

of pollutants or pollutant properties controlled by this subsection which may be introduced into a publicly owned treatment works by a source subject to the provisions of this subpart.

Pollutant or pollutant property:	<i>Pretreatment standard—maximum for any 1 d (milligrams per liter)</i>
Ammonia (as N)-----	100
Oil and grease-----	100

(c) Any owner or operator of any source to which the pretreatment standards required by § 419.24(a) are applicable, shall be in compliance with such standards upon the effective date of such standards. The time for compliance with standards required by § 419.24 (b) shall be within the shortest time but not later than three years from the effective date of such standards.

§ 419.34 Pretreatment standards for existing sources.

For the purpose of establishing pretreatment standards under Section 307 (b) of the Act for a source within the petrochemical subcategory, the provisions of 40 CFR 128 shall not apply. The pretreatment standards for an existing source within the petrochemical subcategory are set forth below.

(a) No pollutant (or pollutant property) introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works.

(2) Pollutants which will cause corrosive structural damage to treatment works, but in no case pollutants with a pH lower than 5.0, unless the works is designed to accommodate such pollutants.

(3) Solid or viscous pollutants in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.

(4) Pollutants at either a hydraulic flow rate or pollutant flow rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

(b) In addition to the general prohibitions set forth in paragraph (a) of this section, the following pretreatment standard establishes the quality or quantity of pollutants or pollutant properties controlled by this subsection which may be introduced into a publicly owned treatment works by a source subject to the provisions of this subpart.

Pollutant or pollutant property:	<i>Pretreatment standard—maximum for any 1 d (milligrams per liter)</i>
Ammonia (as N)-----	100
Oil and grease-----	100

(c) Any owner or operator of any source to which the pretreatment standards required by § 419.34(a) are applicable, shall be in compliance with such standards upon the effective date of such standards. The time for compliance with standards required by § 419.34(b) shall be within the shortest time but not later than three years from the effective date of such standards.

§ 419.44 Pretreatment standards for existing sources.

For the purpose of establishing pretreatment standards under section 307 (b) of the Act for a source within the lube subcategory, the provisions of 40 CFR 128 shall not apply. The pretreatment standards for an existing source within the lube subcategory are set forth below.

(a) No pollutant (or pollutant property) introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works.

(2) Pollutants which will cause corrosive structural damage to treatment works, but in no case pollutants with a pH lower than 5.0, unless the works is designed to accommodate such pollutants.

(3) Solid or viscous pollutants in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.

(4) Pollutants at either a hydraulic flow rate or pollutant flow rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

(b) In addition to the general prohibitions set forth in paragraph (a) of this section, the following pretreatment standard establishes the quality or quantity of pollutants or pollutant properties controlled by this subsection which may be introduced into a publicly owned treatment works by a source subject to the provisions of this subpart.

Pollutant or pollutant property:	<i>Pretreatment standard—maximum for any 1 day (milligrams per liter)</i>
Ammonia (as N)-----	100
Oil and grease-----	100

(c) Any owner or operator of any source to which the pretreatment standards required by § 419.44(a) are applicable, shall be in compliance with such standards upon the effective date of such standards. The time for compliance with standards required by § 419.44(b) shall be within the shortest time but not later than three years from the effective date of such standards.

§ 419.54 Pretreatment standards for existing sources.

For the purpose of establishing pretreatment standards under Section 307 (b) of the Act for a source within the integrated subcategory, the provisions of 40 CFR 128 shall not apply. The pretreatment standards for an existing source within the integrated subcategory are set forth below.

(a) No pollutant (or pollutant property) introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works.

(2) Pollutants which will cause corrosive structural damage to treatment works, but in no case pollutants with a pH lower than 5.0, unless the works is designed to accommodate such pollutants.

(3) Solid or viscous pollutants in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.

(4) Pollutants at either a hydraulic flow rate or pollutant flow rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

(b) In addition to the general prohibitions set forth in paragraph (a) of this section, the following pretreatment standard establishes the quality or quantity of pollutants or pollutant properties controlled by this subsection which may be introduced into a publicly owned treatment works by a source subject to the provisions of this subpart.

Pollutant or Pollutant property:	<i>Pretreatment standard—maximum for any 1 d (milligrams per liter)</i>
Ammonia (as N)-----	100
Oil and grease-----	100

(c) Any owner or operator of any source to which the pretreatment standards required by § 419.54(a) are applicable, shall be in compliance with such standards upon the effective date of such standards. The time for compliance with standards required by § 419.54(b) shall be within the shortest time but not later than three years from the effective date of such standards.

[FR Doc.77-8549 Filed 3-22-77;8:46 am]

[FRL 702-8]

PART 423—STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY PRETREATMENT STANDARDS FOR EXISTING SOURCES

Interim Regulations

Notice is hereby given that pretreatment standards for existing sources set forth in interim final form below are

promulgated by the Environmental Protection Agency (EPA or Agency). On October 8, 1974, EPA promulgated a regulation adding Part 423 to Chapter 40 of the Code of Federal Regulations (39 FR 36186). That regulation with subsequent amendments established effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources for the steam electric power generating point source category. The regulation set forth below will amend 40 CFR 423 steam electric power generating point source category by adding section 423.14 to the general unit subcategory (Subpart A), § 423.24 to the small unit subcategory (Subpart B), § 423.34 to the old unit subcategory (Subpart C) and § 423.44 to the area runoff subcategory (Subpart D) pursuant to section 307(b) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 and 1317(b); 86 Stat. 816 et seq.; Pub. L. 92-500) (the Act).

