitations during periods of "upset" or "bypass." An upset, sometimes called an "excursion," is unintentional noncompliance occurring for reasons beyond the reasonable control of the permittee. It has been argued that an upset provision in EPA's effluent limitations guidelines is necessary because such upsets will inevitably occur due to limitations in even properly operated control equipment. Because technology-based limitations are to require only what technology can achieve, it is claimed that liability for such situations is improper. When confronted with this issue, courts have been divided on the question of whether an explicit upset or excursion exemption is necessary or whether upset or excursion incidents may be handled through EPA's exercise of enforcement discretion. Compare *Marathon Oil Co.* v. *EPA*, 564 F.2d 1253 (9th Cir. 1977) with *Weyerhaeuser* v. *Costle, supra*, and *Corn Refiners Association, et al.* v. *Costle*, 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).

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

EPA has determined that both upset and bypass provisions should be included in NPDES permits, and has recently promulgated NPDES regulations which include upset and bypass permit provisions. See 40 CFR 122.60. 45 FR 33290 (May 19, 1980). 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. Permittees in coil coating will be entitled to the general upset and bypass provisions in NPDES permits. Thus these proposed regulations do not address these issues.

XXI. Variances and Modifications

Upon the promulgation of final regulations, the numerical effluent limitations for the appropriate subcategory must be applied in all federal and state NPDES permits thereafter issued to coil coating direct dischargers. In addition, on promulgation, the pretreatment limitations are directly applicable to indirect dischargers.

For the BPT and BCT effluent limitations, the only exception to the binding limitations is EPA's "fundamentally different factors" variance. See *E. I. duPont de Nemours and Co.* v. *Train*, 430 U.S. 112 (1977); *Weyerhaeuser Co.* v. *Costle, supra*; *EPA* v. *National Crushed Stone Association, et al.* —— U.S. —— (No. 79–770, decided Dec. 2, 1980). This variance recognizes that there may be factors concerning a particular discharger which are fundamentally different from the factors considered in this rulemaking. This variance clause was originally set forth in EPA's 1973–1976 industry regulations. It now will be included in the general NPDES regulations and will not be included in the coil coating or other specific industry regulations. See the NPDES regulation, 40 CFR 125, Supart D, 44 FR 32854, 32893 (June 7, 1979) and 45 FR 33512 (May 19, 1980) for the text and explanation of the "fundamentally different factors" variance.

The BAT limitations in this regulation also are subject to EPA's "fundamentally different factors" variance. In addition, BAT limitations *for non-toxic and nonconventional pollutants* are subject to modifications under Sections 301(c) and 301(g) of the Act. According to Section 301(j)(1)(B), applications for these modifications must be filed within 270 days after promulgation of final effluent limitations guidelines. See 43 FR 40859 (Sept. 13, 1978). Under Section 301(1) of the Act, these statutory modifications are not applicable to "toxic" pollutants. Likewise, limitations on nonconventional pollutants used as "indicators" for toxic pollutants are not subject to Section 301(c) or Section 301(g) modifications.

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

XXII. Relationship to NPDES Permits

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

One matter which has been subject to different judicial views is the scope of NPDES permit proceedings in the absence of effluent limitations, guidelines and standards Under currently applicable EPA regulations, states and EPA Regions issuing NPDES permits prior to promulgation of this regulation and before June 30, 1981 must include a "re-opener clause," providing for permits to be modified to incorporate "toxics" regulations when they are promulgated. Permits issued after June 30, 1981 must meet the requirements of Section 301(b)(2) of the Clean Water Act whether or not applicable effluent limitations guidelines have been promulgated. See 40 CFR 122.62(c), 45 FR 33290, 33339. May 19, 1980. At one time EPA had a policy of issuing short-term permits, with a view toward issuing long-term permits only after promulgation of these and other BAT regulations. While EPA continues to encourage EPA and state permit writers to issue short term permits to primary industry dischargers until June 30, 1981. EPA has changed its policy to allow more flexibility. See 45 FR 33340, May 19, 1980. EPA permit writers may issue long-term permits to primary industries even if guidelines have not yet been promulgated provided that the permits require BAT and BCT and contain reopener clauses. The appropriate technology levels and limitations will be assessed by the permit issuer on a case-by-case basis on consideration of the statutory factors. See *U.S. Steel Corp.* v. *Train*, 556 F. 2d 822, 844, 854 (7th Cir. 1977). In these situations, EPA documents and draft documents (including these proposed regulations and supporting documents) are relevant evidence, but not binding, in NPDES permit proceedings. See 44 FR 32854, June 7, 1979).

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

One additional topic that warrants discussion is the operation of EPA's NPDES enforcement program, many aspects of which have been considered in developing this regulation. The Agency wishes to emphasize that, although the Clean Water Act is a strict liability statute, the intiation of enforcement proceedings by EPA is discretionary (*Sierra Club vs Train*, 557 F 2nd 485, 5th Circ. 1977). EPA has exercised and intends to exercise that discretion in a manner which recognizes and promotes good faith compliance efforts and conserves enforcement resources for those who fail to make good faith efforts to comply with the Act.

XXIII. Summary of Public Participation

On September 7, 1979, EPA circulated a draft technical development document to a number of interested parties, including the National Coil Coaters Association and several member firms, the Natural Resources Defense Council (NRDC), and affected state and municipal authorities. This document did not include recommendations for effluent limitations and standards, but rather presented the technical basis for this proposed regulation. A meeting was held in Washington, D.C. on October 23, 1979, for public discussion of comments on this document. A brief summary of these comments follows.

1. Comment: Numerous comments were received indicating that many parts of the draft development document were difficult to follow and understand. Many typographical and minor errors were pointed out as well.

