ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 425

[WH-FRL 2231-5]

Leather Tanning and Finishing Industry Point Source Category; Effluent Limitations Guidelines, Pretreatment Standards and New Source Performance Standards

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: This regulation limits the discharge of pollutants into navigable waters and into publicly owned treatment works by existing and new sources that are leather tanning and finishing facilities. The Clean Water Act and a consent decree require EPA to issue this regulation.

The purpose of this regulation is to specify effluent limitations for "best practicable technology", "best available technology", "best conventional technology", and "new source performance standards" for direct dischargers and to establish pretreatment standards for indirect dischargers.

DATES: In accordance with 40 CFR 100.01 (45 FR 26048), these regulations will be considered issued for purposes of judicial review at 1:00 P.M. Eastern time on (two weeks after **Federal Register** publication date). They will become effective January 6, 1983, except sections 425.04 (b) and (c) which contain information collection requirements which are under review at OMB. The compliance date for Pretreatment Standards for Existing Sources (PSES) is November 25, 1985.

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

ADDRESSES: Technical information may be obtained by writing to Donald F. Anderson, Effluent Guidelines Division, (WH-552), EPA, 401 M Street, S.W., Washington, D.C. 20460 or through calling (202) 382-7189. Economic information may be obtained from Joseph V. Yance, Office of Analysis and Evaluation (WH-586), at the same address, or through calling (202) 382-5379. Three weeks after the date of publication of this regulation in the **Federal Register**, the Record, including copies of the development document and economic analysis, and responses to public comments will be available for public review in EPA's Public Information Reference Unit, Room 2404 (Rear) (EPA Library), 401 M Street, SW., Washington, D.C. The EPA information regulation (40 CFR Part 2) allows the Agency to charge a reasonable fee for copying. Copies of the development document and the economic analysis may also be obtained from the National Technical Information Service, Springfield, Virginia 22161 (703/487-6000).

FOR FURTHER INFORMATION CONTACT: Technical information: Donald F. Anderson, (202) 382-7189; economic information: Joseph V. Yance, (202) 382-5379.

SUPPLEMENTARY INFORMATION:

Organization of this Notice

I. Legal Authority

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

II. Scope of This Rulemaking

This regulation applies to the leather tanning and finishing point source category which is included within the Standard Industrial Classification (SIC) Major Group 3100, Leather and Leather Products. That part of the industry covered by this regulation is the subgroup SIC 3111.

The regulation promulgated today establishes effluent limitations and standards to control specific toxic, nonconventional and conventional pollutants for nine subcategories in the leather tanning and finishing category: (1) Hair pulp, chrome tan, retan-wet finish; (2) hair save, chrome tan, retan-wet finish; (3) hair save, non-chrome tan, retan-wet finish; (4) retan-wet finish (sides); (5) no beamhouse; (6) through-the-blue; (7) shearling; (8) pigskin; and (9) retan-wet finish (splits).

Best practicable control technology currently available (BPT) effluent limitations are established for all subcategories. The technology basis of the BPT limitations is biological treatment, specifically high solids extended aeration activated sludge. They include mass based limitations (kg/kkg or lb/1,000 lb of raw material) for one toxic pollutant (total chromium), and four conventional pollutants (BOD5, TSS, oil and grease, and pH). These BPT mass limitations are derived utilizing subcategory median water use ratios and BPT effluent concentrations described later in appropriate sections of this preamble, and variability factors described in the Development Document.

BAT and BCT limitations also are established for all nine subcategories in the leather tanning and finishing point source category. For this regulation the technology basis of and mass based effluent limitations for BCT and BAT are the same as the promulgated BPT limitations. The BCT effluent limitations control four conventional pollutants (BOD, TSS, oil and grease, and pH). The BAT limitations control one toxic pollutant, total chromium.

NSPS are mass based and are established for all nine subcategories and limit one toxic pollutant (total chromium), and four conventional pollutants (BOD, TSS, oil and grease, and pH). NSPS are based on the same technology and effluent concentrations and the same variability factors as BAT, but the mass based limitations for NSPS are different from those for BAT because the NSPS limitations are based on reduced water use.

Finally, this regulation establishes categorical pretreatment standards for one toxic pollutant, total chromium, for all subcategories. These standards are concentration based and apply to existing and new source indirect dischargers. The categorical pretreatment standards for total chromium contained in this regulation do not apply to indirect dischargers in subcategory 1 processing less than 275 hides per day, in subcategory 3 processing less than 350 hides per day or in subcategory 9 processing less than 3600 splits per day. Categorical pretreatment standards also are established for the control of sulfides in subcategories 1, 2, 3, 6, and 8 where unhairing operations are included. However, this regulation includes a provision which allows the POTW to certify that discharge of sulfide from a particular facility does not interfere with its treatment works. If this certification is made and EPA determines that the submission is adequate, it will publish a notice in the **Federal Register** identifying those facilities to which the sulfide pretreatment standard would not apply.

Finally, the Agency is adopting a new format to make the regulations more readily usable and understood by regulating authorities, the industry, and the public.

III. Summary of Legal Background

The Federal Water Pollution Control Act Amendments of 1972 established a comprehensive program to "restore and maintain the chemical, physical and biological integrity of the Nation's waters" (Section 101(a)). To implement the Act, EPA was required to issue effluent limitations guidelines, pretreatment standards and new source performance standards for industrial dischargers.

The Act included a timetable for issuing these standards. However, EPA was unable to meet many of the deadlines and, as a result, in 1976, it was sued by several environmental groups. In settling this lawsuit, EPA and the plaintiffs executed a court-approved "Settlement Agreement." This Agreement required EPA to develop a program and adhere to a schedule in promulgating effluent limitations guidelines and pretreatment standards for 65 "priority" pollutants and classes of pollutants, for 21 major industries. [See *Natural Resources Defense Council, Inc.* v. *Train*, 8 ERC 2120 (D.D.C. 1976), *modified*, 12 ERC 1833 (D.D.C. 1979)].

Many of the basic elements of this Settlement Agreement were incorporated into the Clean Water Act of 1977 ("the Act"). Like the Settlement Agreement, the Act stressed control of the 65 classes of toxic pollutants. In addition, to strengthen the toxic control program, Section 304(e) of the Act authorizes the Administrator to prescribe "best management practices" (BMP) to prevent the release of toxic and hazardous pollutants from plant site runoff, spillage or leaks, sludge or waste disposal and drainage from raw material storage associated with, or ancillary to, the manufacturing or treatment process.

Under the Act, the EPA program is to set a number of different kinds of effluent limitations. These are discussed in detail in the proposed regulation and development document. The following is a brief summary:

1. Best Practicable Control Technology Currently Available (BPT). BPT limitations generally are based on the average of the best existing performance at plants of various sizes, ages and unit processes within the industry or subcategory. In establishing BPT limitations, the Agency considers the total cost of applying the technology in relation to the effluent reduction derived, the age of equipment and facilities involved, the process employed, the engineering aspects of the control technologies, process changes and nonwater-quality environmental impacts (including energy requirements). The total cost of applying the technology is balanced against the effluent reduction.

2. Best Available Technology Economically Achievable (BAT). BAT limitations, in general, represent the best existing performance in the industrial subcategory or category. The Act establishes BAT as the principal national means of controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. In arriving at BAT, the Agency considers the age of the equipment and facilities involved, the process employed, the engineering aspects of the control technologies, process changes, the cost of achieving such effluent reduction and nonwater-quality environmental impacts. The Administrator retains considerable discretion in assigning the weight to be accorded these factors.

3. Best Conventional Pollutant Control Technology (BCT). The 1977 Amendments added Section 301(b)(2)(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(a)(4) [biochemical oxygen demanding pollutants (e.g., BOD5), total suspended solids (TSS), fecal coliform and pH] and any additional pollutants defined by the Administrator as "conventional," i.e., oil and grease. (See 44 FR 44501; July 30, 1979.)

BCT is not an additional limitation but replaces BAT for the control of conventional pollutants. In addition to other factors specified in section 304(b)(4)(B), the Act requires that BCT limitations be assessed in light of a two part "cost-reasonableness" test. *American Paper Institute* v. EPA, *660 F.2d 954 (4th Cir. 1981). The first test compares the cost for private industry to reduce its conventional pollutants with the cost to publicly owned treatment works (POTWs) for similar levels of reduction in their discharge of these pollutants. The second test examines the cost-effectiveness of additional industrial treatment beyond BPT. EPA must find that limitations are "reasonable" under both tests before establishing them as BCT. In no case may BCT be less stringent than BPT.*

EPA published its methodology for carrying out the BCT analysis on August 29, 1979 (44 FR 50732). In the case mentioned above, the Court of Appeals ordered EPA to correct data errors underlying EPA's calculation of the first test, and to apply the second cost test. (EPA had argued that a second cost test was not required.) The Agency has corrected data errors and applied a second cost test. A revised BCT methodology was proposed in the **Federal Register** on October 29, 1982 (47 FR 49176).

EPA identified no economically achievable technology beyond BPT (biological treatment) capable of removing significant amounts of conventional pollutants from leather tanning and finishing wastewaters. Therefore, BCT is being set equal to BPT, and is not subject to the "cost-reasonableness" test.

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

5. Pretreatment Standards for Existing Sources (PSES). PSES are designed to control the discharge of pollutants that pass through, interfere with, or are otherwise incompatible with the operation of a publicly owned treatment works (POTW). They must be achieved within three years of promulgation. The Clean Water Act of 1977 requires pretreatment for pollutants that pass through the POTWs in amounts that would violate direct discharger effluent limitations or interfere with the POTWs treatment process or chosen sludge

disposal method. The legislative history of the 1977 Act indicates that pretreatment standards are to be technology-based analogous to the best available technology. EPA has generally determined that there is pass through of pollutants if the percent of pollutants removed by a well-operated POTW achieving secondary treatment is less than the percent removed by the BAT model treatment system. The general pretreatment regulations, which served as the framework for the categorical pretreatment regulations, are found at 40 CFR Part 403 [43 FR 27736 (June 26, 1978); 46 FR 9462 (January 28, 1981)].

6. Pretreatment Standards for New Sources (PSNS). Like PSES, PSNS control the discharge of pollutants to POTWs that pass through, interfere with, or are otherwise incompatible with the operation of POTWs. PSNS are issued at the same time as NSPS. New indirect dischargers, like new direct dischargers, have the opportunity to incorporate the best available demonstrated technologies. The Agency considers the same factors in promulgating PSNS as it considers in promulgating PSES.

IV. Prior Regulations

EPA promulgated BPT, BAT, NSPS, and PSNS for the Leather Tanning and Finishing Point Source Category on April 9, 1974 (39 FR 12958; 40 CFR Part 425, Subparts A–F). The Tanners' Council of America (TCA) challenged these regulations, and the U.S. Court of Appeals for the Fourth Circuit left BAT and PSNS undisturbed, but remanded the BPT and NSPS regulations for several reasons (see *Tanners' Council of America* vs *Train*, 540 F.2d 1188 [4th Cir. 1976.]). EPA promulgated pretreatment standards for existing sources (PSES) within the Leather Tanning and Finishing Point Source Category on March 23, 1977 (42 FR 15696; 40 CFR Part 425, Subparts A–G). These regulations established general pretreatment prohibitions and specific pH standards for indirect dischargers. These PSES regulations were not challenged and are currently in effect.

Previously promulgated best practicable control technology currently available (BPT) and best available technology economically achievable (BAT) limitations, new source performance standards (NSPS), pretreatment standards for existing sources (PSES) and pretreatment standards for new sources (PSNS) are superseded by this regulation. This regulation also establishes best conventional pollutant control technology limitations (BCT).

On July 2, 1979 (44 FR 38746), EPA proposed BPT, BAT, BCT, NSPS, PSNS, and PSES regulations. EPA accepted comments on the proposed regulations until April 10, 1980. In their comments on the proposed regulations, the leather tanning industry claimed that the data and other supporting record material relied upon by EPA in proposing these regulations contained a large number of errors. The Agency has responded by not only completely reviewing the entire data base and all documentation supporting this rulemaking, but also by conducting a program to acquire supplemental data during and after the comment period.

In the **Federal Register** for June 2, 1982 (47 FR 23958), EPA made available for public review and comment supplementary technical and economic data and related documentation received after proposal of the regulations. The Agency also summarized the preliminary findings of how these supplementary record materials might influence final rulemaking.

V. Methodology and Data Gathering Efforts

The methodology and data gathering efforts used in developing the proposed regulation were discussed in the preamble to the proposal (44 FR 38749–38751, July 2, 1979). The notice of availablity of supplementary record materials (47 FR 23958, June 2, 1982) also discussed data gathering and review efforts. In summary, before publishing the proposed regulation in 1979, the Agency conducted a data collection, analytical screening, and analytical verification program for the leather tanning and finishing industry. This program stressed the acquisition of data on the presence and treatability of the 65 toxic pollutants and classes of toxic pollutants discussed previously. The 65 toxic pollutants and classes of pollutants potentially includes thousands of specific pollutants. EPA selected 129 specific toxic pollutants for study in this rulemaking and other industry rulemakings. (Analytical methods are discussed in *Sampling and Analysis Procedures for Screening of Industrial Effluents for Priority Pollutants* (U.S. EPA, April 1977)). Based on the results of that program, EPA identified several distinct treatment technologies, including both end-of-pipe and in-plant technologies, that are or can be used to treat leather tanning and finishing industry wastewaters.

For each of these technologies, the Agency (i) compiled and analyzed historical and newly-generated data on effluent quality, (ii) identified its reliabilities and constraints, (iii) considered the nonwater quality impacts (including impacts on air quality, solid waste generation and energy requirements), and (iv) estimated the costs and economic impacts of applying it as a treatment and control system. Costs and economic impacts of the technology options considered are discussed in detail in *Economic Impact Analysis of Effluent Limitations and Standards for the Leather Tanning and Finishing Industry* (EPA 440/11–82–001, November 1982). A more complete description of the Agency's study methodology, data gathering efforts and analytical procedures supporting the regulation can be found in the *Final Development Document for Effluent Limitations Guidelines New Source Performance Standards and Pretreatment Standards for the Leather Tanning and Finishing Industry Point Source Category* (EPA 440/11–82–016, November 1982).

VI. Subcategorization and Water Use

A. Subcategorization. In 1979, the Agency proposed seven subcategories for the leather tanning and finishing industry on the basis of hide or skin type, and process employed. The seven subcategories were as follows:

1. Hair Pulp, Chrome Tan, Retan-Wet Finish
2. Hair Save, Chrome Tan, Retan-Wet Finish
3. Hair Save or Pulp, Non-Chrome Tan, Retan-Wet Finish
4. Retan-Wet Finish
5. No Beamhouse
6. Through-The-Blue
7. Shearling

Upon further review of the industry and in response to public comment, EPA is establishing two additional subcategories, pigskins (subcategory 8) and retan-wet-finish-splits (subcategory 9). In the 1979 proposal, the processing of pigskins was included in subcategory 1. However, the nature of pigskin is different from that of cattlehide (the predominant raw material in subcategory 1), and the subprocesses utilized to produce finished leather are different. Given proper water conservation and recycle and reuse techniques, the processing of pigskins results in different water use and pollutant loads from the processing of cattlehides. Accordingly, a separate subcategory, pigskins (subcategory 8), was required. In the 1979 proposal, the retanning and wet finishing of splits was included in subcategory 4. However, a split is a different raw material than grain sides, and the subprocesses utilized to produce finished leather are

different. Given proper water conservation and reuse and recycle techniques, the retan-wet finishing of splits results in different water use and pollutant loads from the processing of grain sides. Accordingly, a separate subcategory, retan-wet finish-splits (subcategory 9), was added. These two new subcategories were discussed in the June 2, 1982 notice of availability.