(a) *Legal Authority.* Section 307(b) of the Act requires the establishment of pretreatment standards for pollutants introduced into publicly owned treatment work and 40 CFR 128 establishes that the Agency will propose specific pretreatment standards at the time effluent limitations are established for point source discharges. Pretreatment standards for the steam electric power generating point source category were proposed October 8, 1974 (39 FR 36210). Sections 423.14, 423.24, 423.34 and 423.44 set forth below establish pretreatment standards for existing sources within the general unit subcategory (Subpart A), small unit subcategory (Subpart B), old unit subcategory (Subpart C) and the area runoff subcategory (Subpart D) of the steam electric power generating point source category.

(b) *Summary and Basis of Pretreatment Standards for Existing Sources.*

The regulation set forth below establishes pretreatment standards for pollutants introduced to publicly owned treatment works from existing sources within the subparts set forth in paragraph (a) above. This regulation establishes two sets of pretreatment standards under the authority of section 307 (b) of the Act. The first set, known as prohibited discharge standards, are designed to prevent inhibition or interference with the municipal treatment works by prohibiting the discharge of pollutants of such nature or quantity that the mechanical or hydraulic integrity of the publicly owned treatment works is endangered. These prohibited discharge standards with minor changes are identical to the prohibitions contained in the general pretreatment regulation now found at 40 CFR 128.131. The second set, known as categorical pretreatment standards, apply to existing sources in this specific industrial subcategory. These standards contain numerical limitations based upon available technologies to prevent the discharge of any pollutant into POTW which may interfere with, pass through or otherwise be incompatible with such works.

With respect to the subcategories governed by this regulation, the general pretreatment requirements set forth in 40 CFR Part 128 are superseded. Those requirements were proposed on July 19, 1973 (38 FR 19236) and published in final form on November 8, 1973 (38 FR 30982). They limit the discharge of pollutants which pass through or interfere with the operation of publicly owned treatment works, but do not set numerical limitations or explicitly list particular pollutants to be regulated. The provisions of the present regulation overlap to a considerable degree with the language of the general pretreatment requirements. For the purpose of clarity, sources affected by the present regulation are exempted from 40 CFR Part 128. In its place, the specific pretreatment standards applicable to each subcategory are set forth in detail below as the pretreatment standard for each subcategory. This decision is also warranted because new, general pretreatment regulations have been proposed (42 FEDERAL REGISTER 6476 et seq., February 2, 1977), which will revoke and replace 40 CFR Part 128 upon promulgation. When the general pretreatment regulations are promulgated, these standards will be reviewed for consistency with the general policy stated therein.

A supplemental technical study was made to determine the levels of pretreatment requirements which are appropriate considering the limitations established for direct dischargers under sections 301 and 304 and the requirements of section 307(b). The findings of this study and technical rationale for the establishment of pretreatment standards are summarized in Attachment A to this preamble.

The Agency has determined that control of copper, nickel and zinc from the metal cleaning wastes and oil and grease from the plant's combined discharge to the POTW would be required. These metals from the metal cleaning wastes were found to be incompatible because (1) they can interfere with the operation of the POTW, (2) they may not be adequately treated, and (3) they pose a threat to the receiving waters beyond and to plants grown on soil treated with sludge from the POTW. Pretreatment standard for copper of 1 mg/l is imposed because this level can be achieved via the application of best practicable pretreatment technology (lime precipitation). Standards for nickel and zinc are not imposed because they are indirectly controlled through the regulation of copper. Unlike the metals, oil and grease of petroleum origin are biodegradable at low concentrations. Discharge of oil and grease of petroleum origin exceeding 100 mg/l from a power plant could (1) interfere with the operation of a POTW and (2) be inadequately treated. The power plants can comply with the oil and grease standard of 100 mg/l by employing good housekeeping techniques.

The report entitled "Supplement for Pretreatment to the Development Document for the Steam Electric Power Generating Point Source Category" details

the additional technical analysis undertaken in support of the interim final regulation set forth herein and is available for inspection at the EPA Public Information Reference Unit, Room 2922 (EPA Library), Waterside Mall, 401 M St., S.W., Washington, D.C. 20460, at all EPA Regional offices and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions known to be affected by the interim final regulation or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the Environmental Protection Agency, Effluent Guidelines Division, Washington, D.C. 20460, Attention: Distribution Officer, WH-552.

When this regulation is promulgated in final rather than interim form, revised copies of the technical documentation will be available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Copies of the economic analysis document will be available through the National Technical Information Service, Springfield, VA. 22151.

(c) *Public Participation.* Prior to this publication, many agencies and groups were consulted and given an opportunity to participate in the development of these standards. Immediately prior to this rulemaking the results of this study were circulated for additional comments to persons known to be interested. A summary of public participation in this rulemaking, public comments and the Agency's response and reconsideration of these is contained in Appendix B of this preamble.