Response: The Agency has substantially modified the development document to improve its clarity and to present technical data and information in a logical and understandable fashion. Many changes were made to correct typographical and the minor errors, and are not addressed specifically in this summary of comments.

2. Comments: Commentors indicated that the capital costs estimates for effluent treatment systems were substantially below the actual costs for constructing waste treatment systems.

Response: The Agency has revised the development document to more clearly state the costing methodology used. Additionally, the Agency has requested detailed information on the example installation cited by comments so that costing allowances and specific costs can be compared to identify specific differences.

3. Comment: One commenter pointed out that the cost of land for a treatment system is not included in the cost estimates.

Response: The amount of land required for treatment systems in the flow range needed for coil coating is quite small and can be made extremely small by appropriate engineering design. Because the minimum area required for treatment is so small, the Agency believes that most, if not all, coil coaters will be able to install the necessary equipment within their present available space.

4. Comment: One commenter questioned the validity of the Agency's assumption that higher influent pollutant loading will not alter the effluent concentration of pollutants achieved by a treatment system.

Response: The Agency examined its records of sampled wastewater treatment performance and studied long-term data for treatment system effluent for two industrial plants with wastewater characteristics similar to coil coating wastewaters. These data, shown in Section VII of the development document, support the Agency's position that achieved effluent concentration for metals is relatively independent of influent concentration.

5. Comment: The practicality of using ultrafiltration and membrane filtration in advanced treatment systems was questioned in view of the reported operational difficulties of using these technologies for solids removal.

Response: The Agency is not proposing the use of these technologies for BAT or NSPS and the development document reflects the changes.

6. Comment: A commenter pointed out that Figure 10–1, the diagram for BAT Levels I and II, did not indicate provision for return of backwash from the polishing filter to the system. The commenter asked if provisions for additional capacity for the backwash had been made in the cost of the system.

Response: The errant diagram for the proposed BAT treatment system has been corrected to show proper handling of backwash. The need to allow additional treatment capacity for backwash is recognized and an allowance for handling backwash is included in costing of the system.

7. Comment: One commenter stated that the discussion of environmental hazards of cyanide does not apply to the coil coating industry because the form used is a complex ferricyanide. Also it was stated that "free" cyanide rather than total cyanide, should be the control parameter for cyanide, based on the Water Quality Criteria publication which selects free cyanide as the criteria pollutant.

Response: EPA recognizes that cyanide complexed as ferricyanide is the form used in some conversion coating formulations for coil coating aluminum. Under exposure to ultraviolet light (i.e. sunlight) the complex cyanide forms decompose to release cyanide ion. Such a process occurring in open waters receiving complexed cyanides will produce the environmentally hazardous cyanide ion. Therefore, the Agency is proposing regulation of total cyanide.

Comment: Two commenters noted that the discussion of polishing filters to be used in BAT Levels I and II, called for achieving 3.8 mg/1 TSS for polishing filters, without statisfactory justification.

Response: EPA's response is incorporated in Section VII of the revised Development Document. The TSS concentrations upon which proposed BAT, TSS mass discharge limitations are based, have been set at 10 mg/1 average and 20 mg/1 maximum.

9. Comment: Commenters questioned the median predicted level of 3.8 mg/1 for suspended solids which was set forth at page 340 of the draft development document.

Response: Section VII of the development document to support this proposed regulation contains data on the operation of five industrial wastewater filtration systems. These data have a mean TSS concentration of 2.6 mg/1 and form the basis of technology performance for the BAT limitations.

10. Comment: One commenter contended that the effluent predicted quality is "ideal" and not predictably achieved.

Response: The limitations proposed in this regulation are based primarily on empirical performance data for the technologies suggested. This empirical data and the variation of regulatory levels is displayed in section VII of the development document.

11. Comment: One commenter questioned the requirement for no-rinse conversion coating at BAT Level II on the grounds that retrofitting existing plants for this process will require extensive replacement of existing equipment at very high capital cost.

Response: The Agency recognized that undetermined production losses would be incurred during retrofitting of the no-rinse system to existing lines. Therefore, this pollutant reduction technology has been eliminated from the proposed BAT system. It is retained in the proposed BDT (NSPS) system for new sources where installation as original design equipment will not impose the burden of production loss.

12. Commenters stated that complex cyanides are used only in conversion coating formulations applied to some aluminum strip and no cyanide is used in cleaning or treating steel or galvanized strip. A commenter stated that the presence of cyanide in raw wastewaters from steel and galvanized lines must be due to analytical methods.

Response: Analytical data from thirteen different laboratories established the presence of cyandie in samples from coil coating facilities. In only one coil coating facility was cyanide detected in inlet water. The presence of cyanide in other facilities is attributed to crossover or carryover of cyanides from aluminum processing solutions to rinse waters used in common for steel and alumiunm or galvanized and aluminum processing. Therefore, provision for cyanide treatment is made only for the aluminum subcategory, but cyanide is regulated in all subcategories to assure that discharges of cyanide from multiple subcategory facilities are limited.

13. Comment: One commenter questioned the impact of no-rinse conversion coating on industrial hygiene contending that it introduces the potential of toxic, fugitive dust in the work place; pointed out that the process has not been FDA approved for use in sanitary coating containers; and contended that the process is not proven and must be further developed.

Response: The Agency has reviewed the chemicals used in no-rinse conversion coating formulations and finds that they are essentially identical to the kinds of chemicals used in conventional conversion coating formulations. Hence it appears that there is no more likelihood of potential, toxic, fugitive dust in the work place from no-rinse conversion coating than from conventional conversion coating solutions. EPA does not expect that there will be problems in obtaining FDA approval when application is made for such approval. The no-rinse process is being used in three commercial plants in the United States leaving little doubt about its commercial availability and development.

14. Comment: Commenters stated that many technologies discussed such as starch xanthate, ion exchange, evaporation and chromium regeneration are not usable technologies in coil coating.