Subcategorization in this industry is based primarily upon the raw materials and the three major groups of subprocesses utilized at a plant (beamhouse [hair removal], tanyard [tanning] and retan-wet finish [further tanning, coloring, oil replenishment, surface coating]). These factors have the most significant influence on water use and pollutant generation. These two factors are interdependent because the subprocesses utilized depend upon the nature of the raw materials and their state of preprocessing. For example, cattlehides to be processed into "crust" leather (largely finished leather, except for any special surface coating or color) require all three major groups of subprocesses: (1) Hair removal (hair dissolving or pulping), (2) tanning with trivalent chromium, and (3) retanning, coloring, oil replenishment (fatliquoring), and surface coating (subcategory one). Cattlehides and sheepskins without hair (wool) and acid preserved (pickled) require only chromium tanning, retanning, and wet finishing (subcategory five). Pigskins require some hair (stubble) removal, chromium tanning, retanning, and wet finishing (subcategory 8).

Subcategorization in this industry is incidentally related to the final products produced because as a result of the subcategorization factors i.e., the raw materials and subprocesses used, there is a typical mix of final products for each subcategory. For example, predominant final products are shoe uppers, upholstery and garment leather for subcategory one; they are shoe uppers, (cattlehides) garments, work gloves, and lining material for subcategory five; and shoe uppers (suede or grain) and work gloves for subcategory 8.

Commenters suggested that the Agency also should base subcategorization upon the quality of final products produced. The quality of final products is related both to quantitative and qualitative measures. Quantitative measures include standard tests utilized in industry laboratories by tanners and buyers (e.g., shoe manufacturers) to determine leather properties germane to their intended use. For example, determinations of the percent of chromium content by weight, the "boil" test, and other tests of mechanical properties, provide standardized bases for determining whether final leather products are acceptable for their intended use. The qualitative measures of final product quality are subjective factors, such as the "feel" of leathers. The Agency has not used either the quantitative or qualitative measures of final product quality as a basis for subcategorization because industry has not produced any data and, as discussed below, the Agency does not have any data showing a correlation between water used and pollutants discharged, and final product quality. Furthermore, the Agency feels that it would be difficult if not impossible to quantify the subjective and variable qualitative measures of final product quality, such as the "feel" of leathers, and that such data would be impossible to procure. The data utilized by the Agency does, however, represent leather products of commercially salable qualities.

B. Water Use. The two primary subcategorization factors, the nature of the raw materials and the subprocesses utilized to produce a product, impact upon the volume of water needed for processing (water use). Therefore, the Agency has calculated typical water use ratios (gallons of water per pound of raw material processed) for each subcategory.

In 1979, the Agency proposed to use an average subcategory value, based upon individual data points, in order to determine water use for each subcategory. In response to commenters' concerns over the highly variable nature of the data, the Agency, in its June 2, 1982 notice of availability, applied a different methodology. First, EPA computed the arithmetic mean of every facility's data. Subcategory water use was then determined by using the median value of the mean plant values for each subcategory. The Agency believes that this methodology provides the most reasonable measurement of typical water use for each subcategory. This method gives equal weight to each facility's data, and provides a better estimate of central tendency since the median is less sensitive to extreme values in the data than the mean. The median water use ratios for plants in each of the subcategories are presented in Table 1, together with the total number of plants included in the data base and the number of plants operating below the median water use. The BPT, BCT, and BAT mass based effluent limitations were derived using the median water ratios identified for each subcategory. Reduced water use was not used in deriving BAT mass based effluent limitations because the BAT Option I included BPT in plant and end-of-pipe technology. Water use reduction was incorporated into mass based effluent limitations for the two BAT options which were not selected. PSES are concentration based rather than mass based, and therefore median water use ratios are not a part of PSES.

TABLE 1

Subcategory	Number of plants in subcategory data base	Median flow ratio (gallon per pound)	Number of plants in data base operating below flow ratio
1	28	6.5	15
2	4	5.8	3
3	12	4.9	8
4	8	4.8	4
5	13	5.8	7
6	3	2.1	2
7	1	9.4	1
8	2	5.0	1
9	4	3.0	2

Reduced flow ratios for new sources in eight of the nine subcategories were established by the Agency. A reduced water use ratio was not identified in subcategory 7 because representative and verifiable data was available from only one plant. New sources can select very efficient processing methods and equipment which achieve further water use reductions identified for the eight subcategories. The Agency looked at all plants below the median and chose the flow ratio for the plant which demonstrated the most efficient processing methods available to new sources.

At least one plant in every subcategory has demonstrated these new source flow ratios. Table 2 presents a summary of flow ratios achievable by new sources. The number of plants achieving these ratios also are presented. These new source water use ratios were used in deriving the mass based NSPS effluent limitations. However, as for PSES, these water use ratios were not used for the concentration based PSNS limitations.

TABLE 2

Subcategory	New source flow ratio (gallon per pound)	Number of plants in data based achieving flow ratio
1	4.3	5
2	4.9	1
3	4.2	4
4	4.5	3
5	3.8	3
6	1.4	1
7	9.4	1
8	4.1	1

TABLE 2—Continued

Subcategory	New source flow ratio (gallon per pound)	Number of plants in data based achieving flow ratio
9	2.5	2

In response to the notice of availability, several commenters expressed serious concerns regarding the lack of homogeneity in raw materials, processing methods, and final product mix within subcategories as these relate to the validity and achievability of water use ratios for existing and new sources. The Agency again reviewed, and revised where appropriate, the data presented in the June 2, 1982 **Federal Register** (see 47 FR 23959) underlying the median and reduced water use ratios for all subcategories.

In reviewing the water use (and wastewater pollutant load) data, the Agency applied the same criteria as it employed in developing the water use ratios published in the June 2, 1982 notice of availability. These criteria are as follows:

(1) For a plants' data to be included in the data base utilized to characterize water use and waste loads for any subcategory, at least 80 percent of the plants' production must be in one subcategory, or data for each processing operation representing a separate subcategory at a plant must be for a segregated and measurable wastewater stream. Mixed subcategory plants which did not meet this criteria would not be included in the data base because water use ratios and pollutant loads derived from these plants would not be accurate for a single subcategory.

(2) The location at which the wastewater was sampled (i.e., before or after treatment and type of treatment) and the sampling technique (grab, composite, flow proportional) must be reported so that the data could be used properly to characterize raw waste and the performance of various treatment system components.

(3) Production and flow values must be reported for the days of sampling so that pollutant concentrations could be converted to mass and normalized to production. Average or estimated values were used only with the approval of the individual tannery and upon verification of the data source and validity of the averages or estimates.

(4) Production data (in pounds) must be reported on the basis specified for each type of raw material to allow flow and pollutant loads to be normalized for each subcategory.

Upon review of these criteria and in response to several commenters, adjustments were made in the number of plants included in the data base for subcategories one, three, four, five, and seven. Specifically, nine plants in subcategory one were dropped, seven because they were mixed subcategory plants which did not meet the criterion discussed above, one plant included in this subcategory by mistake, and one because of lack of documentation for water use estimates. In subcategory three, one plant was dropped because it was a mixed subcategory plant which did not meet the criterion discussed above. Three plants were deleted from the subcategory four data base, one plant due to undocumented water use estimates, one plant included in this subcategory by mistake, and one plant due to a limited and unverified period of water use data. In addition, the raw material weight basis for one plant was corrected and the plant's water use ratio recalculated. One plant in subcategory five was deleted due to undocumented water use estimates. One plant in subcategory seven was eliminated due to lack of documentation for the accuracy of the flow data. These changes are reflected in the median flow ratios represented in Table 1 and in the adjustments for new source flow ratios in four subcategories, as represented in Table 2. Mixed subcategory plants which were deleted from the data base (Tables 1 and 2) used to characterize water use and waste loads for each subcategory would, however, still receive prorated mass limitations. Examples of how prorated mass limitations are calculated for mixed subcategory plants can be found in the Development Document.

From an examination and analysis of all available flow and pollutant data, the Agency has determined that there is a direct relationship between the primary subcategorization factors of raw materials and groups of subprocesses utilized and water use and pollutant loadings. Accordingly, the Agency has developed water use ratios for each subcategory which are achievable for each plant within that subcategory. Since the raw materials and subprocesses utilized by individual plants within a subcategory are very similar, it is the Agency's judgment that water use for individual plants within a subcategory can also be similar. The water use for plants within a subcategory are, however, often different. The Agency believes that water conservation, recycling and reuse of water and/or good housekeeping practices can be used by each plant within a subcategory in order to arrive at the flow ratios specified in Tables 1 and 2. Examples of plants which have utilized these techniques are addressed in Chapter VII of the Development Document. Since water conservation and recycle and reuse techniques are available for all three groups of subprocesses and, therefore, applicable for each of the subcategories for this industry, those techniques also are available for mixed subcategory plants. Examples of how mixed subcategory plants could achieve prorated water use ratios are addressed in Chapter VII of the Development Document.

In response to several commenters' concerns about the ability of plants which manufacture certain final products to meet the subcategory water use ratios, the Agency examined and analyzed all available water use data. The Agency attempted to separate further some subcategories by predominant final products and developed median water use ratios for these products. These water use ratios were not significantly different from the median water use ratios established for the subcategories from which these attempted separations were made. The data available to the Agency indicate that different plants making the same mix of salable final products have different water use ratios depending upon the extent to which they implement water conservation and recycle or reuse methods. Accordingly, the Agency has concluded from analysis of available data that there is no relationship between final products manufactured and water used which supports further separation of subcategories. A comparison of water use data and final product mixes is discussed in the Development Document.

Several commenters criticized the data base underlying flow ratios in certain subcategories as being meager. For example, in subcategory seven water use ratios were based on data from one plant out of the universe of eight plants. The Agency recognizes that in some instances the data base was limited. The Agency actively solicited data from the industry. Three data collection questionnaires were developed in cooperation with and mailed directly to member tanneries by the Tanners' Council of America. These cooperative data gathering efforts resulted in the bulk of the data used in this rulemaking. The Agency also visited plants, sampled wastewaters, and conducted related specific data gathering efforts to supplement these industry supplied data. All data

gathering efforts were described in the proposal (44 FR 38749), the notice of availability (47 FR 23958), and detailed in the Development Document. It is the Agency's belief, as confirmed by comment from the Tanners' Council of America, that all available data that exist have been acquired by EPA. In several instances, the industry submitted only a limited amount of accurate and verifiable flow data. For those subcategories, the Agency reviewed the manufacturing and raw material data for each plant in the subcategory. Since there were no significant differences in manufacturing and raw material data for plants within the subcategory, the available flow data was judged representative of the plants within the subcategory.

VII. Summary of Promulgated Regulations

The final regulations reflect the changes discussed above and other changes made in consideration of public comments provided in response to the proposal and the notice of availability, and further evaluation of the information upon which the notice of availability was based. Following are a review of the proposed regulation and the notice of availability, a summary of the changes from proposal to promulgation, and an explanation of the reasons for the changes.

A brief summary of the technology bases for each of the final regulations also is presented below. A more detailed summary is presented in the *Development Document for Effluent Limitations Guidelines and Standards for the Leather Tanning and Finishing Point Source Category*. The BPT, BAT, and NSPS technologies outlined below are the same and apply to all subcategories, and the final effluent concentrations resulting from the application of the technology are identical for all subcategories. However, the BPT, BCT, and BAT mass limitations for each subcategory vary due to different median water use ratios (see Table 1) among the subcategories. The NSPS mass limitations for each subcategory vary due to different reduced water use ratios achievable by new sources (see Table 2).

The Agency proposed PSES regulations which controlled sulfide and chromium to the same concentrations in all subcategories. The proposal also included control for ammonia. The promulgated PSES and PSNS regulations are based on different technologies, outlined below. These standards apply to two groups of subcategories. The first group are those with unhairing operations (subcategories 1, 2, 3, 6, and 8), and the second group are those without unhairing operations (subcategories 4, 5, 7, and 9).

PSES for the first group of subcategories includes concentration based standards for both sulfide and total chromium. As discussed below, the sulfide standard will not apply if the receiving POTW certifies, after consideration of all relevant factors, that the sulfide discharged by a particular facility does not interfere with the treatment works. If this certification is made and EPA determines that the submission is adequate, it will publish a notice in the **Federal Register** identifying those facilities to which the sulfide pretreatment standard would not apply. The chromium standard does not apply to small plants in subcategory 1 or subcategory 3.

PSES for the second group of subcategories includes only total chromium concentration based standards, which do not apply to small plants in subcategory 9. The PSNS model treatment technology and pretreatment standards are the same as those for PSES. Pretreatment standards for ammonia have been deleted for all subcategories.

The 30 day average limitations and standards that were proposed have been replaced with monthly averages based upon eight days of sampling, or approximately twice per week, during any calendar month. Eight day monthly averages were used in developing the monthly limitations and standards, because this sampling frequency is expected to be typical for compliance monitoring in this industry.

NPDES authorities may adopt more frequent monitoring requirements as may be necessary on a case-by-case basis. Moreover, individual plants in the industry may choose to sample more frequently than twice per week, for example to improve process control for biological treatment systems. Compliance by a given discharger with these (eight day) limitations would be bases on the arithmetic average of the actual number of measurements taken during a calendar month, regardless of their frequency.

A. BPT. In these regulations, EPA is promulgating BPT effluent limitations guidelines for all nine subcategories of the leather tanning and finishing industry.

The BPT regulations promulgated by EPA on April 9, 1974 (39 FR 12958) were remanded by the United States Court of Appeals for the Fouth Circuit in *Tanners' Council of American v. Train, supra.* The court held that: (1) The Agency's basis for technology transfer from the meat packing industry to the leather tanning and finishing industry was not supported in the record, and (2) EPA's consideration of seasonal variability in effluent concentrations and the need for cold climate adjustments was inadequate.