(d) *Economic Impact and Inflationary Impact Analysis.* The economic and financial impacts are expected to be minimal. The utilities affected by the regulation should have little or no trouble in obtaining the capital necessary for the construction of the pretreatment facilities. A worst-case estimate of the total capital expenditures for pretreatment equipment is \$13.6 million, or about 0.2 percent of the affected utilities' 1976 annual operating revenues. The annual revenue requirements are projected to increase the cost of electricity by 0.11 mills/kwh at the affected plants, or a 0.27 percent increase over the average consumer charge of 39.5 mills/kwh projected for 1980 (in 1976 dollars).

In general, this regulation affects many small old power plants which, although they may be able to finance the necessary equipment, may seek methods other than pretreatment to meet the standards. These methods include trucking wastes away, dumping wastes to an evaporation pond, or closing the plant. This last alternative is only likely to exist at a small, financially strained, privately owned utility with abnormally

high pretreatment equipment costs. Based on the data available, no such case has been found, although it may exist. Most of the small utilities are municipally owned and have the option of assessing their customers, issuing tax-free bonds, and setting rates to guarantee the ability to finance pretreatment equipment expenditures.

As noted below, the utility industry disagrees with the engineering cost estimates provided by the engineering contractor. The final economic report will incorporate the utilities' own engineering cost estimates, but this is not expected to significantly change the conclusions reached above.

It is hereby certified that the economics and inflationary effects of this proposal have been carefully evaluated in accordance with Executive Order 11821.

(e) *Compliance Date.* Section 301 of the Act anticipates that pretreatment standards for existing sources would be established and compliance would be required before July 1, 1977 while section 307(b) specified "a time for compliance not to exceed three years from the date of promulgation" of the standard. In view of this conflict of statutory language and the fact that the pretreatment standards are only now being promulgated, the Agency believes that the compliance deadline as set forth in section 307(b) should apply. The time for compliance with the categorical pretreatment standards will be within the shortest reasonable time but not later than three years from the effective date. However, this does not preclude a Regional Administrator or local or state authority from establishing a more expeditious compliance date on an individual basis where it is appropriate. Compliance with the prohibited discharge standards is required immediately upon the effective date of these regulations, since these standards are essentially the same as 40 CFR 128.131 and since the deadline for compliance with 40 CFR 128.131 has passed.

The Agency is subject to an order of the United States District Court for the District of Columbia entered in *Natural Resources Defense Council (NRDC) v. EPA*, 8 E.R.C. 2120 (D.D.C. 1976) which requires the promulgation of pretreatment standards for this industry category no later than February 15, 1977. The court order which was entered by the United States Court for the District of Columbia on June 8, 1976, following a consent agreement among the parties to four lawsuits, placed EPA on rigid timetables for the preparation and publication of water pollution regulations for 21 broad industry categories and 65 families of water pollutants.

It has not been practical to develop and republish a regulation for this category in proposed form and to provide a 30-day comment period within the time constraints imposed by the court order referred to above. Accordingly, the Agency has determined pursuant to 5 USC 553(b) that notice and comment on the interim final regulation prior to pro-

mulgation would be impractical and contrary to the public interest. Good cause is also found for the regulation to become effective immediately upon publication.

Interested persons are encouraged to submit written comments. Comments should be submitted in triplicate to the Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460. Attention: Distribution Officer, WH-552. Comments on all aspects of the regulation are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which are available, or which may be relied upon by the Agency, comments should identify and, if possible, provide any additional data which may be available and should indicate why such data suggest amendment or modification of the regulation. In the event comments address the approach taken by the Agency in establishing pretreatment standards, EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of section 307(b) of the Act.

A copy of all public comments will be available for inspection and copying at the EPA Public Information Reference Unit, Room 2922 (EPA Library) Waterside Mall, 401 M Street, S.W., Washington, D.C. 20460. A copy of the technical study and economic study referred to above, and certain supplementary materials will be maintained at this location for public review and copying. The EPA information regulation, 40 CFR Part 2, provides that a reasonable fee may be charged for copying.

All comments received within sixty days will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202).

In addition, section 8 of the FWPCA authorizes the Small Business Administration, through its economic disaster loan program, to make loans to assist any small business concerns in effecting additions to or alterations in their equipment, facilities, or methods of operation so as to meet water pollution control requirements under the FWPCA, if the concern is likely to suffer a substantial economic injury without such assistance.

For further details on this Federal loan program write to EPA, Office of Analysis and Evaluation, WH-586, 401 M St., S.W., Washington, D.C. 20460.

In consideration of the foregoing, 40 CFR 423 is hereby amended as set forth below.

Dated: March 11, 1977.

DOUGLAS M. COSTLE,
Administrator.

ATTACHMENT A

TECHNICAL SUMMARY AND BASIS
FOR REGULATIONS

This attachment summarizes the basis of interim final pretreatment standards for existing sources.

(1) *General Methodology.* The pretreatment standards set forth herein were developed in the following manner. A detail survey was conducted to determine the number of plants affected by the pretreatment standards. Some of the plants from this population were visited and sampled. Plants were visited to determine whether significant differences exist between these power plants and power plants which discharge directly into navigable waters. Further, various waste streams were sampled from representative power plants to determine the type and level of pollutants. In defining the characteristics of various waste streams, data from the site visits and sampling program were used in conjunction with information in the development document for effluent limitations guidelines for this industry dated October 1974 and other sources. The compatibility of each raw waste characteristic with municipal treatment works was then considered. The constituents of the wastewaters which should be subject to limitations were identified.