Response: Although these (and several other technologies) are discussed the Agency has not relied upon them as a basis for this proposed regulations even though they are discussed in the development document. These technologies are discussed in the development document because they may have some merit and applicability in specific or special situations.

15. Comment: One commenter contended that the oil removal techniques, as described, are incomplete and that they do not include the techniques of acid cracking and polyelectrolite addition to remove emulsified oils.

Response: On the bases of sampling data collected from coil coating plants it appears that oil skimming in conjunction with other chemical treatments will adequately remove oil to meet the limitations. If however a particular plant chooses to use a special or unusual oil, appropriate technology, such as deemulsification, may need to be applied at the plant to meet the effluent standards.

16. Comment: Industry comments contend that the application of water conserving techniques do not achieve the water rates used as a basis for limitations.

Response: As discussed in Sections IX and X the water use rates on which these limitations are based are the median water flows for each subcategory as taken from the industry supplied data. This means that half of the plants in the industry are presently meeting the overall water use on which BPT is based. Further the BAT water flow is based on recirculation and reuse of the quench water stream. This reduces the wastewater discharge potential by 60 to 70 percent without reducing the amount of water which is used for cleaning and conversion coat rinses.

17. Comment: One commenter stated that dissolved metals should be regulated rather than total metals. The basis for this statement was that all discussions in the report deal with dissolved salts of the metals rather than the metals themselves.

Response: The Agency recognizes that dissolved metal ions are environmentally hazardous entities. However, the metallic elements and the undissolved compounds of these elements are subject to different sets of conditions after they leave the treatment system. Most metallic particles readily oxidize in the oxygen-containing waters of receiving water bodies. In receiving waters, the oxidized metal particles and undissolved metal compounds dissolve to produce the more environmentally hazardous ionic species. Only a few metals, such as gold, would not oxidize in usual receiving water bodies, but even gold compounds could dissolve. Thus, total metals are regulated.

18. Comment: It was suggested that special (presumably less stringent) limitations be established to facilitate treatment of coil coating wastewaters with other process wastewaters in large integrated facilities.

Response: The Agency does not object to the joint treatment of compatible wastewaters when appropriate. The Agency does insist that the treatment afford wastewaters treated jointly be such that the amount of pollutants discharged from joint treatment be not greater than allowed by the sum of the individual discharge limitations.

XXIV. Solicitation of Comments

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

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

The Agency is now considering regulating the production of two piece beverage type cans (either aluminum or steel) as a subcategory of the coil coating category. Some can making processes were originally projected to be part of the aluminum forming category. Information gathered under the aluminum forming data collection effort indicated that can making does not correspond to any other aluminum forming operation. However, the can making process is very similar to the coil coating process and would fit in better as a subcategory in the coil coating category. Both industries prepare the metal by cleaning baths and rinsing, apply a chemical conversion coat, and each may paint the product. Both processes are done on a continuous motion basis. Coil coating uses a continuous strip moving through the process steps, while can making uses a continuous web of cans. Similar treatment of the wastewaters would be probable due to the similarities in the processes. The Agency recognizes that factors are somewhat different in can making than in coil coating and is soliciting comments on the general issue of adding can making to the coil coating category and on the applicability of three specific items: the coil coating regulatory methodology, the treatment methods recommended, and the production normalizing factor.

The Agency is continuing to seek additional data to support these proposed limitations. The Agency specifically solicits long term sampling data which will help to better define the operability of the treatment technologies relied upon for regulation.

In order to determine the economic impact of this regulation, the Agency has calculated the cost of installing BPT, BAT, PSES, NSPS, and PSNS for each coil coating facility for which data was available. The cost of BCT for the steel and galvanized subcategories is the same as BAT; the cost for aluminum is the same as BPT. The details of the cost estimations are outlined in the Technical Development Document. Based on these estimates, the Agency has determined that no adverse economic burden will result from these regulations. Informal review of the Draft Technical Development Document by industry revealed that industry considers the cost estimates are too low. The Agency invites comments on this issue and requests that commenters submit any relevant cost data to the Agency.

The treatment effectiveness data set forth in the Technical Development Document is based on results of Agency sampling of the raw wastewaters and treated effluents from a broad range of plants generating similar wastewaters. The Agency invites comments on the treatment effectiveness, and requests data (especially paired raw wastewater-effluent data) from plants having well operated BPT or BAT treatment systems.

The Agency considered regulating TSS as an indicator for removal of small amounts of metals, and oil and grease as an indicator for removal of small amounts of organics. As proposed, the regulation will use oil and grease as an indicator, but will not use TSS as an indicator. The Agency invites comments on this approach and suggestions for alternative approaches.

The Agency is considering adding an alternative regulatory strategy. The proposed regulatory strategy calls for meeting numerical limits for each of several specific metals and other pollutants. The additional alternative would require control of a few (two or three) metals plus close control of pH and total suspended solids (TSS). Such an alternative could reduce analytical costs of monitoring. The Agency invites comments on the inclusion of such optional alternative in the regulations.

Dated: December 31, 1980.

Douglas M. Costle,

Administrator.

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

Act—The Clean Water Act
Agency—The U.S. Environmental Protection Agency
BAT—The best available technology economically achievable under Section 304(b)(2)(B) of the Act
BCT—The best conventional pollutant control technology, under Section 304(b)(4) of the Act
BDT—The best available demonstrated control technology processes, operating methods, or other alternatives, including where practicable, a standard permitting no discharge of pollutants under section 306(a)(1) of the Act.
BMP—Best management practices under Section 304(e) of the Act
BPT—The best practicable control technology currently available under Section 304(b)(1) of the Act
Clean Water Act—The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251 *et seq.*), as amended by the Clean Water Act of 1977 (Public Law 95-217)
Direct discharger—A facility which discharges pollutants into waters of the United States
Indirect discharger—A facility which introduces pollutants into a publicly owned treatment works
NPDES permit—A National Pollutant Discharge Elimination System permit issued under Section 402 of the Act
NSPS—New source performance standards under Section 306 of the Act
POTW—Publicly owned treatment works
PSES—Pretreatment standards for existing sources of indirect discharges under Section 307(b) of the Act
PSNS—Pretreatment standards for new sources of direct discharges under Section 307 (b) and (c) of the Act
RCRA—Resource Conservation and Recovery Act (Pub. L. 94-580) of 1976, as amended.