In 1979, the Agency proposed BPT regulations based upon equalization, primary coagulation-sedimentation, and biological treatment in the form of high solids extended aeration activated sludge. The same technology was the basis for tentative effluent limitations included in the June 2, 1982 notice of availability, and the BPT effluent limitations now being promulgated. Technology transfer from the meat packing industry is not the basis for this regulation. The use of this BPT technology has been demonstrated by plants in subcategories 1, 3, and 4, but it has not been applied in all remaining subcategories where wastewater treatment is uniformly inadequate. Most of the existing biological treatment systems in the industry are inadequate. For example, some of the plants: (1) Do not have the equipment necessary to be operated as high solids extended aeration activated sludge; (2) have overloaded activated sludge systems; (3) have simple lagoons with inadequate or no aeration facilities; (4) are poorly operated; or (5) suffer some combination of all of these inadequacies. EPA has documented these inadequacies on a plant-by-plant basis and evaluated the equipment and costs necessary to achieve extended aeration activated sludge treatment and the BPT effluent concentrations. The Agency believes that, given the similarity in the treatability of wastewaters in all subcategories, this technology will remove effectively pollutants from wastewaters of all subcategories and will remove them to the same final effluent concentrations in each subcategory. The basis for this conclusion is discussed in the Development Document. Consequently, the Agency has transferred this technology and the achievable final effluent concentrations, from subcategories 1, 3, and 4 in which this technology has been demonstrated, to the remaining subcategories. To ensure that these effluent limitations are achievable by plants in all subcategories, differences among subcategories in wastewater volumes and pollutant loads resulted in different unit process designs and associated costs. Most importantly, adjustments were made in the sizing of primary coagulation-sedimentation tanks and the aeration capacity and hydraulic

detention time required for activated sludge aeration basins. The Agency's design and costing procedures have been tailored further to each individual direct discharger.

As described previously in the June 2, 1982 notice of availability (47 FR 23960–61), EPA is adopting final effluent concentrations, as follows: BOD*5*–40 mg/l; TSS–60 mg/l; Oil and Grease-20 mg/l; Chromium (Total)—1 mg/l. The variability factors listed in Appendix A of that notice (47 FR 23964), together with median flow ratios presented in Table 1 of this preamble, have been applied to the above long term final effluent concentrations to establish monthly average and maximum day mass based effluent limitations for all nine subcategories. Final effluent concentrations and variability factors can be combined with median water use ratios derived separately to develop mass limitations because the Agency has found that the wastewaters from all subcategories can be treated to the same concentrations, while the median water use ratios have been demonstrated separately by plants in each subcategory. In support of this methodology, the Agency found that these mass based BPT effluent limitations, or the effluent concentrations, or both, were achieved by the three representative plants (two POTWs, nos. 50 and 55, and one direct discharger, plant no. 47). The two POTWs are considered representative of direct dischargers because they both receive more than 95 percent of their wastewaters from tanneries, and because they both use the BPT model treatment technology, i.e., primary treatment followed by activated sludge biological treatment. Data from these plants includes periods of winter operation by the two POTWs, both located in Maine. Review of data in the record for these two POTWs reveals consistent effluent quality for winter periods. This finding demonstrates that periods of winter operation and cold climate locations do not warrant higher effluent limitations.

As noted previously, BPT effluent limitations are being promulgated for two new subcategories (no. 8; pigskins and no. 9; retan-wet finish, splits). However, the BPT limitations for these two new subcategories are based on the use of the same technology, biological treatement, as for the BPT limitations for all of the remaining seven subcategories proposed originally in 1979. The June 2, 1982 notice of availability included tentative effluent limitations for all nine subcategories. Thus the Agency believes that all commenters had an opportunity to present their views on these new subcategories and that separate notice and comment is not necessary.

The Development Document presents the methodology for developing these BPT effluent limitations, the engineering aspects of achieving these effluent limitations, a description of the technology, the costs and effluent reduction benefits, and the non-water quality environmental impact of these effluent limitations.

The Agency's analysis indicates implementation of BPT will require investment costs of $10.5 million, and total annualized cost of $5.7 million (first quarter 1982 dollars) in order to upgrade existing treatment facilities for the 17 direct dischargers.

These costs are expected to result in closure of 2 plants causing approximately 155 people to become unemployed. This is approximately 1.3 percent of the plants and 0.8 percent of the total employment in the industry. The cost of production is estimated to increase by 0.6 to 2.3 percent. The total mass of regulated pollutants removed from existing discharge to BPT would be 5.3 million pounds per year of conventional pollutants (BOD*5*, TSS, and Oil and Grease), and 44,000 pounds per year of total (trivalent) chromium from current discharges (547,000 pounds per year from raw waste). EPA has determined that the effluent reduction benefits of this regulation justify its costs.

B. BAT. The technology basis of the proposed BAT effluent limitations (see 44 FR 38753–38755; July 2, 1979) was BPT biological treatment, preceded by in-plant control, water conservation, stream segregation, and pretreatment of the segregated beamhouse stream by catalytic sulfide oxidation and flue gas coagulation-sedimentation, and followed by upgraded biological treatment through powdered activated carbon (PAC) addition, and multimedia filtration. The proposed BAT effluent limitations would have controlled one toxic pollutant (total chromium). Five nonconventional pollutants also would have been controlled (chemical oxygen demand (COD), TKN, ammonia, sulfide, and total phenols (as measured by the 4AAP procedure listed in 40 CFR Part 136, *Standard Methods*)). All of the pollutants controlled by BAT, including the conventional pollutants BOD, TSS, Oil and Grease, and pH, were proposed as indicators for the control of toxic organic pollutants discharged from leather tanning and finishing plants.

As a result of comments on the proposed regulations, and comprehensive analysis of supplemental data and documentation gathered after proposal, the Agency indicated in the June 2, 1982 notice of availability (47 FR 23961) that it had reviewed the options previously set forth in the BAT proposal, and redefined those options. Proposed OPTION I had been based on the addition of in-plant controls and segregated stream pretreatment to BPT technology. However, in view of the increase in cost for this control technology and the economic posture of the industry, EPA announced that it would consider BAT OPTION I to be equal to BPT. In addition, EPA announced that it would combine the effluent limitations and costs of proposed OPTION II, based on activated sludge upgraded primarily by powdered activated carbon (PAC) addition, with those of proposed OPTION I, primarily based on in-plant control and segregated stream pretreatment. This combination would be considered BAT OPTION II. The addition of multimedia filtration, (previously OPTION III) which was the basis for the proposed BAT regulation, remained as OPTION III. The Agency also indicated that it was no longer seriously considering proposed OPTION IV, which was based on the end-of-pipe addition of granular activated carbon columns, because such technology would be too expensive and lacked demonstrated use in this industry. BAT OPTION II, as amended, would require an incremental investment cost beyond BPT of $17.6 million, with total annualized cost of $7.5 million. This OPTION would remove 4.2 million pounds per year of nonconventional pollutants (COD, TKN, ammonia, sulfide, and total phenol [4AAP]), and 2,000 pounds per year of total chromium. Incidentally, this OPTION would remove 0.84 million pounds per year of conventional pollutants (BOD*5*, TSS, Oil and Grease). The Agency's economic analysis indicated that of the 13 plants analyzed, five may close if this OPTION were selected.

In reviewing all available engineering and economic data and information, the Agency concluded that attainment of BAT limitations based on BAT OPTION II would not be economically achievable for this industry. In addition, this technology has not been demonstrated in this industry at this time. Based on these findings, the Agency has determined that more stringent regulation of toxic pollutant discharges from the leather tanning industry is not justified at this time and that BAT effluent limitations should be established equal to BPT limitations. Therefore, review of BAT OPTION III

was not necessary because it was even more costly and would result in even more plant closures. Moreover, BAT OPTION III also has not been demonstrated in this industry.

The nonconventional pollutants TKN, ammonia, COD, sulfide, and total phenol (4AAP) were not controlled by BPT technology; these pollutants were controlled by BAT OPTIONS II and III. However, because BAT OPTIONS II and III were neither demonstrated nor economically achievable, EPA is not incorporating limitations for these nonconventional pollutants in the BAT (BPT) limitations.

State and local regulatory authorities may find it necessary to establish pollutant limitations in addition to and/or more stringent than those established by these regulations, where needed to achieve or maintain the appropriate receiving water quality. In these instances, the development document includes guidance on the range of anticipated performance of further control technologies. Specific effluent concentrations have not been included for BAT OPTIONS II and III because these technologies are not demonstrated in this industry at this time.

C. BCT. The proposed regulations had set BCT effluent limitations equal to those proposed for BAT (44 FR 38755). However, after review of the supplemented record, EPA indicated in the June 2, 1982 notice of availability (47 FR 23961–23962) that no economically achievable conventional pollutant control technology beyond BPT could be identified. Accordingly, EPA is promulgating BCT effluent limitations equal to BPT effluent limitations for all subcategories.

D. 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 leather tanning processes and wastewater treatment technologies, and, therefore, Congress directed EPA to consider the best demonstrated process changes, in-plant controls, and end-of-pipe treatment technologies which reduce pollution to the maximum extent feasible.

The technology basis of proposed NSPS was the same as the technology basis for the proposed BAT limitations. The proposed NSPS standards (44 FR 38755), were therefore the same as the proposed BAT effluent limitations.

The June 2, 1982 notice of availability (47 FR 23962) indicated that the Agency was considering adopting BAT (BPT) technology with reduced flows as the basis for NSPS mass based standards. The Agency is promulgating NSPS based upon the same end-of-pipe technology and effluent concentration limitations as utilized in the promulgated BAT (BPT) with reduced flows because this is the best available demonstrated technology.

The Agency received comments on the basis for and the achievability of new source water use ratios. As noted previously in this preamble, the Agency reviewed the data base in response to those comments and adjustments were made in new source water use ratios for four subcategories. These new source ratios (see Table 2), identified in eight of the nine subcategories, have been demonstrated by at least one plant in each of these eight subcategories, and have been incorporated in the mass based NSPS standards.

The cost of NSPS would be less than BAT for an existing source in eight of the nine subcategories because new plants can use more efficient processing methods which require less water use (see Tables 1 and 2). Because the cost of treatment technology is most dependent upon wastewater volume, new sources would be able to build smaller and less costly treatment systems. Similarly, the mass of pollutants discharged by these new source systems would be less than the mass of pollutants discharged by existing sources. This is true because new sources can achieve the same final effluent concentrations as existing sources. In the shearling subcategory, the new source water use ratio was the same as the median water use ratio. Therefore, the costs of end-of-pipe technology and the mass of pollutants discharged by new sources would be the same as for existing sources. Examples of costs and pollutant removals for selected model plants are presented in the Development Document. The economic analysis indicates that these NSPS regulations are not expected to significantly discourage entry into the industry or result in any differential economic impacts to new plants.

E. PSES. The Clean Water Act of 1977 requires pretreatment for pollutants that pass through POTWs in amounts that would violate direct discharger effluent limitations or interfere with the POTW's treatment process or chosen sludge disposal method. The legislative history of the 1977 Act indicates that pretreatment standards are to be technology-based, analogous to the best available technology. EPA has generally determined that there is pass through of pollutants if the percent of pollutants removed by a well-operated POTW achieving secondary treatment is less than the percent removed by the BAT model treatment system.

As noted in the June 2, 1982 notice of availability (47 FR 23962–23963), EPA reviewed the entire basis for the proposed PSES concentration limitations for ammonia, sulfide, and chromium. As part of that review and in response to comments, EPA developed two additional technology options (TECHNOLOGY OPTIONS I and II) which are less costly and require less space for installation than the technology option (TECHNOLOGY OPTION III) which served as the basis for the proposed PSES regulations. These two new technology options were described, along with their costs and projected economic impacts, in the notice of availability. Details on these technology options are presented in the Development Document. Discussion of the regulatory option selected by EPA for the promulgated regulations follows.

Ammonia. In-process substitution of epsom salts for ammonia in the deliming process served as the basis for the proposed pretreatment standard for ammonia. In their comments on the proposed regulations, industry supplied data and information on side-by-side pilot processing tests with and without in-process substitution. Based on that data and information, the Agency agrees with the industry that the substitution of epsom salts for ammonia may adversely affect finished leather quality and increase costs because of its operational difficulty. There are no other available pretreatment technologies which afford substantial removal of ammonia. Accordingly, EPA has decided that pretreatment standards for ammonia will not be promulgated.

Sulfide. EPA proposed (44 FR 38756–38757) a pretreatment standard for sulfide of "zero discharge" (not detectable by the 304(h) analytical method) based upon catalytic oxidation of segregated unhairing wastewaters. The standard would have been applicable to all subcategories. Sulfides were controlled by PSES because of the potential for interference resulting from release of massive quantities of hydrogen sulfide gas in sewers, headworks, and sludge management facilities at POTWs. Fatalities attributable to release of hydrogen sulfide gas have been documented. In response to the proposal, the industry commented that the standard (0.0 mg/l) was not achievable, and that the standard would not improve treatment efficiency or water quality.

The June 2, 1982 notice of availability (47 FR 23963) indicated that the severity of these problems varies by pH and time (slug loading), and by POTW (comingling of varying quantities of

municipal and industrial wastewaters in collection sewers). Review of the supplemented data base regarding the performance of catalytic sulfide oxidation technology revealed that a long term average effluent concentration of 9 mg/l could be achieved in total sewer discharges, with a maximum day variability factor of 2.7. EPA further indicated that only a maximum day limitation would be effective, because the most severe hazard posed by hydrogen sulfide occurs during rapid fluctuations in pH caused by unequalized slug loading. The maximum day concentration would reduce the potential for interference problems to the maximum extent feasible by available technology. The Agency indicated that it was considering applying the maximum day pretreatment standard (24 mg/l) to plants in subcategories (nos. 1, 2, 3, 6, and 8) which incorporate sulfide unhairing operations and discharge high concentrations of sulfides. Sulfides are discharged by plants in the remaining subcategories, but at concentrations typical of domestic sewage, thus not imposing any additional interference or operational costs than would be experienced without these wastewaters. Pretreatment Technology OPTIONS I, II, and III, discussed in the June 2, 1982 notice of availability, all include sulfide control for these five subcategories.

The Agency has included in this regulation a sulfide analytical method different from that promulgated under Section 304(h) of the Act. This was necessary because the 304(h) sulfide analytical method was subject to interferences. The method included in this regulation is that utilized by the Society of Leather Trades' Chemists, Method SLM 4/2. The sulfide pretreatment standard is based upon this method. Although this method has not been formally proposed by the Agency, it served as the basis for the tentative sulfide pretreatment standards announced in the June 2, 1982 notice of availability, and it was referenced in the supplemented record. Therefore, the Agency has determined that there has been adequate opportunity for comment.

The Agency indicated in the June 2, 1982 notice of availability that it was considering two regulatory options for sulfide control. The first option was to promulgate a categorical pretreatment standard applicable to all plants in the above noted five subcategories. The second option was to promulgate a categorical pretreatment standard which would include a provision for waivers from this standard. A waiver could be requested by the POTWs receiving unhairing wastewaters from tanneries and would be based upon evaluation of site specific factors which determine the degree of interference (hazard to human life) attributable to the high sulfide concentrations.

Those state and local authorities which commented generally agreed with the need for sulfide control. However, site specific factors were cited as important in determining the degree of interference that would exist. Most tanners either rejected totally the need for sulfide control or recommended that waivers be allowed for individual POTWs. Some commenters indicated that a waiver process would impose unnecessary procedural burdens, and that some POTWs would choose not to invoke the waiver process even if sulfide control were not necessary.

EPA is promulgating a categorical sulfide pretreatment standard applicable to subcategories with unhairing operations (nos. 1, 2, 3, 6, and 8) based on catalytic sulfide oxidation technology in order to prevent interference to the maximum extent feasible by available technology. EPA estimates that the investment cost of sulfide pretreatment and wastewater neutralization alone would be as high as $54 million with total annual costs of $18 million if all plants in these five subcategories are required to comply with the standard. No closures were anticipated for this cost. This cost would effect removal of 5.3 million pounds/year of sulfide.