The control and treatment technologies were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which is existent or capable of being designed. It also included an identification of the effluent level resulting from the application of each of the technologies. In addition, the non-water quality environmental impact, such as the effects of the application of such technologies upon other pollution problems, were identified. The energy requirements of the control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology reflected the application of the recommended pretreatment technologies. In identifying such technologies, various factors were considered. These included the total cost of application of technology, the age and size of facilities involved, the fuel used, the mode of operations, the engineering aspects of the application of various types of control techniques, non-water quality environmental factors (including energy requirements) and other factors.

The data upon which the above analysis was performed included EPA sampling and inspections, consultant and EPA reports, industry submissions, and other sources.

(2) *Summary of conclusions with respect to the general unit subcategory (Subpart A), small unit subcategory (Subpart B), old unit subcategory (Subpart C) and area runoff subcategory (Subpart D) of the steam electric power generating point source category.*

(i) *Categorization.* For the purpose of establishing pretreatment standards, the subcategorizations in the effluent limitations guidelines regulations dated October 8, 1974 are determined to be applicable. Many factors were considered in

this determination, but the largest contributing factors are (1) the production process, (2) the type and level of pollutants, (3) the treatability of wastewaters, (4) the cost of the application of such technologies.

(ii) Waste characteristics. There are two different types of waste produced by steam electric power plants. The first type consists of the chemical wastes which originate from different processes and operations within a plant. These wastes are highly variable from plant to plant, depending on fuel, raw water quality, processes used in the plant and other factors. The known significant pollutants and pollutant properties from these wastes include pH, total suspended solids, iron, copper, nickel, zinc, chromium, oil and grease, and chlorine.

The second type of waste consists of the waste heat produced by the plant and disposed to the environment through the cooling water system.

(iii) Origins of wastewater pollutants. Wastewater streams from power plants can be classified into (1) metal cleaning wastes, (2) cooling system wastes, (3) boiler blowdown, (4) ash transport water, and (5) low volume waste.

Metal cleaning wastes are those wastes which are derived from cleaning of metal process equipments. These equipments include, but are not limited to, boiler tube, boiler fireside, and air preheater. Pollutants and pollutant properties in these wastes include oil and grease, iron, copper, nickel, zinc, total suspended solids, chromium and pH.

All condenser cooling systems can be classified as (1) once-through or (2) recirculating. Biocides such as chlorine or hypochlorites are usually added to once-through cooling water to minimize biological growth within the condenser and may, therefore, be discharged. The wastes from the recirculating cooling system include chemical additives (such as chlorine, hypochlorites and organic chromates) to control growth of organisms, chemical additives to inhibit corrosion (such as organic phosphates, chromates and zinc salts), and material present in the intake waters (but at a much higher concentration due to evaporative loss).

Boiler blowdown wastes normally have a high pH and high dissolved solids (except high pressure boiler). Phosphates which are used to precipitate the calcium and magnesium salts are also found in boiler blowdown.

One of the products of the combustion of coal and oil is ash. These ashes are sometimes transported by water to a settling pond or basin. Some or all of the water from the settling pond or basin may be discharged. The chemical characteristic of ash handling wastewater is basically a function of the fuel burned. The pollutants and pollutant properties in the ash handling wastes from coal fired plants include TSS, pH, iron, aluminum, mercury and oil and grease. TSS, pH, oil and grease, and sometimes vanadium are found in the ash handling wastes from oil fired plants.

Area runoff are the product of drainage from rainfall. This waste stream may

contain TSS and oil and grease. Runoff from coal pile may also contain iron, high or low pH (depending upon the type of coal), copper, zinc and manganese.

Low volume wastes include ion exchange water treatment, water treatment evaporative blowdown, laboratory and sampling streams, floor drainage, cooling tower basin cleaning, ash pollution device effluent and any aqueous power plant wastes which have not been mentioned. These wastes contain primarily TSS and oil and grease.

(iv) Treatment and control technologies. Wastewater treatment and control technologies have been studied for this industry to determine what is the best pretreatment technology.

The following discussions of treatment technologies provide the bases for the pretreatment standard. These discussions do not preclude the selection of other wastewater treatment alternatives which provide equivalent or better levels of treatment.

(a) Oil and Grease. Oil skimmers have been demonstrated to reduce oil and grease concentration to less than 20 mg/l, far less than the limitation established here. Most, if not all, of the power plants can comply with the 100 mg/l limitation if they employ good housekeeping techniques.

(b) Copper. The treatment of metal cleaning wastes would consist of oil and grease skimming in the equalization tank, lime addition in the reactor (to attain a pH level of approximately 9) and sedimentation and clarification (to achieve a total suspended solids of 30 mg/l). Effluent concentrations of 1 mg/l total copper are achievable by the application of this technology. Numerous chemicals are also removed by this treatment. Pollutants significantly removed by this treatment include nickel, zinc and chromates.

It is emphasized that in-plant measures to recycle and reuse wastewater to minimize discharge to municipal treatment works are included as part of the recommended pretreatment technology.

The pretreatment technology described above for the removal of copper requires disposal of the pollutants removed from wastewaters in the form of sludge. In order to insure long-term protection of the environment, special consideration of disposal sites must be made. All landfill sites where such hazardous wastes are disposed should be selected so as to prevent horizontal and vertical migration of these contaminants to ground or surface waters. In cases where geologic conditions may not reasonably ensure this, adequate legal and mechanical precautions (e.g., impervious liners) should be taken to ensure long term protection to the environment from hazardous materials. Where appropriate, the location of solid hazardous materials disposal sites should be permanently recorded in the appropriate office of legal jurisdiction.