Appendix B.—Toxic Pollutants Considered for Specific Limitation

(a) Subpart A—Steel Basis Material Subcategory

039 Fluoranthene
072 1,2-benzanthracene (benzo(a)anthracene)
073 Benzo(a)pyrene (3,4-benzo-pyrene)
074 3-4Benzofluoranthene (benzo(b)fluoranthene
075 11,12-benzofluoranthene (benzo(b)fluoranthene
076 Chrysene
077 Acenaphthylene
078 Anthracene
079 1,12-benzoperylene (benzo(ghi)perylene)
080 Fluorene
081 Phenanthrene
082 1,2,5,6-dibenzanthracene dibenzo(,h)anthracene)
083 Indeno(1,2,3-cd) pyrene (2,3,-o-pheynylene pyrene)
084 Pyrene
087 Trichloroethylene
118 Cadmium
119 Chromium
121 Cyanide, Total
122 Lead
124 Nickel
128 Zinc

(b) Subpart B—Galvanized Basis Material Subcategory

039 Fluoranthene
072 1,2,-benzanthracene (benzo(a)anthracene)
073 Benzo(a)pyrene (3,4-benzo-pyrene)
074 3,4-Benzofluoranthene (benzo(b)fluoranthene
075 11,12-benzofluoranthene (benzo(b)fluoranthene)
076 Chrysene
077 Acenaphthylene
078 Anthracene
079 1,12-benzoperylene (benzo(ghi)perylene)
080 Fluorene

081 Phenanthrene
082 1,2,5,6-dibenzanthracene (dibenzo(,h)anthracene)
083 Indeno(1,2,3-cd) pyrene 2,3-o-pheynylene pyrene)
084 Pyrene
087 Trichloroethylene
118 Cadmium
119 Chromium
120 Copper
121 Cyanide, Total
122 Lead
124 Nickel
128 Zinc

(c) Subpart C—Aluminum Basis Material Subcategory

118 Cadmium
119 Chromium
120 Copper
121 Cyanide, Total
122 Lead
128 Zinc

Appendix C.—Toxic Pollutants Not Detected

(a) Subpart A—Steel Basis Material Subcategory

001 Acenaphthene
002 Acrolein
003 Acrylonitrile
005 Benzidine
006 Carbon tetrachloride (tetrachloromethane)
007 Chlorobenzene
008 1,2,4-trichlorobenzene
009 Hexachlorobenzene
010 1,2-dichloroethane
012 Hexachloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
016 Chloroethane
017 Bis (chloromethyl) ether
018 Bis (2-chloroethyl) ether
019 2-chloroethyl vinyl ether (mixed)
020 2-chloronaphthalene
021 2,4,6-trichlorophenol
022 Parachlorometa cresol
023 Chloroform (trichloromethane)
024 2-chlorophenol
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3-dichlorobenzidine
029 1,1-dichloroethylene
030 1,2-trans-dichloroethylene
031 2,4-dichlorophenol
032 1,2-dichloropropane
033 1,2-dichloropropylene (1,3-dichloropropene)
035 2,4-dinitrotoluene
036 2,6-dinitrotoluene
037 1,2-diphenylhydrazine
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 Bis (2-chloroisopropyl) ether
043 Bis (2-chloroethoxy) methane
045 Methyl chloride (dichloromethane)
046 Methyl bromide (bromomethane)
047 Bromoform (tribromomethane)
048 Dichlorobromomethane
049 Trichlorofluoromethane
050 Dichlorodifluoromethane
051 Chlorodibromomethane
052 Hexachlorobutadiene
053 Hexachloromyclopenta-
056 Nitrobenzene
057 2-nitrophenol
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
062 N-nitrosodiphenylamine
063 N-nitrosodi-n-propylamine
064 Pentachlorophenol
088 Vinyl chloride (chloroethylene)
089 Aldrin
090 Dieldrin
091 Chlordane (technical mixture and metabolites)
092 4,4-DDT
093 4,4-DDE (p,p-DDX)
094 4,4-DDD (p,p-TDE)
095 Alpha-endosulfan
096 Beta-endosulfan
097 Endosulfan sulfate
098 Endrin
099 Endrin aldehyde
100 Heptachlor
101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
102 Alpha-BHC
103 Beta-BHC
104 Gamma-BHC (lindane)
105 Delta-BHC (PCB-polychlorinated biphenyls)
106 PCB-1242 (Arochlor 1242)
107 PCB-1254 (Arochlor 1254)
108 PCB-1221 (Arochlor 1221)
109 PCB-1232 (Arochlor 1232)
110 PCB-1248 (Arochlor 1248)
111 PCB-1260 (Arochlor 1260)
112 PCB-1016 (Arochlor 1016)
113 Toxaphene
116 Asbestos
117 Beryllium
125 Selenium
127 Thallium
129 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)