Hydrogen sulfide at POTWs presents serious fatal hazards to life. Occurrences of hydrogen sulfide related deaths have been noted at POTWs receiving tannery wastewater. However, because the degree of interference will vary, EPA is adopting a waiver procedure which would allow affected POTWs to certify that uncontrolled discharge of sulfide does not interfere with their particular treatment works. The POTW would make this finding based upon an evaluation of a nonexclusive list of criteria set out in the regulations. After making these findings the POTW would be required to allow for public comment by notice in a local newspaper, and by public hearing if requested. The POTW would then forward its findings and results of public comments and certify in writing to the Water Management Divisioni Director in the appropriate EPA regional office that local circumstances do not require a categorical pretreatment standard for sulfide. The regulations also include a procedure with appropriate deadlines for POTWs to follow for invoking this waiver.

The Agency recognizes that it is virtually impossible to cover all possible combinations of factors which could occur at individual POTWs. Therefore, the Agency has elected to include in the regulations a list of general factors which, at a minimum, must be considered by POTWs when certifying that there is no interference caused by sulfide in their treatment works. These factors are:

(1) The presence and characteristics of other industrial wastewaters which can change sulfide concentrations, pH, or both.

POTWs that serve few if any industrial indirect dischargers, other than tanneries which employ unhairing operations, have little or no wastewater to contribute either to sulfide concentration changes, or to pH changes, especially decreases in pH which tend to liberate hydrogen sulfide gas.

POTWs that have significant industrial wastewater contributions, especially wastewaters that are not equalized and may include sludge loads or consistently low pH wastewater, may experience substantial difficulty in maintaining very high concentrations of sulfide in solution and are likely to have interference.

(2) The characteristics of the sewer/interceptor collection system which either minimize or enhance opportunities for release of hydrogen sulfide gas.

Leather tanneries with unhairing operations connected to POTWs by short pressure mains will experience little or no difficulty in maintaining sulfides in alkaline solution during wastewater transit from the indirect discharger to the POTW headworks. In this instance, the pressurized sewer system contributes to maintaining dissolved sulfides, thus decreasing the likelihood of interference.

POTWs with long gravity interceptor sewers, with "dead spots" and other discontinuities in hydraulic profile probably will have difficulty maintaining sulfides in solution, and interference is likely. In this case, reducing the sulfide concentration entering the sewer by sulfide pretreatment will minimize the potential for release of massive quantities of hydrogen sulfide gas during wastewater transit to the POTW.

(3) The characteristics of the receiving POTWs headworks, preliminary and primary treatment systems, and sludge management facilities which either minimize or enhance opportunities for release of hydrogen sulfide gas.

POTWs with facilities that have very short hydraulic detention times and are enclosed in well ventilated buildings have reduced opportunities for release of hydrogen sulfide gas.

POTWs with facilities that are enclosed in very confined and poorly ventilated buildings and have long hydraulic detention times have enhanced opportunities for release of hydrogen sulfide gas and substantial risk to human life.

(4) The history of any sulfide related interference problems at affected POTWs is of major importance in determining the need for a pretreatment standard for sulfide.

Five years is the suggested minimum period of historical review of any interference incidents as they relate to the presence of elevated sulfide concentrations from leather tanneries with unhairing operations, and to the first three factors relating to the POTW noted above.

The Agency considered relying solely on the prohibited discharge standards (Section 403.5) of the general pretreatment regulations in place of a categorical pretreatment standard for sulfide. However, the Agency rejected this approach because of the special interference problems presented by the very high concentrations of sulfides in the unhairing wastewaters generated by this industry, the very serious nature of the problem, and the availability of control technology.

Chromium. The proposed regulation (44 FR 38756–57) included a pretreatment standard (concentration limitation) for chromium (total), 2 mg/l, applicable to all plants and based upon coagulation-sedimentation of combined wastewater streams. The June 2, 1982 notice of availability (47 FR 23963) reasserted the Agency's concern for pass through of chromium (trivalent) based on the performance of well operated POTWs. For the cities studied, chromium removal by well operated POTWs achieving secondary treatment averaged 65 percent. This is substantially lower than the removals required by BAT level treatment (95–98 percent), and therefore the Agency indicated that it was considering a categorical pretreatment standard for chromium. The Agency indicated that its basis for the standard was pretreatment Technology Option II, which included coagulation-sedimentation of segregated and equalized tanyard and retan-wet finish wastewaters. It also was noted that from 5–10 percent of the plants might not have adequate interior space or adjacent land to install this technology.

Comments submitted by the industry focused on three major issues. First, the industry claimed that the Agency's finding of chromium pass through based on the POTW study was erroneous. The industry cited the low POTW effluent concentrations as the significant finding of the POTW study, not the percent removals. Second, the industry asserted that trivalent chromium is not significantly harmful to the environment, citing as supporting evidence the EPA Office of Solid Waste action that removed all tannery wastes (process solid wastes and wastewater treatment sludges) from the list of hazardous wastes because they did not contain hexavalent chromium. Third, the industry commented that the number of plants which do not have adequate space to install pretreatment technology was greater than estimated by EPA. Parts of the industry further objected to the Agency's assumption that parking lot space was available for treatment facilities.

The Agency has decided to promulgate a categorical pretreatment standard for chromium (total). Categorical pretreatment standards are necessary in this case because the percent of chromium removed by well operated POTWs achieving secondary treatment requirements is less than required by BAT for direct dischargers. This definition of pass through satisfies two competing objectives set by Congress: (1) That standards for indirect dischargers be analogous to standards for direct dischargers, while, at the same time, (2) that the treatment capability and performance of the POTW be recognized and taken into account in regulating the discharge of pollutants from indirect dischargers. The Agency compares percentage removal rather than the mass or concentration of pollutants discharged from the POTW because the former would not take into account the mass of pollutants discharged to the POTW from non-industrial sources and the latter would credit the indirect discharger with the dilution of the pollutants in the POTW effluent to lower concentrations due to the addition of large amounts of non-industrial wastewater.

EPA has decided to regulate trivalent chromium in these pretreatment standards because the total quantity of trivalent chromium generated by indirect dischargers in this industry is nationally significant (5.7 million lbs/yr) when compared to other industrial categories, such as the metal finishing industry (8.9 million lbs/yr) and inorganic chemicals industry-chrome pigments subcategory (1.4 million lbs/yr), where chromium also is regulated. Information in the record indicates that while trivalent chromium is not as toxic as hexavalent chromium from the *human health* standpoint, trivalent chromium exhibits chronic *aquatic* toxicity (24 hr toxicity value approximately 50 μg/l), as confirmed by ongoing EPA studies to develop a water quality criteria for trivalent chromium. Therefore, both forms of chromium (trivalent and hexavalent) are environmentally significant and are appropriate to be regulated under the Clean Water Act. The commenters submitted no information which would justify excluding chromium from these regulations.

The basis for the chromium pretreatment standard is Technology Option II with two different concentration limitations depending upon subcategory. The achievable long term effluent concentration for chromium (total) is 8 mg/l for those subcategories (nos. 4, 5, 7, and 9) which do not have beamhouse operations. The achievable long term effluent concentration for chromium (total) is 5 mg/l for those subcategories (nos. 1, 2, 3, 6, and 8) which do have beamhouse operations.

EPA's economic analysis projected that the cost of chromium control would result in disproportionate economic impacts on small plants in subcategories 1, 3 and 9. 4–5 of 6 small plants in subcategory 1, 1–2 of the 3 small plants in subcategory 3, and 4–5 of 9 small plants in subcategory 9 were projected to close. No less costly chromium control technology options or less stringent chromium standards could be identified for these plants. Therefore, the PSES regulations for chromium do not apply to small plants which process less than 275 hides/day in subcategory 1, less than 350 hides/day in subcategory 3, and less than 3600 splits/day in subcategory 9. However, small plants in subcategories 1 and 3 would still be subject to sulfide pretreatment standards, and small plants in subcategories 1, 3 and 9 would still be required to comply with general pretreatment regulations.

Pretreatment Technology Option II includes both sulfide and chromium control. The total investment cost of chromium control alone could be as high as $105 million with total annualized costs of as high as $28 million if all plants not exempted from these regulations were required to install this technology. This cost may result in the closure of one to three plants among all plants covered by these chromium pretreatment standards. The total mass

of trivalent chromium removed would be 5.2 million pounds per year.

Constraints on the availability of interior plant space and adjacent land were considered by EPA, and an attempt was made to develop further separations within subcategories or alternative effluent limitations to take this factor into account. The Agency specifically solicited comment in the notice of availability as to whether any plants would have inadequate space to install the recommended chromium control technology. However, EPA did not receive and does not have the detailed information and data needed to define the total population of indirect discharging plants that do not have adequate space to install the model chromium treatment technology. Therefore, the Agency believes that the more appropriate approach is to grant variances from the chromium pretreatment standard based upon a specific demonstration by the indirect discharger, as provided by the general pretreatment regulation (§ 403.13), of the fundamentally different factor (FDF) of inadequate interior plant space or adjacent land. In the event that sufficient detailed submissions are received within 180 days of the effective date of these regulations, as required by § 403.13, to precisely define those plants which do not have adequate space for chromium removal technology, an amendment of PSES regulations may be possible. Such submissions would have to conform to the requirements of § 403.13, and include at a minimum: (1) Detailed information and data on interior plant layout and adjacent land (diagrams noting all areas with current uses and dimensions); (2) details on the least costly pretreatment system including all unit processes to be used to meet the chromium standard and the area required, as well as pertinent details of any pretreatment facilities already in place; (3) the itemized cost of each of the additional treatment system unit processes which must be added, and the cost of any additional land which must be obtained, or other plant modifications that would be necessary to accommodate the additional facilities; (4) process flow diagram and production rates; and (5) the pretreatment standards which could be achieved if the discharger were to spend an amount equal to the Agency's model pretreatment Technology Option II (that portion not required to achieve the sulfide pretreatment standard).

In reviewing the information and data submitted by plants in support of their request for FDF variances, it must be noted that the Agency considers reallocation of that portion of available interior plant space and adjacent land (including parking lots) necessary to install pretreatment technology to be an appropriate requirement. Reallocation of all or a portion of parking lots for treatment facilities has been implemented by a few plants in this industry and by plants in other industrial categories.

It must be noted that the Agency has promulgated concentration based pretreatment standards for sulfide and chromium. The amount of water used at any plant is not germane to the achievability of these standards. Therefore, indirect dischargers will have added flexibility because water use reduction is not necessary to achieve these standards. The Agency believes that the cost of pretreatment technology can be minimized by first reducing to the maximum extent feasible the volume of wastewater to be treated. For this reason, the Agency has utilized reduced water use ratios (see Section V of the Development Document) achieved by existing sources only in calculating the costs of PSES.

The Agency has considered the time for compliance for PSES. Few leather tanning and finishing plants have installed and are properly operating the treatment technology for PSES. Additionally, many plants in this and other industries will be installing the treatment equipment suggested as model technologies for this regulation at about the same time, and this may result in delays in engineering, ordering, installing, and operating this equipment. For these reasons, the Agency has decided to set the PSES compliance date at three years after publication of this regulation.

F. PSNS. The Agency proposed pretreatment standards for new sources (PSNS) which were based on the same technology required for PSES, plus physical-chemical treatment by the Chappell Process. One of the comments received by the Agency was that the Chappell Process was not reliably demonstrated. EPA agreed that this process has not been demonstrated for immediate use in all subcategories. Therefore, in the June 2, 1982 notice of availability (47 FR 23963), EPA indicated that it was considering establishing PSNS based on the same pretreatment technology option chosen for existing sources (PSES). The Agency has decided to adopt Technology Option II and the same concentration based pretreatments standards for sulfide and chromium (total) as promulgated for PSES. As noted in the discussion of PSES, reduced water use is not necessary to achieve these concentration based standards.

It must be noted that because new sources can select among the most efficient processing methods and the most advantageous sites at which to locate, variances based upon fundamentally different factors (FDF) (Section 403.13) are not available. However, if a POTW certifies that the discharge of a new facility (operating in any of subcategories 1, 2, 3, 6, or 8) would not interfere with its treatment works, the sulfide pretreatment standards would not apply as noted for PSES. EPA does not consider the sulfide waiver to be an FDF variance because the waiver relates to conditions at the POTW, not conditions at the new source.

VIII. Costs and Economic Impact

Executive Order 12291 requires EPA and other agencies to perform regulatory impact analyses of major regulations. Major rules are defined as those which result in an annual cost of $100 million or more, or meet other economic impact criteria, such as cause major increase in costs or prices, or significant adverse effects on the ability of domestic producers to compete with foreign enterprises, or on competition, investment, productivity, or innovations. The promulgated regulation for leather tanning is not a major rule according to the definition and therefore does not require a formal regulatory impact analysis. This rulemaking satisfies the requirements of the Executive Order for a non-major rule.

The complete economic impact assessment is presented in *Economic Impact Analysis of Effluent Limitation Guidelines and Standards for the Leather Tanning Industry.* EPA 440/11-82-001. This report details the investment and annual costs for the industry as a whole and for typical plants covered by the proposed regulation. Compliance costs are based on engineering estimates of capital requirements and annual costs for the effluent control systems described earlier in this preamble, and include cost estimates for waste treatment sludge disposal. The report assesses the impact of effluent control costs in terms of price changes, production changes, plant closures, employment effects, and balance of trade effects. The impacts of each regulatory option are discussed in the report.

EPA has identified 158 facilities engaged in wet tanning which are covered by this regulation. Total investment costs for BPT, BCT, BAT, and PSES are estimated to be as high as

$170 million, with total annual costs of $51 million, including depreciation and interest. These costs are expressed in first quarter 1982 dollars and are based on the determination that plants will move from existing treatment to BAT, and from no assumed pretreatment to PSES. They are considered an estimate of the upper limit of actual costs that will be incurred because the sulfide pretreatment standards may not apply to all indirect dischargers in the affected subcategories, some POTWs may grant credits for chromium removal and reduce substantially (if not totally) the cost to individual plants of chromium pretreatment, and some plants may be granted FDF variances from chromium pretreatment standards because of lack of available space for installation of technology. Furthermore, some plants may find less expensive technologies, than used by EPA in this analysis, to comply with the regulations. Finally, while EPA assumed no treatment in place at indirect discharging plants for purposes of economic impact analysis, as many as 25 percent of the plants actually have in place portions of the technology needed to comply with PSES.

The major economic impact projected as a result of compliance costs for this regulation is the potential closure of 3 to 5 tanneries employing 255–460 persons. Closure estimates are those projected to result from the regulation after estimating baseline closures. Leather price increases are expected to reduce the demand for domestically produced leather by 1.5 to 2.0 percent, as a result of somewhat increased imports of leather and leather products. EPA has determined that these costs are justified in light of the effluent reduction benefits.

In order to evaluate the potential impacts, economic model plants were developed to represent plants according to industry subcategory, size and type of discharge (direct or indirect). The major decision criteria for plant closure are based on net present values (NPV) and cash flows. The cash-flow analysis projects revenues and expenditures for each year over the life of the investment, and indicates whether the firm could meet debt repayments. The NPV analysis discounts the cash flows of the plant over the life of the investment to estimate whether the owners would choose to close rather than comply with the regulation.