(v) Determination of incompatibility. Characteristics of waste streams described above were analyzed for incompatibility with POTW. Factors considered in determining incompatibility include (1) susceptibility of the pollutant to treatment by a secondary treatment sys-

tem, and (2) interference of the pollutant with the operation of the POTW.

Copper, nickel and zinc from the metal cleaning wastes were found to be incompatible because (1) they can interfere with the operation of the POTW, (2) they may not be adequately treated, and (3) they pose a threat to the receiving waters beyond and to plants grown on soil treated with sludge from the POTW. Pretreatment standard for copper from the metal cleaning wastes of 1 mg/l is imposed. Limitations are not imposed for nickel and zinc because they are indirectly controlled through the regulation of copper. In certain cases, copper may not be present in significant quantity, but nickel and zinc will still be present in high concentrations. In such cases, it will be necessary for individual POTW operators to regulate nickel and zinc to levels which are achievable via lime precipitation.

Oil and grease from power plants are primarily petroleum based. This type of oil and grease is less biodegradable in secondary treatment plants than oil and grease of vegetable and animal origin. Pretreatment standard of 100 mg/l of oil and grease is imposed to ensure (1) the proper operation of the biological treatment system, (2) adequate treatment by the POTW, and (3) proper transport of wastes to the treatment system.

Pretreatment standard other than those described above and the general standards carried over from 40 CFR 128 is determined not to be necessary at the present time.

(vi) Cost estimates for control of wastewater pollutants. Cost information was obtained from engineering firms, available literature, development documents for effluent limitation guidelines (October, 1974) for this industry, and from plants contacted. User charge data were obtained from power plants and POTW.

(vii) Energy requirements and non-water quality environmental impacts. The major non-water quality consideration which may be associated with the recommended pretreatment technologies is the generation of metals-bearing solid wastes. In most cases, these wastes will be landfilled.

Other non-water quality aspects, including energy, noise and air pollution, will not be perceptibly affected.

(viii) Economic impact analysis. This section summarizes the economic and inflationary impacts of the pretreatment standards for the steam electric power industry.

Executive Order 11821 (November 27, 1974) requires that major proposals for legislation and promulgation of regulations and rules by Agencies of the executive branch be accompanied by a statement certifying that the inflationary impact of the proposal has been evaluated. The Administrator has directed that all regulatory actions which are likely to exceed any of the following four criteria will require certification.

1. Additional national annualized costs of compliance, including capital charges (interest and depreciation), will

total \$100 million within any calendar year by the attainment date, if applicable, or within five years of implementation.

2. Total additional cost of production of any major product is more than 5 percent of the selling price of the product.

3. Net national energy consumption will be increased by the equivalent of 25,000 barrels of oil a day (equal to 50×10^{12} BTU per year or 5×10^9 kilowatt-hours per year).

4. Additional annual demands are created or annual supply is decreased by more than 3 percent for any of the following materials by the attainment date, if applicable, or within five years of implementation: plate steel, tubular steel, stainless steel, scrap steel, aluminum, copper, manganese, magnesium, zinc, ethylene, ethylene glycol, liquified petroleum bases, ammonia, urea, plastics, synthetic rubber, or pulp.

The following table presents the costs of complying with the pretreatment standards.

Summary of impacts of pretreatment expenditures

[All figures in 1976 dollars]

	Worst case ¹	Best estimate ²
Capital cost.....	\$13,580,000	\$12,332,000
Total annual cost ³	4,874,000	4,456,000
Increase in electricity cost (mills/kwh).....	0.11	0.10
Increase in monthly residential bill ⁴09	.08

¹ All plants require pretreatment for all wastes.

² 42 plants do not need pretreatment equipment for metal cleaning wastes, but require equipment to pretreat low volume wastes.

³ Total annual costs include operating and maintenance costs at 50 pct capacity factor, and amortization of capital expenditures assuming 20-yr life and a capital structure of 55 pct long-term debt at 10 pct interest, 10 pct preferred stock at 10 pct dividend rate, and 35 pct common equity with a 14 pct return.

⁴ Assumes 1980 residential consumption of 10,110 kwh/year.

SOURCE "Financial Impact of Wastewater Pretreatment Standards on the Steam Electric Power Generating Industry," Temple, Barker, and Sloane, Jan. 4, 1977.

As indicated in the table above, the total national annualized costs of compliance for both of the pretreatment standards are well below \$100 million per year. The increase in selling price of 0.10 to 0.11 mills/kwh is an increase of 0.25 to 0.27 percent over the estimated 1980 national average consumer charge of 39.5 mills/kwh (1976 dollars). Increased energy consumption is expected to be nominal. No appreciable increase in demand or decrease in supply of any of the above-mentioned materials is expected. Thus, an inflationary impact statement is not necessary.

The utilities affected by the pretreatment regulations should have little or no trouble in obtaining the capital necessary for construction of the pretreatment facilities. The impacts are largest on the very small utilities, but since most are municipally owned, they can guarantee increased rates to pay for the equipment or to pay interest on any debt issued.

Based on this analysis, the effects on employment, industry growth, and in-

ternational trade are expected to be minimal.