(b) Subpart B—Galvanized Basis Material Subcategory

001 Acenaphthene
002 Acrolein
003 Acrylonitrile
004 Benzene
005 Benzidine
006 Carbon tetrachloride (tetrachloromethane)
007 Chlorobenzene
008 1,2,4-trichlorobenzene
009 Hexachlorobenzene
010 1,2-dichloroethane
012 Hexachloroethane
013 1,1-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
016 Chloroethane
017 Bis (chloromethyl) ether
018 Bis (2-chloroethyl) ether
019 2-chloroethyl vinyl ether (mixed)
020 2-chloronaphthalene
021 2,4,6-trichlorophenol
022 Parachlorometa cresol
023 Chloroform (trichloromethane)
024 2-chlorophenol
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3-dichlorobenzidine
031 2,4-dichlorophenol
032 1,2-dichloropropane
033 1,2-dichloropropylene (1,3-dichloropropene)
034 2,4,-demethylphenol
035 2,4-dinitrotoluene
036 2,6-dinitrotoluene
037 1,2-diphenylhydrazine
038 Ethylbenzene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 Bis (2-chloroisopropyl) ether
043 Bis(2-chloroethoxy) methane
044 Methylene chloride (dichloromethane)
045 Methyl chloride (dichloromethane)
046 Methyl bromide (Bromomethane)
047 Bromoform (tribromomethane)
048 Dichlorobromomethane
049 Trichlorofluoromethane
050 Dichlorodifluoromethane
051 Chlorodibromomethane
052 Hexachlorobutadiene
053 Hexachloromyclopentadiene
056 Nitrobenzene
057 2-nitrophenol
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
062 N-nitrosodiphenylamine
063 N-nitrosodi-n-propylamine
064 Pentachlorophenol
065 Phenol
085 Tetrachloroethylene
086 Toluene
088 Vinyl chloride (chloroethylene)
089 Aldrin
090 Dieldrin
091 Chlordane (technical mixture and metabolites)
092 4,4-DDT
093 4,4-DDE (p,p-DDX)
094 4,4-DDD (p,p-TDE)
095 Alpha-endosulfan
096 Beta-endosulfan
097 Endosulfan sulfate
098 Endrin
099 Endrin aldehyde
100 Heptachlor
101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
102 Alpha-BHC
103 Beta-BHC
104 Gamma-BHC (lindane)
105 Delta-BHC (PCB-polychlorinated biphenyls)
106 PCB-1242 (Arochlor 1242)
107 PCB-1254 (Arochlor 1254)
108 PCB-1221 (Arochlor 1221)
109 PCB-1232 (Arochlor 1232)
110 PCB-1248 (Arochlor 1248)
111 PCB-1260 (Arochlor 1260)
112 PCB-1016 (Arochlor 1016)
113 Toxaphene
114 Antimony
115 Arsenic
116 Asbestos
117 Beryllium
123 Mercury
125 Selenium
126 Silver
127 Thallium
129 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)

(c) Subpart C—Aluminum Basis Material Subcategory

001 Acenaphthene

002 Acrolein
003 Acrylonitrile
005 Benzidine
006 Carbon tetrachloride (tetrachloromethane)
007 Chlorobenzene
008 1,2,4-trichlorobenzene
009 Hexachlorobenzene
010 1,2-dichloroethane
011 1,1,1-trichlorethane
012 Hexachloroethane
013 1,1-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
016 Chloroethane
017 Bis (chloromethyl) ether
018 Bis (2-chloroethyl) ether
019 2-chloroethyl vinyl ether (mixed)
020 2-chloronaphthalene
021 2,4,6-trichlorophenol
022 Parachlorometa cresol
023 Chloroform (trichloromethane)
024 2-chlorophenol
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3-dichlorobenzidine
029 1,1-dichloroethylene
030 1,2-trans-dichloroethylene
031 2,4-dichlorophenol
032 1,2-dichloropropane
033 1,2-dichloropropylene (1,3-dichloropropene)
034 2,4-dimethylphenol
035 2,4-dinitrotoluene
036 2,6-dinitrotoluene
037 1,2-diphenylhydrazine
038 Ethylbenzene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 Bis (2-chloroisopropyl) ether
043 Bis (2-chloroethoxy) methane
045 Methyl chloride (dichloromethane)
046 Methyl bromide (bromomethane)
047 Bromoform (tribromomethane)
048 Dichlorobromomethane
049 Trichlorofluoromethane
050 Dichlorodifluoromethane
051 Chlorodibromomethane
052 Hexachlorobutadiene
053Hexachloromyclopentadiene
054 Isophorone
056 Nitrobenzene
057 2-nitrophenol
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
062 N-nitrosodiphenylamine
063 N-nitrosodi-n-propylamine
064 Pentachlorophenol
065 Phenol
088 Vinyl chloride (chloroethylene)
089 Aldrin
090 Dieldrin
091 Chlordane (technical mixture and metabolites)
092 4,4-DDT
093 4,4-DDE (p,p-DDX)
094 4,4-DDD (p,p-TDE)
095 Alpha-endosulfan
096 Beta-endosulfan
097 Endosulfan sulfate
098 Endrin
099 Endrin aldehyde
100 Heptachlor
101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
102 Alpha-BHC
103 Beta-BHC
104 Gamma-BHC (lindane)
105 Delta-BHC (PCB-poly-chlorinated biphenyls)
106 PCB-1242 (Arochlor 1242)
107 PCB-1254 (Arochlor 1254)
108 PCB-1221 (Arochlor 1221)
109 PCB-1232 (Arochlor 1232)
110 PCB-1248 (Arochlor 1248)
111 PCB-1260 (Arochlor 1260)
112 PCB-1016 (Arochlor 1016)
113 Toxaphene
114 Antimony
115 Arsenic
116 Asbestos
117 Beryllium
123 Mercury
125 Selenium
126 Silver
127 Thallium
129 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)

Appendix D.—Toxic Pollutants Detected Below the Nominal Quantification Limit

(a) Subpart A—Steel Basis Material Subcategory

004 Benzene
038 Ethylbenzene
044 Methylene chloride (dichloromethane)
071 Dimethyl phthalate
085 Tetrachloroethylene
086 Toluene
123 Mercury