In response to comments on the proposal and the notice of availability, changes were made in the Agency's analysis. The profitability of the model plants were reduced by about 40 percent to reflect average conditions over the past 12 years. The cash flow test now uses a five-year repayment period for loans, instead of the 15 years assumed previously. In addition, costs were added for sludge disposal. These changes are discussed further in the comments section of this preamble.

BPT/BAT/BCT. As stated previously, the Agency is promulgating BAT and BCT limitations which are the same as BPT limitations. These regulations will affect 17 existing plants. Investment beyond the pollution control equipment already in place is estimated at $10.5 million, with total annualized costs of $5.7 million..

These costs are estimated to increase the cost of production at the tanneries by 0.6 to 2.3 percent. This regulation may result in the closure of 2 plants causing approximately 155 people to become unemployed. This is approximately 1.3 percent of the plants and 0.8 percent of the employment in the industry.

PSES. Investments to implement the promulgated pretreatment standards are estimated to incur costs of as high as $159 million, with an annualized cost of $45 million if all 141 plants were covered by these standards. These costs could increase the cost of production of 0.5 to 3.3 percent over the life of the investment. This regulation may result in the closure of 1 to 3 plants causing approximately 100 to 305 people to become unemployed. This is approximately 1 to 2 percent of the plants and 0.5 to 1. 6 percent of the employees in the industry. These economic effects take into account that small plants in the retan-wet finish, splits subcategory, and small plants in the hair save or pulp, nonchrome tan, retan-wet finish subcategory and extra-small plants in the hair pulp, chrome tan, retan-wet finish subcategory are not covered by the chromium pretreatment standards. This exclusion is necessary in order to avoid any disproportionate economic impacts on this segment of the industry. Without the exclusion, the analysis of compliance costs indicates significant impacts for these small plants. The 6 extra small plants in subcategory 1, 3 small plants in subcategory 3, and 9 small plants in subcategory 9, would have incurred an additional investment cost of $9.4 million, and total annual costs of $2.4 million. Plants corresponding to the small model plants are the least profitable and are currently operating at marginal levels. EPA estimates that if these plants were subject to the chromium pretreatment standards, 9–12 of these 18 small plants may have closed rather than install treatment technology. Since all 18 plants represented by the model plants are marginally profitable, and the model plants were projected closures, the chromium pretreatment standards do not apply to any of these 18 small plants. No less costly technology to control chromium could be identifed for these plants. However, all of these plants remain subject to general pretreatment regulations, and the six small plants in subcategory 1 and subcategory 3 may still be required to comply with the sulfide pretreatment standards.

NSPS and PSNS. While the industry in general has been declining in terms of production and number of plants, some new tanneries have been established near cattle slaughtering facilities away from the traditional centers. Since NSPS and PSNS are essentially the same as BPT and PSES, these regulations for new sources have no incremental economic effect. In fact, cost to new sources may be less than costs for existing sources because new sources can utilize the most efficient processing methods which generate less wastewater and, therefore, install smaller sized control technologies.

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

Regulatory Flexibility Analysis. Public Law 96–354 requires that a Regulatory Flexibility Analysis be prepared for regulations proposed after January 1, 1981 that have a significant impact on a substantial number of small entities. Although this regulation was proposed before January 1981 and all significant impacts on small entities have been eliminated by exempting some small leather tanners from chromium standards required by the PSES regulation, the Agency has prepared a Regulatory Flexibility Analysis. This analysis must:

- Describe the reasons, objectives, and legal basis for the final rule;
- Describe, and where feasible, estimate the number of small entities, as (in most cases) defined by Small Business Administration (SBA) affected by the final rule;
- Describe the reporting, recordkeeping, and other compliance requirements;
- Identify any Federal rules that may duplicate, overlap, or conflict with the final rule;
- Describe any significant alternatives that would accomplish the stated objectives, and minimize any significant economic impacts of the final rules on small entities.

This analysis may be done in conjunction with or as a part of any other analysis conducted by the Agency. This final rulemaking and the economic impact analysis supporting the final rule satisfy the requirements of the Regulatory Flexibility Act.

Many of the provisions of the Initial Regulatory Flexibility Analysis have been addressed in detail in other sections of this preamble. Sections I and II discuss the legal authority and objectives of the proposed rule. Section XV of this preamble discusses public participation. The Agency is not aware of any other Federal rules that may overlap or conflict with this final rule.

The economic analysis underlying the Regulatory Flexibility Analysis was included in the Economic Impact Analysis of the proposed regulations, and in the Economic Impact Analysis and the Leather Tanning Economic Summary which accompanied the June 2, 1982 notice of availability. The accompanying economic impact analysis includes a revised assessment of the impacts associated with this rule and outlines the other regulatory options the Agency considered.

Approximately 60 percent of this industry or 94 plants, have 200 or fewer employees per facility. (The SBA has proposed to define small businesses in the leather tanning industry as entities with 200 or fewer employees. See 47 FR 18993, May 3, 1982). The Agency estimated initially that application of PSES Technology Option II, chromium removal, to all indirect dischargers would cause closures of 10–15 small plants. Nine to twelve estimated closures were concentrated in the smallest size groups in subcategories 1, 3, and 9, with one to three projected closures in other size groups and subcategories. To reduce the economic impact, the Agency excluded 18 existing plants corresponding to the extra-small subcategory 1 model plant, the small subcategory 3 model plant, and the small subcategory 9 model plant from the requirements of PSES Technology Option II (chromium removal). These small plants are required to comply with the general pretreatment regulations. Moreover, the small plants in subcategory 1 and subcategory 3 are required to meet the PSES sulfide pretreatment standard. It is not expected that the plants excluded from the chromium requirement would close as a result of the remaining requirements of this regulation. These exclusions would not provide relief for one to three small plants in two subcategories; however, no further exclusions were made because the total number of plants corresponding to the affected size groups in the applicable subcategories is 24–27; hence a large number would receive relief compared to the few projected to require relief.

At the selected option for BAT (BPT), 2 out of the 14 small direct discharge plants would close. The Agency believes that this technology is economically achievable despite these closures in light of the significant pollutant removal.

IX. Nonwater Quality Environmental Impacts

Eliminating or reducing one form of pollution may cause other environmental problems. Sections 304(b) and 306 of the Act require EPA to consider the nonwater quality environmental impacts (including energy requirements) of certain regulations. In compliance with these provisions, the Agency considered the effect of this regulation on air pollution, solid waste generation, water scarcity, and energy consumption. This regulation was circulated to and reviewed by EPA personnel responsible for nonwater quality programs. While it is difficult to balance pollution problems against each other and against energy use, the Agency believes that this regulation will best serve often competing national goals. The Administrator has determined that the impacts identified below are justified by the benefits associated with compliance with the limitations and standards.

A. Air Pollution. Implementation of PSES, PSNS, BAT (BPT), BCT, and NSPS are not expected to have any significant air pollution impacts. However, minimal amounts of volatile organic compounds may be released to the atmosphere by aeration systems in activated sludge treatment facilities at direct dischargers.

B. Solid Waste. Implementation of these regulations by existing and new sources will generate sludges from wastewater treatment which must be disposed. As noted previously, separate Agency action removed both process solid wastes and wastewater treatment sludges from the list of hazardous wastes under RCRA, thus facilitating disposal at substantially lower cost than for hazardous wastes. Implementation of PSES by Technology Option II will generate 116,000 kkg (metric tons) per year (wet basis, 20 percent solids) of sludge. Implementation of BAT (BPT) will generate 30,000 kkg (metric tons) per year (wet basis, 20 percent solids) of sludge. The Agency has assumed that these sludges will be disposed in available off-site landfills. The cost of off-site landfill disposal of these sludges was assumed to be $20 per wet ton, or $100 per dry ton (20 percent solids). The resulting total annual O & M cost for sludge disposal is $2.5 million for all indirect dischargers, and $0.7 million for all direct dischargers.

The sludge generation rates and unit disposal costs associated with PSES and BAT (BPT) are projected to be the same for PSNS and NSPS. The mass of sludge and disposal costs for selected model plants are presented in the Development Document.

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, of concern primarily in arid and semi-arid regions. These regulations do not envision recycling requiring evaporative cooling mechanisms and, therefore, will create no additional consumptive water loss.

D. Energy Consumption. Implementation of PSES by Technology Option II will require 53 million kwh/yr of electric power. Implementation of BAT (BPT) will require 17 million kwh/yr of electric power. This represents an increase of approximately 1 percent above power usage for production to achieve PSES, and an increase of approximately 3 percent above power usage for production to achieve BAT (BPT). Similar percent increases in energy usage would be expected for new sources.

X. Pollutants and Subcategories Not Regulated

Paragraph 8 of the modified Settlement Agreement, approved by the District Court for the District of Columbia on March 9, 1979 (12 ERC 1833), contains provisions authorizing the exclusion from regulation, in certain circumstances, of toxic pollutants and industry categories and subcategories.

A. Exclusion of Pollutants. On December 18, 1980, EPA submitted an affidavit explaining that the Agency decided not to regulate certain of the 129 toxic pollutants under the authority of Paragraph 8(a)(iii) of the modified Settlement Agreement. Since that time, the Agency acted to remove three organic compounds from the list of toxic pollutants. All three of these pollutants were among those excluded from regulation because "they are not detectable by Section 304(h) analytical methods or other state-of-the-art methods."

The Agency has gathered additional data since these regulations were proposed, as described previously in the Methodology and Data Gathering Efforts section of this preamble. Based upon analysis of this additional data, together with the data used in the proposal, the Agency is revising its exclusion of pollutants. Of the 126 toxic pollutants, 71 are excluded from regulation under the authority of Paragraph 8(a)(iii) of the modified Settlement Agreement because "they are not detectable by Section 304(h) analytical methods or other state-of-the-art methods."

Among indirect dischargers, 54 of the remaining pollutants are excluded from regulation because there is no available pretreatment technology which is economically achievable that will remove these pollutants prior to discharge to POTWs. Pretreatment standards for existing sources (PSES) and new sources (PSNS) are included in these regulations to control the remaining toxic pollutant, chromium.

Among direct dischargers, 34 pollutants are excluded from regulation because "they are detected in treated effluents in trace amounts and neither cause nor are likely to cause toxic effects;" 7 pollutants are excluded from regulation because "they are detected at only a small number of sources within a subcategory and are uniquely related to those sources;" and 13 pollutants are "present in amounts too small to be effectively reduced by technologies known to the Administrator." These pollutants are excluded under authority of Paragraph 8(a)(iii). The pollutants and the specific reasons for their exclusion are presented in Appendix B. The pollutant (total) chromium is controlled by BPT; because BAT is being promulgated equal to BPT, total chromium is controlled.

B. Exclusion of Subcategories and Point Sources. On May 10, 1979, the Agency submitted an affidavit excluding from regulation leather products manufacturing, including Shoes and Related Footwear (SIC 3131–3149), and Gloves, Luggage, Personal Goods, and Miscellaneous (SIC 3151–3199) under the authority of Paragraph 8(a)(iv) of the Settlement Agreement. The Agency is not regulating this portion of SIC major group 3100 because the amount and toxicity of each pollutant in the discharges do not justify the development of national regulations.

XI. Best Management Practices

Section 304(e) of the Clean Water Act gives the Administrator authority to prescribe "best management practices" (BMPs). EPA, through its Office of Water Enforcement, is offering guidance to permit authorities in establishing BMPs required by unique circumstances for a given plant. BMPs are not addressed in this regulation.

XII. Upset and Bypass Provisions

A recurring issue is whether industry guidelines should include provisions authorizing noncompliance with effluent limitations during periods of "upset" or "bypass." An upset, sometimes called an "excursion," is an unintentional noncompliance occurring for reasons beyond the reasonable control of the permittee. It has been argued that an upset provision in EPA's effluent limitations is necessary because such upsets will inevitably occur even in properly operated control equipment. Because technology-based limitations require only what technology can achieve, it is claimed that liability for such situations is improper. When confronted with this issue, courts have disagreed on whether an explicit upset or excursion exemption is necessary, or whether upset or excursion incidents may be handled through EPA's exercise of enforcement discretion. Compare *Marathon Oil Co.* v. *EPA*, 564 F 2d 1253 (9th Cir. 1977) with *Weyerhaeuser* v. *Costle*, 590 F. 2d 1011 (D.C. Cir. 1978) and *Corn Refiners Assn., et al.* v. *Costle*, 594 F. 2d 1223 (8th Cir. 1979). See also *American Petroleum Institute* v. *EPA*, 540 F. 2d 1023 (10th Cir. 1976); *CPC International, Inc.* v. *Train*, 540 F. 2d 1320 (8th Cir. 1976); *FMC Corp.* v. *Train*, 539 F. 2d 973 (4th Cir. 1976).

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

We determined that both upset and bypass provisions should be included in NPDES permits and have promulgated Consolidated Permit Regulations that include upset and bypass 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. Consequently, although permittees will be entitled to upset and bypass provisions in NPDES permits, this final regulation does not address these issues.

XIII. Variances and Modifications

Upon the promulgation of this regulation, the effluent limitations for the appropriate subcategory must be applied in all Federal and State NPDES permits thereafter issued to direct dischargers in the leather tanning and finishing industry. For the BPT effluent limitations, the only exception to the binding limitations is EPA's "fundamentally different factors" variance. [See *E.I. du Pont de Nemours & Co.* v. *Train* 430 U.S. 112 (1977); *Weyerhaeuser Co.* v. *Costle, supra.*] This variance recognizes factors concerning a particular discharger that are fundamentally different from the factors considered in this rulemaking. Although this variance clause was set forth in EPA's 1973–1976 industry regulations, it is now included in the NPDES regulations and will not be included in the leather tanning and finishing or other industry regulations. (See the NPDES regulations at 40 CFR Part 125, Subpart D.)

The BAT limitations in this regulation are also subject to EPA's "fundamentally different factors" variance. BAT limitations for nonconventional pollutants are subject to modifications under Sections 301(c) and 301(g) of the Act. These statutory modifications do not apply to toxic or conventional pollutants. To apply for these modifications a discharger must be in compliance with BPT. Because this rule will make BAT equal to BPT, EPA does not expect any applications for Section 301(c) or 301(g) modifications. [See 43 FR 40895 (September 13, 1978).]

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.

NSPS are not subject to EPA's "fundamentally different factors" variance or any statutory or regulatory modifications. (See *E. I. du Pont de Nemours and Co.* v. *Train*, supra.)

XIV. Relationship to NPDES Permits

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

One issue that warrants consideration is the effect of this regulation on the powers of NPDES permit-issuing authorities. The promulgation of this regulation does not restrict the power of any permitting authority to act in any manner consistent with law or these or any other EPA regulations, guidelines, or policy. For example, even if this regulation does not control a particular pollutant, the permit issuer may still limit such pollutant on a case-by-case basis when limitations are necessary to carry out the purposes of the Act. Where manufacturing practices or treatment circumstances warrant additional controls, such limitations may be technology-based in conformance with the legislative history of the Act. However, such limitations are subject to administrative and judicial review as part of the permit issuance process. In addition, to the extent that State water quality standards or other provisions of State or Federal law require limitation of pollutants not covered by this regulation (or require more stringent limitations on covered pollutants), such limitations must be applied by the permit-issuing authority.