ATTACHMENT B

SUMMARY OF PUBLIC PARTICIPATION

Prior to this publication, copies of the draft document were sent to industry trade groups, environmental interest groups, Federal agencies, State, local, and territorial pollution control agencies, interested parties and ESQWIAC (the Effluent Standards and Water Quality Information Advisory Committee established under section 515 of the Act. In addition, copies were sent to each power plant known to be discharging to a POTW. The recipients of the draft document were requested to comment on its technical accuracy and completeness. A public meeting was held on December 6, 1976, at EPA headquarters in Washington, D.C. at which interested parties were invited to express their views publicly. Public comments were also solicited when pretreatment standards were proposed in the FEDERAL REGISTER on October 8, 1974.

No comments were received on the pretreatment standards proposed on October 8, 1974. The following responded with comments regarding the adequacy of the draft document: Gibbs and Hill, Inc.; Olin Brass Company; R.W. Beck and Associates; Charles R. Velzy Associates, Inc.; Martin Marietta Corporation; Betz Laboratories, Inc.; Utility Water Act Group; Debevoise and Liberman; Department of Water and Power, the City of Los Angeles; Consolidated Edison of New York, Inc.; Tucson Gas and Electric Company; State Water Resources Control Board of the State of California; Department of Natural Resources, State of Michigan; U.S. Department of Agriculture (Rural Electrification Administration); Department of Commerce; and Federal Power Commission.

The primary issues raised by commenters during the development of pretreatment regulations for the steam electric power generating industry are as follows:

1. Some commenters suggested that the survey conducted for the draft supplement is inadequate to properly describe those power plants which discharge part or all of their wastes (other than sanitary waste) into publicly owned treatment works.

Of the estimated 98 electric power generating plants which discharge their wastes into POTW, 23 were visited and 8 were sampled. The plants which were visited or sampled were selected on the basis of age, fuel, size, geographical location, treatment practices, etc., and were judged to be representative of the 98 concerned power plants. The information from the survey showed that the pollutants generated by these power plants are similar to those of the direct dischargers. Therefore, data from the Development Document for Effluent Limitations Guidelines for this industry dated October, 1974, were also used where appropriate. The Agency feels that the survey is adequate.

2. Some commenters suggested that the time allotted for review of the Draft Supplement was inadequate.

The Draft Supplement was forwarded to the industry, Federal agencies and other interested parties for comment on November 19, 1976 and response was requested on December 6, 1976. The comment period allotted is shorter than normal. As explained in the transmittal letter attached with the Draft Supplement, the comment period was limited in order to meet the Court mandated deadline (Settlement Agreement, NRDC, et al. vs EPA, dated June 21, 1976). It should be noted that the Draft Supplement was made available to the Utility Water Act Group (an ad-hoc group of publicly, cooperatively and privately owned electric utility system) on approximately October 15, 1976 for comment. The Utility Water Act Group members were provided with a 50-day comment period.

3. Some commenters suggested that the Draft Supplement did not address sufficiently (1) the ability of various POTW to remove constituents contained in the wastewaters from power plants, and (2) the impact of those constituents on the operation of the POTW receiving the wastes.

The Agency has assumed in the development of pretreatment standards that all the POTW which receive wastes from power plants will have a biological treatment system. The Draft Supplement has been revised to include a more detail discussion of the issues mentioned by the commenters as they relate to biological treatment systems.

4. Some commenters suggested that the Agency consider in the development of pretreatment standards the mixing of the power plant effluent with other domestic and industrial wastes in the sanitary or combined sewer system. Further, it is suggested that credit should be given for the treatment that takes place in a POTW.

The methodology used in the development of pretreatment standards is delineated in Appendix A. This methodology, as it applies to metal cleaning wastes, does not include consideration for dilution of power plants effluent with other POTW contributors. Once it is determined that copper from the metal cleaning wastes is incompatible, the limitation is based upon the best practicable pretreatment technology.

5. Some commenters suggested that subcategorization should be developed such that it would reflect the differences between plants, in addition to the differences between waste streams in a given plant.

Factors such as age, size, mode of operation, space availability and geographical location were considered for possible subcategorization. The study indicates that (1) the type of pollutants from various power plants using the same fuel type is similar and (2) the level of pollutants is highly variable even among plants which have similar characteristics such as age, size, etc. Possible

subcategorization was considered for the smaller and older units on the basis of economic impact. After careful consideration of the information contained in the draft document and in the draft financial impact study, it was determined that further subcategorization in addition to those established for the effluent limitations guidelines would not be necessary.

6. Some commenters suggested that the discussion of the parameters which are not limited in the effluent limitations guidelines is unnecessary. Further, discussion of technology more stringent than that required by BPCTCA is not relevant.

The Agency is required to consider all the pollutants discharged by power plants. In addition to those factors considered in the development of the effluent limitations guidelines, the pollutants must be analyzed to determine whether they (1) would interfere with the operation of the POTW, and (2) are susceptible to treatment by the POTW. It should be pointed out that the parameters limited in the effluent limitations guidelines are not the only parameters that can be limited in the pretreatment standards. Further, limits are not imposed on certain pollutants in the effluent limitations guidelines because they are indirectly controlled through regulation or treatment of other pollutants. A broad spectrum of technologies is described in the Draft Supplement because they were considered by the Agency.

7. Some commenters suggested that the information contained in the Draft Supplement is erroneous since it did not reflect the changes requested by the various facilities visited or sampled.