(b) Subpart B—Galvanized Basis Material Subcategory

069 Di-n-octyl phthalate
071 Dimethyl phthalate

(c) Subpart C—Aluminum Basis Material Subcategory

004 Benzene
039 Fluoranthene
044 Methylene chloride (dichloromethane)
055 Naphthalene
069 Di-n-octyl phthalate
085 Tetrachloroethylene
086 Toluene
087 Trichloroethylene

Appendix E.—Toxic Pollutants Detected in Environmentally Insignificant Amounts

(a) Subpart A—Steel Basis Material Subcategory

011 1,1,1-trichlorethane
013 1,1-dichloroethane
034 2,4-dimethylphenol
054 Isophorone
055 Naphthalene
065 Phenol
066 Bis(2-ethylhexyl)phthalate
067 Butyl benzyl phthalate
068 Di-N-Butyl Phthalate
069 Di-n-octyl phthalate
070 Diethyl Phthalate
114 Antimony
115 Arsenic
120 Copper
126 Silver

(b) Subpart B—Galvanized Basis Material Subcategory

011 1,1,1-trichlorethane
029 1,1-dichloroethylene
030 1,2-trans-dichloroethylene
054 Isophorone
055 Naphthalene
066 Bis(2-ethylhexyl)phthalate
067 Butyl benzyl phthalate
068 Di-N-Butyl Phthalate
070 Diethyl Phthalate

(c) Subpart C—Aluminum Basis Material Subcategory

066 Bis(2-ethylhexyl)phthalate
067 Butyl benzyl phthalate
068 Di-N-Butyl Phthalate
070 Diethyl Phthalate
071 Dimethyl phthalate
072 1,2-benzanthracene (benzo(a)anthracene)
073 Benzo(a)pyrene (3,4,benzopyrene)
074 3,4-Benzofluoranthene (benzo(b)fluoranthene)
075 11,12-benzofluoranthene (benzo(b)fluoranthene)
076 Chrysene
077 Acenaphthylene
078 Anthracene
079 1,12-benzoperylene (benzo(ghi)perylene)
080 Fluorene
081 Phenanthrene
082 1,2,5,6-dibenzanthracene (dibenzo(,h)anthracene)
083 Indeno(1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)
084 Pyrene
124 Nickel

EPA proposes to add Part 465 to Title 40 of the Code of Federal Regulations to read as follows:

PART 465—COIL COATING POINT SOURCE CATEGORY

General Provisions

Subpart A—Steel Basis Material Subcategory

Subpart B—Galvanized Basis Material Subcategory

Subpart C—Aluminum Basis Material Subcategory

Authority: Sections 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the 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

§ 465.01 Applicability.

This part applies to any coil coating facility which discharges a pollutant to waters of the United States or which introduces pollutants to a publicly owned treatment works.

§ 465.02 General definitions.

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

(a) "Coil" means a strip of basis material rolled into a roll for handling.

(b) "Coil coating" means the process of converting basis material strip into coated stock. Usually cleaning, conversion coating, and painting are performed on the basis material. This regulation covers processes which perform any two or more of the three operations.

(c) "Basis material" means the coiled strip which is processed.

(d) "Area processed" means the area actually exposed to process solutions. Usually this includes both sides of the metal strip.

(e) "Steel basis material" means cold rolled steel, hot rolled steel, and chrome, nickel and tin coated steel which are processed.

(f) "Galvanized basis material" means zinc coated steel, galvanized, brass and other copper base strip which is processed in coil coating.

(g) "Aluminum basis material" means aluminum, aluminum alloys and aluminum coated steels which are processed in coil coating.

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

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

(j) "NSPS" means new source performance standards under Section 306 of the Act.

(k) "PSES" means pretreatment standards for existing sources, under Section 306(b) of the Act.

(l) "PSNS" means pretreatment standards for new sources, under Section 306(c) of the Act.

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

§ 465.03 [Reserved]

Subpart A—Steel Basis Material Subcategory

§ 465.10 Applicability; description of the steel basis material subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from coil coating of steel basis material coils.

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

Except as provided in 40 CFR §§ 125.30–.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 A

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of area processed	
Cadmium	0.18 (0.036)	0.089 (0.018)
Chromium	5.42 (1.11)	1.95 (0.40)
Copper	5.78 (1.18)	2.34 (0.48)
Cyanide, Total	0.65 (0.13)	0.27 (0.055)
Lead	0.30 (0.061)	0.15 (0.03)
Nickel	4.27 (0.87)	3.23 (0.66)
Zinc	4.44 (0.91)	1.93 (0.39)
Iron	6.43 (1.32)	2.19 (0.45)
Oil and Grease	59.2 (12.1)	29.6 (6.07)
TSS	104. (21.2)	74.1 (15.2)
pH—Within the range of 7.5 to 10.0 at all times.		

§ 465.12 Effluent limitations representiong the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

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

Subpart A

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	mg/μ² (lb/1,000,000 ft²) of area processed	
Cadmium	0.050 (0.010)	0.024 (0.005)
Chromium	.33 (.067)	.12 (.025)
Copper	1.59 (.33)	64. (.13)
Cyanide, Total	.17 (.035)	.073 (.015)
Lead	.12 (.025)	.054 (.011)
Nickel	.78 (.16)	.35 (.072)
Zinc	.84 (.17)	.37 (.075)
Iron	2.64 (.54)	.90 (.18)
Oil and Grease	12.2 (2.49)	12.2 (2.49)

§ 465.13 New source performance standards.

Any new source subject to this subpart must achieve the follwoing performance standards:

(a) There shall be no discharge of wastewater pollutants from conversion coating operations.