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

XV. Public Participation

The Agency solicited public comment on the proposed rules and the notice of availability of additional information published in the **Federal Register** on July 2, 1979, and June 2, 1982. Also, on February 15, 1980, in Washington, D.C., the Agency held a public hearing on the proposed pretreatment standards for the leather tanning and finishing industry.

Individual public comments received on the proposed regulation and the notice of availability, and the Agency's responses, are presented in two reports, "Responses to Public Comments, Proposed Leather Tanning and Finishing Industry Effluent Guidelines and Standards," and "Responses to Public Comments, Notice of Availability," which are part of the public record for this regulation.

A summary of the Agency's responses to major comments follows:

1. *Comment:* In their comments, members of the leather tanning industry claimed that the data and other supporting record material relied upon by EPA in proposing these regulations contained a large number of errors. Instances of repetitive data, unsupported data, and misuse of data were noted.

Response: In response to this comment, the Agency reviewed the entire data base and all documentation supporting this rulemaking. All historical data points were examined for background documentation, accuracy, and applicability. In its review of the data base, the Agency has corrected errors relating to data previously submitted by the industry, including production levels, water use ratios, and technology cost. As discussed in detail in the Subcategorization and Water Use section of this preamble and the Development Document, data points from a number of plants were eliminated from the data base utilized to develop water use ratios.

EPA also conducted a program to acquire new data during the comment period. This program involved sending 56 information requests (developed in cooperation with and distributed by the Tanners' Council of America), 43 site visits, and 10 wastewater sampling visits. The Agency acquired a significant amount of additional information and data on production levels, wastewater flow, as well as control and treatment technology performance and cost. The Agency is confident that the available data base accurately reflects the nature of the leather tanning industry, its water use and pollutant loads.

2. *Comment:* A number of industry representatives, the TCA, and several consultants questioned the pollutant removal efficiencies stated by the Agency for the recommended treatment technologies. The commenters said that there was a difference between "capability to achieve" the specified removal efficiencies and the level of removal efficiency achievable with "reliable performance." The commenters believed that the limitations and standards should be based on "reliable performance."

Response: As stated in the June 2, 1982 notice of availability (47 FR 23958–23965), the Agency has reviewed and revised its basis for evaluation of effluent limitation and standards. The Agency recognizes that levels of "reliable performance" may not be as stringent as the "capability to achieve," and has established the limitations and standards in this regulation based upon performance which can be reliably achieved. The review and analysis of the updated data base also included recalculation of variability factors for regulated pollutants. The resulting long term average performance and the normal variability which describe the effluent reduction achievable by BPT and PSES technologies are representative of "reliable performance" by full scale operating data submitted by tanneries. More stringent long term average effluent concentrations and variability factors as proposed and as represented by non-selected BAT and PSES options were capable of being achieved but did not represent "reliable performance."

3. *Comment:* Several tanneries presented data documenting previous efforts to reduce water consumption. The commenters said they had taken all of the feasible water conservation steps and that further reduction in water use which would be necessary to meet mass based limitations and standards would result in adverse changes in finished leather quality.

Response: As discussed previously in this preamble, the Agency does not have any data showing a correlation between subcategorization and final product quality. The reduced flow rates for existing and new sources were derived from data which show these values can be achieved and are being achieved or surpassed in every subcategory by at least one plant which utilizes raw materials and processing methods typical of each subcategory to produce salable final products of commercially acceptable qualities. A more detailed discussion of final product quality and subcategorization is presented in the Subcategorization and Water Use section of this preamble and in the Development Document.

4. *Comment:* Several commenters claimed that the median and reduced water use ratios utilized by the Agency were not representative for a subcategory because the data did not represent homogeneous processing methods and final products. For this

reason several industry members claimed that establishing mass based limitations and standards, utilizing specific water consumption values related to production levels, significantly reduces the tanners' ability to alter processes to accommodate varying raw material and final product mixes.

Response: The Agency concludes that the tanners ability to alter processes to accommodate varying raw materials and final product mixes will not be constrained by application of these regulations. Moreover, the Agency believes that the water use ratios are representative for each subcategory. The revised median water use ratios developed by the Agency, and summarized in Table 1 of the June 2, 1982 notice of availability (47 FR 23959), were based upon extensive data supplied by 90 plants in the industry. In utilizing these data, the Agency considered a broad range of differences in raw materials (cattlehide, sheepskin, pigskin, shearling, blue splits and grain sides, etc.) and three major groups of subprocesses (beamhouse, tanyard, and retan-wet finish). The Agency subcategorized the leather tanning industry based on these factors because they had significant influence on water use and waste load generation. Subcategorization was found to be related incidentally to the final products produced because, as a result of the primary subcategorization factors i.e., the raw materials and groups of subprocesses used, there is a typical mix of final products for each subcategory. Day to day variations in raw materials, final product mixes, and attendant water consumption are reflected by the individual data points which underlie these median flow ratio values.

Since the raw materials and subprocesses utilized by individual plants within a subcategory are very similar, it is the Agency's judgment that water use for individual plants within a subcategory also can be similar. The Agency believes that water conservation, recycling and reuse of water and/or good housekeeping practices can be used by plants within a subcategory in order to arrive at the flow ratios specified in Tables 1 and 2.

In response to comments, the Agency attempted to separate further some subcategories by predominant final products and developed a median water use ratio for these predominant final products. These water use ratios were not significantly different from the median water use ratios established for the applicable subcategory. Therefore, the data available to the Agency indicate that different plants making the same mix of salable final products of commercially acceptable quality have different water use ratios depending upon the extent to which they implement water conservation and recycle or reuse methods. Accordingly, the Agency has concluded from analysis of available data that there is no relationship between final products manufactured and water used which supports further subcategory separations.

Those plants with unique mixes of processing methods and final products covering more than one subcategory would have mass based NPDES permits or mass based pretreatment standards if the local POTW elected to do so, developed in a prorated basis to provide discharge allowances for each product or process utilized at a given plant. Since water conservation and recycle and reuse techniques are available for all three groups of subprocess and, therefore, applicable for each of the subcategories for this industry, those techniques also are available for mixed subcategory plants. Examples of how mixed subcategory plants could achieve reduced water use are addressed in the Development Document.

5. *Comment:* In response the notice of availability, the Tanners' Council of America provided examples for each subcategory of plant water use data which they claimed were misused or not representative of that subcategory. The Tanners' Council of America criticized the Agency's data base as being meager in some subcategories and provided examples of subcategories with inadequate data bases.

Response: The Agency has reviewed each individual example of alleged data verification from contributing plants. While the Agency believes that major changes in subcategorization are not necessary, minor adjustments have been made in the data bases for four subcategories and are summarized previously in this preamble. These adjustments are discussed in the *Water Use* section of this preamble, and detailed in the Development Document. Most notably, seven plants were deleted from subcategory one because they were mixed subcategory plants. Three plants were deleted from subcategory four, two because of inadequate documentation and one because of an error in subcategory placement, and a fourth plant had its raw material weight basis corrected and flow ratio recalculated; all resulting in an increased median flow ratio and substantially increased reduced flow ratios for subcategory four. In cases where subcategory flow ratios increased, costs were recalculated completely (PSES costs for subcategories 4 and 7). For those subcategories where flows decreased, costs remained the same (PSES costs for subcategories 1, 3, [small changes] and 5 [large change]).

The number of plants included in the data base utilized to define water use for each subcategory closely reflects the total number of plants in each subcategory of the industry; some of the subcategories do not have many plants in them. Therefore, the Agency found a commensurately limited amount of accurate and verifiable data in the following subcategories: hair save, chrome tan, retan-wet finish (subcategory 2)—4 plants; through-the-blue (subcategory 6)—3 plants; shearling (subcategory 7)—1 plant; pigskin (subcategory 8)—2 plants; and retan-wet finish (splits) (subcategory 9)—4 plants. The Agency has actively solicited data from the industry. In several instances, the industry submitted only a limited amount of accurate and verifiable flow data. For those subcategories the Agency reviewed the manufacturing and raw material data for each plant in the subcategory. Since there were no significant differences in manufacturing and raw material data for plants in the same subcategory, the available data was judged representative for all plants within the subcategory.

6. *Comment:* A number of commenters claimed that trivalent chromium is not significantly harmful to the environment, and should not be regulated. As supporting evidence that trivalent chromium is non-toxic, these commenters cited actions taken by the EPA Office of Solid Waste (OSW) to delist all tannery wastes (from processing and wastewater treatment) which contain trivalent chromium, and to specify hexavalent chromium in the hazardous waste listing criteria.

Response: Since chromium (total) is a toxic pollutant as defined by the Clean Water Act and occurs in nationally significant amounts (6.3 million lbs/yr), the Agency must set effluent limitations for chromium. Moreover, as discussed below, there is pass through of chromium at POTWs and the Agency is required to set pretreatment standards for chromium. Information and data available indicate that trivalent chromium is not nearly as toxic as hexavalent chromium from the *human health* standpoint, which was the basis used by OSW in delisting all tannery wastewater treatment sludges and process solid wastes. However, trivalent chromium does exhibit chronic *aquatic*

toxicity. Ongoing EPA efforts to develop water quality criteria for trivalent chromium confirm chronic aquatic toxicity (24 hr. toxicity value approximately 50 μg/l). Therefore, the Agency believes that it is appropriate to regulate trivalent chromium.

7. *Comment:* A number of commenters indicated that chromium pass through at POTWs receiving tannery waste has not been properly evaluated. They believe that the significant finding in the POTW study interim report is that very low chromium concentrations were found. They believe that chromium pretreatment is not necessary because the POTWs discharge low concentrations even through the study also showed POTW removal rates to be lower than those required of direct dischargers with BAT limitations.

Response: Section 307(b) of the Act requires that categorical pretreatment standards be established if EPA determines that the introduction of pollutants from a point source category would interfere with, pass through, or otherwise be incompatible with a POTW. Pursuant to the general pretreatment regulations, categorical pretreatment standards are necessary where the percent removal by POTWs is less than required by BAT for direct dischargers (i.e., pass through). Because there is pass through of chromium at POTWs, chromium pretreatment standards for indirect dischargers were established by the Agency. At POTWs where chromium does not pass through, removal credits may be granted to tanneries to reduce the amount of pretreatment necessary. If the POTWs achieve chromium removals comparable to those required by BAT, the POTW would grant removal credits to the indirect dischargers which would increase the standards to concentrations typical of raw wastewaters, thus eliminating the need for pretreatment.

8. *Comment:* Several commenters cited the increased costs associated with disposal of tannery sludges if they are classified as a hazardous waste due to the presence of chromium. The commenters contend that trivalent chromium does not interfere with land application of sludge and therefore should not be used as a limiting factor in sludge disposal.

Response: Chromium bearing wastes are no longer listed as hazardous by the Resource Recovery and Conservation Act (RCRA). This action should facilitate the disposal of sludges from treatment of tannery wastewater.

9. *Comment:* Tanners and their consultants commented on the proposed sulfide limit of 0.0 mg/l as being impossible to meet and unnecessary. Since domestic sewage contains sulfide in measurable quantities, requiring an industrial discharger to a POTW to remove all sulfide would place a burden on the industry which would not result in any improvement in either water quality, treatment efficiency, or personnel safety.

Response: In response to comments, the Agency has reviewed data in the supplemented record on the performance of sulfide oxidation and finds that, for indirect dischargers with unhairing (beamhouse) operations, a long-term average total sulfide concentration of 9.0 mg/l can be achieved in total sewer discharge. Accordingly, the Agency has revised the basis for the sulfide pretreatment standard from 0.0 mg/l to 9.0 mg/l for indirect dischargers with unhairing operations which discharge very high sulfide concentrations. Sulfide limitations are not necessary for indirect dischargers in the "no beamhouse" subcategories (subcategory numbers 4, 5, 7, and 9) because the sulfide concentrations in raw wastewaters from plants in these subcategories typically are less than 9.0 mg/l. Achievement of the sulfide pretreatment standard will minimize sulfide interference to the extent feasible by existing technology, including the very serious sulfide-related risks to human life in sewage collection and treatment systems at affected POTWs. A more stringent technology based sulfide pretreatment standard, which would relate to human safety criteria, cannot be supported at this time. The preliminary treatment step of sulfide oxidation for beamhouse subcategories has the added benefit of reducing the oxygen demand in subsequent aerobic treatment processes at POTWs.

10: *Comment.* Industry representatives commented on the lack of a proven substitute for ammonia in the deliming process and indicated that ammonia substitutes do not produce leather of acceptable quality.

Response: As indicated in the June 2, 1982 notice of availability, EPA has withdrawn the proposed ammonia pretreatment standards and effluent limitations and eliminated all associated costs for in-process ammonia substitution previously included in BAT and PSES technology options. EPA also is no longer considering regulation of ammonia as part of the BAT, discharge limitations. Although the Agency did not find final product quality to be a factor requiring further subcategorization, the Agency did consider leather quality in eliminating in process substitution for ammonia as a recommended technology. This decision was based upon the comments that in-process substitution for ammonia with epsom salts would not be feasible in light of its adverse effect on the properties of leather, and that its costs were substantial.

EPA recognizes, however, that site specific water quality problems may require more stringent permit requirements for ammonia on a case-by-case basis. Accordingly, the Agency has retained the cost, in BAT OPTION II, of technology to achieve nitrogen control by biological nitrification (i.e., pretreatment of segregated streams to reduce TKN in raw wastewater, and additional aeration and chemical addition to control pH in activated sludge systems). EPA engineering evaluation of end-of-pipe technologies (i.e., BAT OPTION II) indicates that consistently low TKN and ammonia effluent concentrations can be achieved with proper design and diligent operation of wastewater treatment systems. However, these concentrations have not been demonstrated in this industry.

11. *Comment:* Several commenters were concerned that the Chappell process, the basis for the proposed PSNS, is not proven and should be investigated further before it is accepted as providing pollutant removals equal to proposed BAT end-of-pipe treatment technology (extended aeration activated sludge upgraded with powdered activated carbon addition followed by multimedia filtration).

Response: The Chappell process was operated for only a short time at a small (25,000 gallons per day of wastewater) tannery which did not operate a beamhouse. The Agency has decided that, due to a lack of operating data from sustained, full-scale operation including treatment of unhairing wastewaters, the process cannot be recommended as an alternative to biological treatment by extended aeration activated sludge, and will not be used as the basis for PSNS.

12. *Comment:* Several direct dischargers commented that their present discharge does not have any adverse effects on the receiving water and therefore no additional treatment processes should be required.

Response: The Clean Water Act requires existing industrial dischargers to achieve "effluent limitations requiring the application of the best practicable control technology currently available" (BPT) (Section 301(b)(1)(A)), and "effluent limitations requiring the application of the best available technology economically achievable" (BAT) (Section 301(b)(2)(A)). The Agency has found that the best

included in the economic impact analysis of the proposed regulations.