Site visit reports were forwarded to each of the plants visited or sampled. The facilities were requested to comment on the validity of the information contained in these reports. Most of the responses were received after the completion of the Draft Supplement. These comments have now been included.

8. Some commenters suggested that the statistical analysis in the Draft Supplement to determine possible correlation between electrical production and discharge flow is unnecessary.

The statistical analysis is necessary in order to determine whether poundage of pollutant/production unit limitation can be imposed. The result of this analysis agrees with the conclusion reached during the development of the effluent limitations guidelines and that is, poundage/production unit limitation cannot be developed at this time.

9. One commenter suggested that only electric generating facilities be considered.

The pretreatment standards are applicable only to those power plants which are engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil type fuel or nuclear fuel in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium. All the plants considered in the Draft Supplement fit the above description.

10. One commenter suggested that a description of the consultant's qualification and experience be included in the Draft Supplement.

The purpose of the Draft Supplement is to delineate the information considered by this Agency in the development of the interim final regulations. It should be pointed out that information from sources other than the contractor was considered in producing the Draft Supplement. It is the information contained in this document and not the qualification of the contractor that affects the regulation being developed. The industry was requested to comment on the information provided in the Draft Supplement on its technical accuracy and completeness. The qualification of the contractor is therefore, not included in this document. A copy of the contractor's qualification is available for inspection at the EPA office.

11. Some commenters recommended wording changes, provided technical information or suggested criteria for the development of pretreatment standards.

The Draft Supplement dated November 1976 has been revised to reflect most of the wording changes and technical information provided. The Agency has considered the commenters suggestions in the development of its pretreatment standards.

Sections 423.14, 423.24, 423.34, and 423.44 are added as follows:

§ 423.14 Pretreatment standards for existing sources.

For the purpose of establishing pretreatment standards under section 307 (b) of the Act for a source within the general unit subcategory, small unit subcategory or old unit subcategory, the provisions of 40 CFR 128 shall not apply. The pretreatment standards for an existing source within the general unit subcategory (§ 423.14), small unit subcategory (§ 423.24) and old unit subcategory (§ 423.34) are set forth below.

(a) No pollutant (or pollutant property) introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works.

(2) Pollutants which will cause corrosive structural damage to treatment works, but in no case pollutants with a pH lower than 5.0, unless the works is designed to accommodate such pollutants.

(3) Solid or viscous pollutants in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.

(4) Pollutants at either a hydraulic flow rate or pollutant flow rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

(b) In addition to the general prohibitions set forth in paragraph (a) of this

section, the following pretreatment standard establishes the quality or quantity of pollutants or pollutant properties controlled by this section which may be introduced into a publicly owned treatment works by a source subject to the provisions of this subpart.

(1) There shall be no discharge to publicly owned treatment works of polychlorinated biphenyl compounds such as those used for transformer fluid.

(2) The quantity of copper discharged in metal cleaning wastes to publicly owned treatment works shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times 1 mg/l.

(3) The quantity of oil and grease in the plant's combined discharge to the publicly owned treatment works shall not exceed the quantity determined by multiplying the flow of the combined discharge times 100 mg/l.

(c) Any owner or operator of any source to which the pretreatment standards required by § 423.14(a), § 423.24(a) and § 423.34(a) are applicable, shall be in compliance with such standards upon the effective date of such standards. The time for compliance with standards required by § 423.14(b), § 423.24(b) and § 423.34(b) shall be within the shortest time but not later than three years from the effective date of such standards.

§ 423.24 Pretreatment standards for existing sources.

For the purpose of establishing pretreatment standards under Section 307 (b) of the Act for a source within the general unit subcategory, small unit subcategory or old unit subcategory, the provisions of 40 CFR 128 shall not apply. The pretreatment standards for an existing source within the general unit subcategory (§ 423.14), small unit subcategory (§ 423.24) and old unit subcategory (§ 423.34) are set forth below.

(a) No pollutant (or pollutant property) introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works.

(2) Pollutants which will cause corrosive structural damage to treatment works, but in no case pollutants with a pH lower than 5.0, unless the works is designed to accommodate such pollutants.

(3) Solid or viscous pollutants in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.

(4) Pollutants at either a hydraulic flow rate or pollutant flow rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

(b) In addition to the general prohibitions set forth in paragraph (a) of this section, the following pretreatment

standard establishes the quality or quantity of pollutants or pollutant properties controlled by this section which may be introduced into a publicly owned treatment works by a source subject to the provisions of this subpart.

(1) There shall be no discharge to publicly owned treatment works of polychlorinated biphenyl compounds such as those used for transformer fluid.

(2) The quantity of copper discharged in metal cleaning wastes to publicly owned treatment works shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times 1 mg/l.

(3) The quantity of oil and grease in the plant's combined discharge to the publicly owned treatment works shall not exceed the quantity determined by multiplying the flow of the combined discharge times 100 mg/l.

(c) Any owner or operator of any source to which the pretreatment standards required by § 423.14(a), § 423.24(a) and § 423.34(a) are applicable, shall be in compliance with such standards upon the effective date of such standards. The time for compliance with standards required by § 423.14(b), § 423.24(b) and § 423.34(b) shall be within the shortest time but not later than three years from the effective date of such standards.

§ 423.34 Pretreatment standards for existing sources.