(b) The discharge of wastewater pollutants from all coil coating operations other than conversion coating operations shall not exceed the values set forth below:

Subpart A

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	mg/μ^2 (lb/1,000,000 ft^2) of area processed	
Cadmium	0.014 (0.003)	0.007 (0.001)
Chromium	.094 (.019)	.035 (.007)
Copper	.46 (.094)	.19 (.038)
Cyanide, Total	.052 (.01)	.021 (.004)
Lead	.035 (.007)	.015 (.003)
Nickel	.22 (.046)	.1 (.021)
Zinc	.24 (.049)	.11 (.021)
Iron	.75 (.15)	.26 (.053)
Oil and Grease	3.49 (.72)	3.49 (.72)
TSS	5.24 (1.07)	3.49 (.72)

pH—Within the range of 7.5 to 10.0 at all times.

§ 465.14 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR § 403.13, an 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 provision of 40 CFR Part 403.6(c) and Appendix A, B.2.e requiring that pretreatment standards be established as concentration is set aside for this subpart. The mass wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

Subpart A

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	mg/μ^2 (lb/1,000,000 ft^2) of area processed	
Cadmium	0.050 (0.010)	0.022 (0.005)
Chromium	.33 (.067)	.12 (.025)
Copper	1.59 (.33)	.64 (.13)
Cyanide, Total	.18 (.037)	.073 (.015)
Lead	.12 (.025)	.054 (.011)
Nickel	.78 (.16)	.35 (.072)
Zinc	.84 (.17)	.37 (.075)

§ 465.15 Pretreatment standards for new sources (PSNS).

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 provision of 40 CFR Part 403(c) and Appendix A, B.2.e. requiring that pretreatment standards be established as concentration is set aside for this subpart. The mass wastewater pollutants in coil coating process watewater introduced into a POTW shall not exceed the following values:

Subpart A

Pollutant of pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	mg/m^2 (1b/1,000,000 ft^2) of area processed	
Cadmium	0.014 (0.003)	0.007 (0.001)
Chromium	.094 (.019)	.035 (.007)
Copper	.46 (.094)	.19 (.004)
Cyanide, Total	.052 (.01)	.021 (.004)
Lead	.035 (.007)	.015 (.003)
Nickel	.22 (.046)	.1 (.021)
Zinc	.24 (.049)	.11 (.021)

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

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

Subpart A

Pollutant of pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	mg/m^2 (1b/1,000,000 ft^2) of area processed	
Oil and Grease	12.2 (2.49)	12.2 (2.49)
TSS	18.2 (3.73)	12.2 (2.49)

pH—Within of 7.5 to 10.0 at all times.

Subpart B—Galvanized Basis Material Subcategory

§ 465.20 Applicability; description of the galvanized basis material subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from coil coating of galvanized basis material coils.

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

Except as provided in 40 CFR §§ 125.30–.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 practical control technology currently available:

Subpart B

Pollutant of pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	mg/m^2 (1b/1,000,000 ft^2) of area processed	
Cadmium	0.2 (0.041)	0.1 (0.021)
Chromium	6.13 (1.26)	2.21 (.45)
Copper	6.53 (1.34)	2.65 (.54)
Cyanide, Total	.74 (.15)	.3 (.062)
Lead	.34 (.069)	.17 (.034)
Nickel	4.82 (.99)	3.65 (.75)
Zinc	5.02 (1.03)	2.18 (.45)
Iron	7.27 (1.49)	2.48 (.51)
Oil and Grease	67.0 (13.7)	33.5 (6.86)
TSS	117.2 (24.)	83.7 (17.1)

pH—Within of 7.5 to 10.0 at all times.

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

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

Subpart B

Pollutant of pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	mg/m^2 (1b/1,000,000 ft^2) of area processed	
Cadmium	0.049 (0.010)	0.022 (0.005)
Chromium	.33 (.067)	.12 (.025)
Copper	1.58 (.32)	.64 (.13)
Cyanide, Total	.17 (.035)	.072 (.015)
Lead	.12 (.025)	.053 (.011)
Nickel	.77 (.16)	.35 (.072)
Zinc	.83 (.17)	.36 (.074)
Iron	2.61 (.53)	.89 (.18)
Oil and Grease	12.1 (2.47)	12.1 (2.47)

§ 465.23 New source performance standards (NSPS).

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

(a) There shall be no discharge of wastewater pollutants from conversion coating operations.

(b) The discharge of wastewater pollutants from all coil coating operations other than coversion coating operations shall not exceed the values set forth below:

Subpart B

Pollutant or pollutant property	NSPS Maximum for any 1 day	NSPS Average of daily values for 30 consecutive sampling days
	mg/m² (lb/1,000,000 ft²) of area processed	
Cadmium	0.018 (0.004)	0.009 (0.002)
Chromium	.12 (.024)	.043 (.009)
Copper	.56 (.12)	.23 (.047)
Cyanide, Total	.06 (.012)	.026 (.005)
Lead	.043 (.009)	.019 (.004)
Nickel	.28 (.056)	.12 (.026)
Zinc	.3 (.061)	.13 (.026)
Iron	.93 (.19)	.32 (.065)
Oil and Grease	4.29 (.088)	4.29 (.88)
TSS	6.44 (1.32)	4.29 (.88)

pH—Within the range of 7.5 to 10.0 at all times.

§ 465.24 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR § 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 provision of 40 CFR Part 403.6(c) and Appendix A, B.2.e requiring that pretreatment standards be established as concentration is set aside for this subpart. The mass wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

Subpart B

Pollutant or pollutant property	PSES Maximum for any 1 day	PSES Average of daily values for 30 consecutive sampling days
	mg/m² (lb/1,000,000 ft²) of area processed	
Cadmium	0.049 (0.010)	0.022 (0.005)
Chromium	.33 (.067)	.12 (.025)
Copper	1.58 (.32)	.64 (.13)
Cyanide, Total	.18 (.035)	.072 (.015)
Lead	.12 (.025)	.053 (.011)
Nickel	.77 (.16)	.35 (.072)
Zinc	.83 (.17)	.36 (.074)

§ 465.25 Pretreatment standards for new sources (PSNS).