Response: In developing revised costs, EPA developed credits for in place control technology for direct dischargers. These credits were estimated on a plant specific basis by the following methodology. First, estimates were prepared for the cost of upgrading each plant to BPT technology utilizing as much as possible of in place technology. Second, estimates were prepared for the total cost of BPT technology assuming that no technology was in place at any of the plants. Finally, the plant specific credit was the difference between these two costs. These credits were utilized in the economic impact analysis for each plant.

22. *Comment:* The industry sponsored economic analysis stated that the economic effects of the proposed regulations were understated for three major reasons, as follows:

- The compliance costs estimated by EPA were too low; therefore the consultants' sensitivity analysis calculated closures also using compliance costs which were two and three times those estimated by EPA;
- The 21-year time period over which EPA calculated the economic impacts of pollution control expenditures was too long; the study concluded that a five-year period was appropriate; and
- The interest rate used by the EPA to discount cash flows to obtain the net present value after pollution controls (9.9 percent) was too low; the analysis concluded that a higher discount rate of 15.9 percent, representing the "opportunity cost of capital," should have been used.

The industry consultant said that the proposed regulation would cause many more tanneries to close than EPA's data or studies indicated. The study concluded that as many as half the current total number of tanneries would close.

Response: Since the proposal, and as noted previously in this preamble, EPA has reviewed carefully and revised where appropriate the compliance costs of all control technologies. As a result, capital costs have increased considerably. However, annual costs, which were used in the net present value analysis and which considered both capital as well as operation and maintenance costs, have increased only modestly. Accordingly, EPA believes that the TCA consultant's estimates of costs two and three times the Agency's estimates were overstated.

The 21 year period over which the EPA economic models were calculated covers the construction period and the operating life of the equipment. The industry study concluded that the five-year period it incorporated was more appropriate for the calculation of impact because it better reflected the uncertainty in the industry. EPA believes that the uncertainty factor was adequately reflected in its assumption that the loan for pollution control equipment must be repaid in five years. By using a five year period, industry appears to have placed little value on the years of useful economic life remaining in the plant and pollution control equipment at the end of five years. In effect, the cost of pollution control and producing leather over the five year period were overstated, leading to an overestimate of closure impacts.

Subsequent to the proposal, the Agency revised its discount rate to 11 percent. The Agency believes that this was a reasonable estimate of the after-tax cost of capital to the tanning industry. This discount rate was based on industry data for recent years which indicates a pre-tax cost of debt of 17 percent and a pre-tax rate of return on equity of 17.5 percent.

In net present value analysis, a higher cost of capital increases the likelihood that a company's earnings would be judged an inadequate return on investment and that the company would be a closure prospect. The Agency carried out analyses using the industry's assumption of a 16 percent cost of capital, and found that closure was predicted, even with no pollution control expenditures, for six out of 22 model plants. Because this is a higher incidence of closure than would be expected under average conditions (and with no pollution control costs), the closure estimates resulting from the 16 percent discount rate were inconsistent with the known rate of industry closure since proposal (1979). Therefore, the industry closure estimates were overstated. The Agency believes that these three factors taken together overstated substantially the likely closures resulting from the cost of these regulations.

23. *Comment:* The industry sponsored economic study questioned the assumption that costs would not be passed through in higher prices. It was stated that many tanners would attempt to pass on cost increases, although probably only those in a strong competitive position would be able to do so.

Further, it was stated that the added costs would weaken the position of U.S. tanners with respect to foreign manufacturers. It was estimated that an increase in the price of domestically produced leather of 3 to 6 percent, as suggested by the 1979 EPA report, would cause a reduction in the demand for domestic leather production of 4.5 to 9 percent.

Response: The 1979 EPA economic report did not assume that costs would be passed through in higher prices for finished leather goods. In response to comments received on the notice of availability, the Agency has done a detailed analysis of the relationship between costs and increased prices and the consequent effects on imports and exports.

The Agency now agrees that there would be some increase in the price of domestically produced leather, and that this would cause some increase in the imports of leather and leather products, resulting in a reduction in the demand for domestically produced leather by 1.5 to 2.0 percent. The industry study overestimated the likely leather price increase, as well as its effect on demand for leather. The relationship between price increases and demand for leather is discussed in the economic analysis of these regulations.

24. *Comment:* The notice of avilability assumed that pollution control expenditures would be financed in large part by 15 year loans. The Tanners' Council stated that probably no more than 10 percent of the firms would qualify for long-term borrowing without guarantee and that the economic implications for industry members would be very serious if loans were made for shorter periods, even up to five years. The commenter noted that many companies would simply be unable to obtain the required financing.

Response: In response to this comment, the Agency conducted a telephone survey of tanners and bankers on the terms of financing that would be available for pollution control equipment. Based on the survey, the Agency found that loans for pollution control equipment would likely be for shorter periods than 15 years—three to seven years. The Agency then revised its economic analysis to use a 5 year repayment period. A cash flow analysis was then carried out incorporating the assumption of a five year repayment period.

Regarding the comment that loans would not be available at all, the impact analysis assumes that if the plant would be viable by the net present value test, and it could cover the loan repayment, loans would be available.

25. *Comment:* The Tanners' Council of America stated that EPA had apparently determined not to conduct a Regulatory Flexibility Analysis to assess the impact

17. *Comment:* Numerous commenters indicated that the use of indicator pollutants for BAT to reflect removal of toxics in a failure of EPA to set specific numerical standards as required by the NRDC Settlement Agreement. The industry preferred specific toxic pollutant limitations.

Response: EPA examined carefully the presence and level of toxic pollutants in the industry's wastewaters. As explained previously, EPA has established a specific limitation for the one toxic pollutant, chromium, which it found at treatable levels. No other toxic pollutants or indicators will be controlled by BAT because no economically achievable technology beyond BPT was identified which also afforded treatment specifically for toxic pollutants found in these effluents. The 12 toxic pollutants, other than chromium, found in treated effluents (see Table 4, 47 FR 23959) are not projected to be at concentrations which are effectively treatable by any available technology known to the Administrator, and therefore these 12 toxic pollutants have been excluded from regulation as provided by Paragraph 8(a)(iii) of the revised Settlement Agreement.

18. *Comment:* Commenters noted that the conditions in the leather tanning industry deteriorated substantially between the time economic data was collected [1976] for the proposal and their publishing [1979].

Response: In response to these comments, EPA completed a reassessment of the economic conditions of the industry, with the assistance of summary data provided by the TCA, financial data provided by a number of individual firms, and other data collected by the Agency. The basis for the economic analysis was updated to reflect conditions through 1979, including hide prices, demand for and prices of finished leather, plant utilization rates, international competition, and related factors, with control technology cost data expressed in first quarter 1980 dollars. As part of this reassessment, EPA evaluated seven additional model plants for indirect dischargers, in addition to the 15 model plants evaluated for the proposed regulations. Plant specific analyses were performed again for 13 of the 20 direct dischargers, including consideration of an allowance for previous expenditures on in-place control technologies.

19 *Comment:* The Tanners' Council of America criticized EPA's use of data from 1975 and 1976 noting that this period was not representative for the industry. The TCA noted that significant changes in the economic condition of the industry, unrelated to the recession, have occurred since proposal of the regulations in 1979. Since the last half of 1981 and the first half of the 1982, the long-term decline of the industry has taken a sharply accelerated pace due to accelerated decline in the U.S. production of shoes and other leather products; increased foreign competition in leather markets; failure of negotiated agreements with leather exporting countries; rise of unfavorable fashion trends; and rebound in export of U.S. hides. The TCA claimed that the capital investment and operating expenses necessary to implement the technical options being considered will have greater impact on the industry than perceived by EPA.

Response: The Agency agrees that the profit rates for the model plants were based on a period which was nonrepresentative for the industry. The profit rates were largely based on a plant survey taken in 1976 and primarily reflect profit rates for 1974 and 1975 when profits were the highest over the past 12 years. In response to this comment, the Agency revised the profit rates by using an average profit rate for the period of 1969–1981 instead of a profit rate based on the years 1974 and 1975. Accordingly, the profitability of the model plants has been reduced by approximately 40 percent. This change increased the number of potential plant closures resulting from installing the treatment equipment.

The factors cited for the decline in the leather tanning industry, however, were not unique to the end of 1981 and 1982. The factors cited were cyclical and their effect on the decline in the industry is captured in the long-term data used in the economic analysis. The current sharp decline is due predominately to the generally weak economic conditions, not an underlying change in the factors cited by the TCA.

20. *Comment:* Many commenters stated that the capital, as well as operation and maintenance costs, used for the recommended technologies were significantly underestimated. To document this the TCA prepared their own model plant costs for tanneries in subcategories 1, 2, 3, 4, and 5.

Response: EPA performed a comprehensive review and revision of the entire engineering design and cost development procedure. All the cost estimates appearing in the June 2, 1982 notice were updated to first quarter 1980 values. Design factors of the unit processes for all treatment technologies were found generally to be correct, while a number of inadequacies were found in the cost development procedure used for the proposed regulations. The Agency has revised the subcategory median water use ratios, which generally increased, and the cost curves. Moreover, the Agency has revised the cost estimates by now including a 23 percent allowance for engineering and contingency costs, and for interest during construction. In addition, the Agency has revised its costs by assuming that all construction work is to be done by contract labor instead of tannery workers. In reference to this last item, EPA's cost estimates may now be higher than what actual installed costs would be, since historically tanners have used in-house labor extensively for installation of treatment systems. Taken together, these changes have resulted in substantial increases in the cost of control and treatment technologies. The cost estimates submitted by TCA were three to five times higher than the estimates used by the Agency to evaluate the economic impact of the proposed regulation. The Agency's revisions in cost have served to reduce the discrepancies between the TCA and Agency estimates.

There are, however, remaining differences between the TCA and Agency estimates. A portion of the remaining differences were attributed to the fact that the TCA model plant costs included items that EPA believes were not justified. For instance, the TCA included the cost of recovery and reuse systems for vegetable tanning (Subcategory Three), brine (Subcategory Five), and degreasing solvent (Subcategory Five). These systems are used extensively in the industry and provide return on investment. Therefore, the Agency believes these costs should not be included as wastewater treatment costs. In addition, the TCA did not take into account the reduced chemical purchase requirements for production purposes which occur due to operation of chemical reuse and recovery systems. The TCA model plant costs also include expenditures for reconstructing process equipment to facilitate waste stream segregation and chemical recovery and reuse. As an example, the cost of constructing a new beamhouse was included for Subcategories One and Two. The Agency believes that these measures are not required by this regulation and must be justified to improve production efficiency.

21. *Comment:* Several commenters stated that capital expenditures made for wastewater treatment and pretreatment in contemplation of complying with the 1972 Act should be

practicable control technology currently available that also is economically achievable and cost effective is equalization, primary coagulation-sedimentation, and biological treatment in the form of extended aeration activated sludge. This technology achieves significant reduction in all pollutants, toxic as well as conventional and nonconventional pollutants. Accordingly, this technology serves as the basis for BPT effluent limitations. The Agency's review of the direct dischargers indicated that the existing effluent quality generally was very poor; in a small number of cases final effluent concentrations were found to be only marginally lower than raw waste concentrations either periodically or consistently. Environmental analysis of existing discharges indicated that aquatic and human health toxicity values for certain toxic pollutants (e.g., pentachlorophenol, trivalent chromium, naphthalene) were exceeded under low flow conditions. In light of these findings, the Agency has found it to be environmentally necessary and cost-effective to require upgrading of existing treatment facilities in order to improve the general level of effluent quality of most plants, and to improve the consistency of effluent quality of other plants. It must be noted, however, that the Agency has not found additional technology options and associated effluent limitations more stringent than BPT to be economically achievable for the category as a whole at this time. Therefore, the Agency has decided BAT should be no more stringent than BPT. However, the Agency also recognizes that in certain instances site specific water quality considerations may require permit requirements more stringent than BPT effluent limitations based on case-by-case analysis.

13. *Comment:* Several tanneries and POTW's stated that indirect dischargers located in large metropolitan areas may contribute only a small percentage to the total waste stream. Application of national pretreatment standards to these tanneries therefore is not necessary to assure proper operation of the POTW.

Response: The Agency recognizes that some indirect dischargers located in large metropolitan areas may contribute only a small percentage to the total wastestream. Under the Clean Water Act and the general pretreatment regulations, pretreatment standards for indirect dischargers are required if the introduction of pollutants would result in pass through, interference, or otherwise would be incompatible with POTWs. The Agency has determined that pretreatment standards are necessary for the leather tanning industry because trivalent chromium passes through POTWs and because sulfide can interfere with POTWs. Where chromium does not pass through the POTW, removal credits are available to reduce the need for pretreatment. POTWs also may certify that the sulfide pretreatment standard should not apply to certain contributing indirect dischargers if site specific evaluation indicates that sulfide interference is not a problem.

14. *Comment:* Several tanneries and POTW's commented that the pretreatment standards in the proposed regulations could require duplicate treatment in instances where the POTW has facilities specifically constructed for the treatment of tannery wastewater. Furthermore, in some cases construction of these facilities has been financed by the tannery while ownership and operation is the responsibility of the POTW.

Response: As noted in the response to the previous comment, categorical pretreatment standards are necessary where pass through has been demonstrated. However, § 403.7 of the general pretreatment regulations provides for granting of removal credits achieved at POTWs. In cases where POTW facilities have been specifically designed to treat leather tanning and finishing wastewaters, it is likely that the POTW would be able to grant a credit for chromium removal to the indirect discharger. Where the POTW achieves removals comparable to BAT, credits probably would eliminate the need for pretreatment.

15. *Comment:* The Tanners' Council of America commented that the proposed pretreatment regulation discouraged the use of POTWs by industry by requiring new sources to provide pretreatment equivalent to BAT, and thereby contravened the intent of the Act to encourage joint treatment.

Response: The proposed pretreatment standards for new sources (PSNS) were based upon technology equivalent to BAT. The proposed PSNS contained limitations equal to BAT for ammonia, sulfide, and chromium, which were more stringent than those proposed for PSES, as well as limitations for BOD5, COD, TSS, Oil and Grease, Total Kjeldahl Nitrogen, and Phenol. A specific range was included for pH. After review of the entire technology, performance, and cost basis for the proposed PSNS, EPA revised PSNS. The PSNS being promulgated today is based on the same technology and regulates the same pollutants to the same concentrations as PSES, not BAT.

16. *Comment:* Several tanners cited the lack of available space for construction of wastewater pretreatment facilities as a constraint on the industry's ability to comply with the proposed PSES. The Tanners' Council of America, in responding to the notice of availability, also objected to the use of employee parking space for pretreatment facilities.

Response: During the comment period for the proposed regulations, the Agency's representatives visited a total of 59 of the 141 indirect discharging tanneries including tanneries in the urban areas of Chicago, IL; Milwaukee, WI; Peabody-Salem, MA; and Gloversville-Johnstown, NY. Based on the findings of these visits the Agency predicted that 5 to 10 percent of the leather tanning industry does not have space available for construction of wastewater pretreatment facilities.