For the purpose of establishing pretreatment standards under Section 307 (b) of the Act for a source within the general unit subcategory, small unit subcategory or old unit subcategory, the provisions of 40 CFR 128 shall not apply. The pretreatment standards for an existing source within the general unit subcategory (§ 423.14), small unit subcategory (§ 423.24) and old unit subcategory (§ 423.34) are set forth below.

(a) No pollutant (or pollutant property) introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works.

(2) Pollutants which will cause corrosive structural damage to treatment works, but in no case pollutants with a pH lower than 5.0, unless the works is designed to accommodate such pollutants.

(3) Solid or viscous pollutants in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.

(4) Pollutants at either a hydraulic flow rate or pollutant flow rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

(b) In addition to the general prohibitions set forth in paragraph (a) of this section, the following pretreatment standard establishes the quality or quantity

of pollutants or pollutant properties controlled by this section which may be introduced into a publicly owned treatment works by a source subject to the provisions of this subpart.

(1) There shall be no discharge to publicly owned treatment works of polychlorinated biphenyl compounds such as those used for transformer fluid.

(2) The quantity of copper discharged in metal cleaning wastes to publicly owned treatment works shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times 1 mg/l.

(3) The quantity of oil and grease in the plant's combined discharge to the publicly owned treatment works shall not exceed the quantity determined by multiplying the flow of the combined discharge times 100 mg/l.

(c) Any owner or operator of any source to which the pretreatment standards required by § 423.14(a), § 423.24(a) and § 423.34(a) are applicable, shall be in compliance with such standards upon the effective date of such standards. The time for compliance with standards required by § 423.14(b), § 423.24(b) and § 423.34(b) shall be within the shortest time but not later than three years from the effective date of such standards.

§ 423.44 Pretreatment standards for existing sources.

For the purpose of establishing pretreatment standards under section 307 (b) of the Act for a source within the area runoff subcategory, the provisions of 40 CFR 128 shall not apply. The pretreatment standards for an existing source within the area runoff subcategory are set forth below.

(a) No pollutant (or pollutant property) introduced into a publicly owned treatment works shall interfere with the operation or performance of the works. Specifically, the following wastes shall not be introduced into the publicly owned treatment works:

(1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works.

(2) Pollutants which will cause corrosive structural damage to treatment works, but in no case pollutants with a pH lower than 5.0, unless the works is designed to accommodate such pollutants.

(3) Solid or viscous pollutants in amounts which would cause obstruction to the flow in sewers, or other interference with the proper operation of the publicly owned treatment works.

(4) Pollutants at either a hydraulic flow rate or pollutant flow rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

(b) Any owner or operator of any source to which the pretreatment standards required by § 423.44(a) are applicable, shall be in compliance with such standards upon the effective date of such standards.

[FR Doc.77-8550 Filed 3-22-77;8:45 am]

[FRL 702-6]

PART 425—LEATHER TANNING AND FINISHING POINT SOURCE CATEGORY PRETREATMENT STANDARDS FOR EXISTING SOURCES

Final Regulations

Notice is hereby given that pretreatment standards for existing sources set forth in final form below are promulgated by the Environmental Protection Agency (EPA or Agency). On April 9, 1974, EPA promulgated a regulation adding Part 425 to Chapter 40 of the Code of Federal Regulations (39 FR 12960). That regulation established effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources for the leather tanning and finishing point source category. The regulation set forth below will amend 40 CFR 425—leather tanning and finishing point source category by adding § 425.14 of the hair pulp, chrome tan, retan-wet finish subcategory (Subpart A), § 425.24 of the hair save, chrome tan, retan-wet finish subcategory (Subpart B), § 425.34 of the hair save, non-chrome tan, retan-wet finish subcategory (Subpart C), § 425.44 of the retan-wet finish subcategory (Subpart D), § 425.54 of the no beamhouse subcategory (Subpart E), and § 425.64 of the through-the-blue subcategory (Subpart F), and section 425.74 of the shearling subcategory (Subpart G), pursuant to section 307(b) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1316(b) and 1317 (b) and (c), 1251, 1317(b), 86 Stat. 816 et seq.; Pub. L. 92-500) (the Act).

(a) *Legal Authority.* Section 307(b) of the Act requires the establishment of pretreatment standards for pollutants introduced into publicly owned treatment works (POTW) and 40 CFR 128 establishes that the Agency will propose specific pretreatment standards at the time effluent limitations are established for point source discharges. Pretreatment standards for existing sources in the leather tanning and finishing point source category were proposed on April 9, 1974 (39 FR 12960). Section 425.14 of the hair pulp, chrome tan, retan-wet finish subcategory (Subpart A), § 425.24 of the hair save chrome tan, retan-wet finish subcategory (Subpart B), § 425.34 of the hair save, non-chrome tan, retan-wet finish subcategory (Subpart C), § 425.44 of the retan-wet finish subcategory (Subpart D), § 425.54 of the no beamhouse subcategory (Subpart E), § 425.64 of the through-the-blue subcategory (Subpart F), and § 425.74 of the shearling subcategory (Subpart G) set forth below establish pretreatment standards for existing sources within the leather tanning and finishing point source category.

(b) *Summary and Basis of Pretreatment Standard for Existing Sources.* The regulation set forth below establishes pretreatment standards for pollutants introduced to publicly owned treatment works from existing sources