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 provision of 40 CFR Part 403(c) and Appendix A, B.2.e requiring that pretreatment standards be established as concentration is set aside for this subject. The mass wastewater pollutants in coil coating process waste water introduced into a POTW shall not exceed the following values:

Subpart B

Pollutant or pollutant property	PSNS Maximum for any 1 day	PSNS Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of area processed	
Cadmium	0.018 (0.004)	0.008 (0.002)
Chromium	.12 (.024)	.043 (.009)
Copper	.56 (.12)	.23 (.047)
Cyanide, Total	.06 (.012)	.026 (.005)
Lead	.043 (.009)	.019 (.004)
Nickel	.28 (.056)	.12 (.026)
Zinc	.3 (.061)	.13 (.026)

§ 465.26 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

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

Subpart B

Pollutant or pollutant property	BCT effluent limitations Maximum for any 1 day	BCT effluent limitations Average of daily values for 30 consecutive sampling days
	mg/m² (lb/1,000,000 ft²) of area processed	
Oil and Grease	12.1 (2.47)	12.1 (2.47)
TSS	18.1 (3.70)	12.1 (2.47)

pH—Within the range of 7.5 to 10.0 at all times.

Subpart C—Aluminum Basis Material Subcategory

§ 465.30 Applicability; description of the aluminum basis material subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from coil coating of aluminum basis material coils.

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

Except as provided in 40 CFR §§ 125.30–.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

Pollutant or pollutant property	BPT effluent limitations Maximum for any 1 day	BPT effluent limitations Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of the area processed	
Cadmium	0.17 (0.035)	0.086 (0.018)
Chromium	5.24 (1.07)	1.89 (.39)
Copper	5.58 (1.14)	2.26 (.46)
Cyanide, Total	.63 (.13)	.26 (.053)
Lead	.29 (.059)	.14 (.029)
Nickel	4.12 (.84)	3.12 (.64)
Zinc	4.29 (.88)	1.86 (.38)
Aluminum	1.83 (.38)	.74 (.15)
Iron	6.21 (1.27)	1.86 (.38)
Oil and Grease	57.3 (11.7)	28.6 (5.86)
TSS	100.0 (20.5)	71.6 (14.7)

pH—Within the range of 7.5 to 10.0 at all times.

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

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

Subpart C

Pollutant or pollutant property	BAT effluent limitations Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of the area processed	
Cadmium	0.040 (0.008)	0.02 (0.004)
Chromium	.26 (.054)	.097 (.02)
Copper	1.27 (.26)	.52 (.11)
Cyanide, Total	.14 (.028)	.058 (.012)
Lead	.097 (.02)	.043 (.009)
Nickel	.62 (.13)	.28 (.058)
Zinc	.67 (.14)	.29 (.06)
Aluminum	.44 (.09)	.18 (.036)
Iron	2.11 (.43)	.72 (.15)
Oil and Grease	9.73 (1.99)	9.73 (1.99)

§ 465.33 New source performance standards (NSPS).

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

There shall be no discharge of waste water pollutants from conversion coating operations.

The discharge of wastewater pollutants from all coal coating operations other than conversion coating operations shall not exceed the values set forth below:

Subpart C

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of area processed	
Cadmium	0.015 (0.003)	0.008 (0.002)
Chromium	.1 (.021)	.038 (.008)
Copper	.5 (.1)	.2 (.041)
Cyanide, Total	.057 (.012)	.023 (.005)
Lead	.038 (.008)	.017 (.003)
Nickel	.24 (.05)	.11 (.023)
Zinc	.26 (.053)	.11 (.023)
Aluminum	.17 (.035)	.068 (.014)
Iron	.82 (.17)	.28 (.06)
Oil and Grease	3.78 (.77)	.378 (.77)
TSS	5.67 (.116)	.378 (.77)

pH—Within the range of 7.5 to 10.0 at all times.

§ 465.34 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 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 provision of 40 CFR Part 403.6(c) and Appendix A, B.2.e requiring that pretreatment standards be established as concentration is set aside for this subpart. The mass wastewater pollutants in coil coating process wastewater.

Subpart C

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of area processed	
Cadmium	0.040 (0.008)	0.02 (0.004)
Chromium	.26 (.054)	.097 (.02)
Copper	1.27 (.26)	.52 (.11)
Cyanide, Total	.14 (.028)	.058 (.012)
Lead	.097 (.02)	.043 (.009)
Nickel	.62 (.13)	.28 (.058)
Zinc	.67 (.14)	.29 (.06)

§ 465.35 Pretreatment standards for new sources (PSNS).

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 provision of 40 CFR Part 403(c) and Appendix A, B.2.e requiring that pretreatment standards be established as concentration is set aside for this subpart. The mass wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

Subpart C

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of area processed	
Cadmium	0.015 (0.003)	0.008 (0.002)
Chromium	.1 (.021)	.038 (.008)
Copper	.5 (.1)	.2 (.041)
Cyanide, Total	.057 (.012)	.023 (.005)
Lead	.038 (.008)	.017 (.003)
Nickel	.24 (.05)	.11 (.023)
Zinc	.26 (.053)	.11 (.023)

§ 465.36 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

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

Subpart C

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive sampling days
	Mg/m² (lb/1,000,000 ft²) of area processed	
Oil and Grease	9.73 (1.99)	9.73 (1.99)

pH—Within the range of 7.5 to 10.0 at all times.

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