The Agency did not have sufficient data to identify all indirect discharging tanneries with inadequate space to install chromium pretreatment technology, and could not establish specific exemptions or alternative effluent limitations for these plants. Therefore, in the notice of availability the Agency solicited comment and additional data concerning plants with inadequate space to install the recommended pretreatment technology (47 FR 23962). However, additional substantive input was not received, even though EPA extended the comment period to facilitate receipt of such comments. EPA does not have sufficient detailed information regarding space availability to define the population of plants which have less than adequate space to install the recommended pretreatment technology for chromium. The Agency believes that the more appropriate approach is to grant waivers based upon a specific demonstration by the indirect discharger, as provided by the general pretreatment regulation (§ 403.13), of the fundamentally different factor of inadequate interior plant space or adjacent land. Should sufficient detailed data be received to identify those plants which do not have adequate space for chromium pretreatment technology, an amendment of PSES regulations may be possible. The Agency considers reallocation of that portion of available interior plant space and adjacent land (including parking lots) necessary to install pretreatment technology to be an appropriate requirement. Reallocation of all or a portion of parking lots for treatment facilities has been implemented by plants in other industrial categories.

of the regulation on small business. As part of its comment, the Tanners' Council reviewed the criteria of the Regulatory Flexibility Act, as well as the EPA guidelines for implementing the Act, and provided such an assessment for indirect dischargers. Defining small businesses as those with 200 or fewer employees, the TCA found 68 percent of the 140 indirect dischargers would be classified as small business. For these tanneries, the TCA noted that the criteria for a significant impact would be met, in varying degrees, for three of the four criteria suggested in the EPA Regulatory Flexibility guidelines:

- Compliance costs more than 5 percent of production cost;
- Compliance costs as a percent of sales for small entities more than 10 percent higher than for large entities (diseconomies of small scale);
- Capital costs a significant portion of capital available.

The TCA concluded it was therefore imperative for EPA to give consideration, under the terms of the Regulatory Flexibility Act, to the dramatic impact that the regulation would have on small business.

Response: While the draft economic report did not contain a separate section on small business analysis, Chapter VIII of the draft report, which presents estimates of impacts on model plants of various sizes, provides the information for such an analysis. A regulatory flexibility analysis is included in the final report.

EPA believes that, in terms of the three criteria considered by the TCA, either the impacts were not as dramatic as indicated by the Council, or that the impacts were not confined to small plants.

TCA estimated a significant impact in terms of compliance cost as a percent of production cost based on data in the economic report on annualized cost for the first year of operation. This figure overstated compliance cost because it did not take into account the tax implications of pollution control expenditures and because the economic model estimated the highest costs in the first year of operation, and lower costs for subsequent years. A better measure of compliance cost was provided by the statistic on price increase required to maintain a company's rate of return on investment equal to its baseline value. Averaged over the years of operation of the pollution control equipment, this did not exceed five percent for any of the model plants. Over the first five years of operation, which were of most immediate concern, the rquired price increase exceeded five percent for only one model plant (small nonchrome tan).

The criterion referring to adverse scale diseconomies holds for all sizes of model plants, except for the largest model plant in each subcategory. Hence, for the tanning industry, this criterion was not useful for distinguishing impacts on small plants.

In assessing impacts in terms of the third criterion, capital requirements and capital availability, the Tanners' Council commented that most of the small tanneries would not qualify for 15-year loans. However, as the TCA also stated, this also appeared to be true for tanners in general. Hence, on this criterion alone, there was not a basis for distinguishing impacts on small plants.

The Agency believed that more stress should be placed on the fourth regulatory flexibility criterion, not mentioned by the TCA in this context, the likelihood of closures. EPA believed that the economic effects of concern would best be assessed in terms of closure analysis. For the notice of availability, no closures were projected for indirect dischargers (and only one for the direct dischargers). However, as a result of comments received, the Agency revised its economic analysis. The initial result was that a substantial number of closures were projected among small plants with indirect discharge. In order to reduce the economic impacts, PSES was revised so that the smallest plants in subcategories 1, 3 and 9 would not be covered by the chromium removal requirement. The details of this analysis, and the exclusions, are given in this Regulatory Flexibility Analysis portion of this preamble.

26. *Comment:* In response to the notice of availability, one commenter questioned EPA's operation and maintenance costs as understated because of omission of sludge disposal and effluent monitoring costs.

Response: EPA has reviewed its operation and maintenance costs carefully, compared to those provided by the commenter. The Agency has found that sludge disposal costs, while included in preliminary costs and economic analysis, were inadvertently omitted from the costs summarized in the June 2, 1982 notice of availability. The cost of treatment system sludge disposal now has been added. The cost of installing and operating effluent monitoring facilities were included in the notice of availability for all plants. However, the cost of sample analysis for sulfide and total chromium was omitted for indirect dischargers; these costs now have been included.

27. *Comment:* The Tanners' Council of America and other commenters considered the long term average concentrations for the BAT options not selected [BAT OPTIONS II and III] very stringent and not demonstrated within the industry. They expressed the concern that these concentrations could be misused by premitting authorities.

Response: The Agency agrees that the concentrations projected for BAT OPTIONS II and III have not been demonstrated, and therefore could be misused by permitting authorities. Accordingly, the Agency has deleted these concentrations from the Development Document. The final Development Document, however, includes the range of expected performance for these technologies, in place of concentrations because the specific concentrations included in the notice of availability have not been demonstrated in this industry at this time.

28. *Comment:* In response to the notice of availability, most industry members commented that sulfide pretreatment standards were not necessary and should be used as guidance. Some commenters were concerned that the waiver process suggested in the notice of availability would impose unnecessary procedural burdens, and that some POTWs would choose not to invoke the waiver process even if sulfide control was not necessary. State and local authorities generally agreed with the need for sulfide pretreatment standards, and some considered the limitations under consideration too lenient.

Response: Under Section 307 of the Clean Water Act and the general pretreatment regulations, pretreatment standards for indirect dischargers are required if the introduction of pollutants would result in interference with POTWs. The Agency believes that a pretreatment standard for sulfide is necessary to minimize the potential for interference, such as the hazard to human life associated with very high sulfide concentrations in wastewaters from plants with unhairing operations. Accordingly, EPA has decided to adopt a sulfide pretreatment standard, but will allow POTWs to certify to EPA that these standards should not apply to specified indirect dischargers upon consideration of factors discussed previously in this preamble. The Agency will require POTWs to certify that these factors have been considered and that waivers are warranted. The Agency has streamlined the procedural process for sulfide waivers and believes that the procedural burden will be minimized.

The concentration limitation is achievable by the catalytic sulfide oxidation technology, affords

substantial reduction in sulfide concentrations, and minimizes the attendant risk to the extent feasible. As discussed above, a more stringent pretreatment standard cannot be supported at this time.

XVI. Small Business Administration (SBA) Financial Assistance

The Agency is continuing to encourage small manufacturers to use Small Business Administration (SBA) financing as needed for pollution control equipment. Three basic programs are in effect: the Guaranteed Pollution Control Program, the Section 503 Program, and the Regular Guarantee Program. All the SBA loan programs are only open to businesses with net assets less than $6 million, with an average annual after-tax income of less than $2 million and with fewer than 250 employees.

The guaranteed pollution control program authorizes the SBA to guarantee the payments on qualified contracts intered into by eligible small businesses to acquire needed pollution control facilities when the financing is provided through pollution control bonds, bank loans and debentures. Financing with SBA's guarantee of payment makes available long-term financing comparable with market rates. The program applies to projects that cost from $150,000 to $200,000.

The Section 503 Program, as amended in July 1980, allows for long-term loans to small and medium-sized businesses. These loans are made by SBA-approved local development companies, which for the first time are authorized to issue Government-backed debenturers that are bought by the Federal Financing Bank, an arm of the U.S. Treasury.

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

For additional information on the Regular Guarantee and Section 503 Programs contact your district or local SBA Office. The SBA coordinator at EPA headquarters is Ms. Frances Desselle who may be reached at (202) 426-7874.

For further information and specifics on the Guaranteed Pollution Control Program contact: U.S. Small Business Administration, Office of Pollution Control Financing, 4040 North Fairfax Drive, Rosslyn, Virginia 22203, (703) 235-2902.

XVII. List of Subjects in 40 CFR Part 425

Leather and leather products industry, Water pollution control, Waste treatment and disposal.

XVIII. OMB Review

The regulation was submitted to the Office of Management and Budget for review as required by Executive Order 12291. Any comments from OMB to EPA and any EPA response to those comments are available for public inspection at Room M2404, U.S. EPA, 401 M St., SW., Washington, D.C. 20460 from 9:00 a.m. to 4:00 p.m. Monday through Friday excluding federal holidays.

In accordance with the Paperwork Reduction Act of 1980 (Pub. L. 96-511), the reporting or recordkeeping provisions that are included in this regulation will be submitted for approval to the Office of Management and Budget (OMB). They are not effective until OMB approval has been obtained and the public notified to that effect through a technical amendment to this regulation.

Dated: November 7, 1982.

Anne M. Gorsuch,

Administrator.

XIX. Appendices

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

AGENCY—The U.S. Environmental Protection Agency.

BAT—The best available technology economically achievable, under section 301(b)(2)(A) of the Act.

BCT—The best conventional pollutant control technology, under section 301(b)(2)(E) of the Act.

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

BPT—The best practicable control technology currently available, under section 301(b)(1)(A) 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 where wastewaters are discharged or may be discharged into waters of the United States.

Indirect discharger—A facility where wastewaters are discharged or may be discharged 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 (POTWs)—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 indirect discharges, under section 307(c) of the Act.

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

The Act—The Clean Water Act of 1977.

Appendix B—Toxic Pollutants Excluded

(1) Toxic pollutants not detectable with the use of analytical methods approved pursuant to section 304(h) of the Act:

Acenaphthene
Acrolein
Acrylonitrile
1,2,4-Trichlorobenzene
Hexachloroethane
1,1-Dichloroethane
Chloroethane
Bis(2-Chloroethyl) Ether
2-Chloroethyl Vinyl Ether
2-Chloronaphthalene
Parachlorometa Cresol
2-Chlorophenol
1,3-Dichlorobenzene
1,2-Dichloropropane
1,3-Dichloropropylene
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Fluoranthene
4-Chlorophenyl Phenyl Ether
4-Bromophenyl Phenyl Ether
Bis(2-Chloroisopropyl) Ether
Bis(2-Chloroethoxy) Methane
Methyl Chloride
Methyl Bromide
Bromoform
Dibromochloromethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
2,4-Dinitrophenol
4,6-Dinitro-O-Cresol
N-Nitrosodimethylamine
N-Nitrosodi-N-Propylamine
Butylbenzyl Phthalate
Di-N-Octyl Phthalate
Dimethyl Phthalate
1,2-Benzanthracene
3,4-Benzopyrene
3,4-Benzofluoranthene
11,12-Benzofluoranthene
Acenaphthylene
1,12-Benzoperylene
1,2,5,6-Dibenzanthracene
Indeno (1,2,3-CD) Pyrene
Pyrene
Vinyl Chloride
Aldrin
Dieldrin
Chlordane
4,4'-DDT
4,4'-DDE (P,P'-DDX)
4,4'-DDD (P,P'-TDE)
Alpha-Endosulfan
Beta-Endosulfan
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Heptachlor
Heptachlor Epoxide
Alpha-BHC
Beta-BHC
Gamma-BHC (Lindane)
Delta-BHC
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene
2,3,7,8-Tetrachlorodibenzo-P-Dioxin

(2) Toxic pollutants detected at only a small number of sources within a subcategory and uniquely related to the source:
Benzene
Benzidene
1,1,1-Trichloroethane
2,4-Dichlorophenol
2,4-Dimethylphenol
Naphthalene
Toluene

(3) Toxic pollutants detected in treated effluents in trace amounts and neither cause nor are likely to cause toxic effects:
Tetrachloromethane
Chlorobenzene
Hexachlorobenzene
1,2-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroform
1,4-Dichlorobenzene
3,3-Dichlorobenzidene
1,1-Dichloroethylene
1,2-Trans-Dichloroethylene
1,2-Diphenylhydrazine
Dichlorobromomethane
Isophorone
Nitrobenzene
2-Nitrophenol
N-Nitrosodiphenylamine
Di-N-Butyl Phthalate
Diethyl Phthalate
Chrysene
Anthracene/Phenanthrene
Fluorene
Tetrachloroethylene
Trichloroethylene
Antimony
Arsenic
Asbestos
Beryllium
Cadmium
Mercury
Selenium
Silver
Thallium

(4) Toxic pollutants in treated effluents present in amounts too small to be effectively reduced by technologies known to the Administrator:
Copper
Lead
Nickel
Zinc
Cyanide
1,2-Dichlorobenzene
2,4,6-Trichlorophenol
Ethylbenzene
Methylene Chloride
4-Nitrophenol
Pentachlorophenol
Phenol
Bis(2-Ethylhexyl) Phthalate

(5) Toxic pollutants excluded from regulation because there is no available pretreatment technology which is economically achievable that will remove these pollutants prior to discharge to POTWs:

Benzene
Benzidene
Tetrachloromethane
Chlorobenzene
Hexachlorobenzene
1,2-Dichloroethane
1,1,1-Trichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroform
2,4-Dichlorophenol
2,4-Dimethylphenol
1,4-Dichlorobenzene
3,3-Dichlorobenzidene
1,1-Dichloroethylene
1,2-Trans-Dichloroethylene
1,2-Diphenylhydrazine
Dichlorobromomethane
Isophorone
Nitrobenzene
2-Nitrophenol
N-Nitrosodiphenylamine
Di-N-Butyl Phthalate
Diethyl Phthalate
Naphthalene
Toluene
Chrysene
Anthracene/Phenanthrene
Fluorene
Tetrachloroethylene
Trichloroethylene
Antimony
Arsenic
Asbestos
Beryllium
Cadmium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide
1,2-Dichlorobenzene
2,4,6-Trichlorophenol
Ethylbenzene
Methylene Chloride
4-Nitrophenol
Pentachlorophenol
Phenol
Bis(2-Ethylhexyl) Phthalate

Part 425 of Title 40 is revised to read as follows:

PART 425—LEATHER TANNING AND FINISHING POINT SOURCE CATEGORY

General Provisions

Subpart A—Hair Pulp, Chrome Tan, Retan-Wet Finish Subcategory

Subpart B—Hair Save, Chrome Tan, Retan-Wet Finish Subcategory

Subpart C—Hair Save or Pulp, Non-Chrome Tan, Retan-Wet Finish Subcategory

Subpart D—Retan-Wet Finish-Sides 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), 1337 (b) and (c), and 1361; 86 Stat. 816 et seq., Pub. L. 92-500; 91 Stat. 1567, Pub. L. 95-217.

General Provisions

§ 425.01 Applicability.

This part applies to any leather tanning and finishing facility which discharges or may discharge process wastewater pollutants to the waters of the United States, or which introduces or may introduce process wastewater pollutants into a publicly owned treatment works.

§ 425.02 General definitions.

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

(a) "Sulfide" shall mean total sulfide as measured by the Society of Leather Trades' Chemists method SLM 4/2 as described in § 425.03.

(b) "Hide" means any animal pelt or skin as received by a tannery as raw material to be processed.

(c) "Retan-wet finish" means the final processing steps performed on a tanned hide including, but not limited to, the following wet processes: retan, bleach, color, and fatliquor.

(d) "Hair pulp" means the removal of hair by chemical dissolution.

(e) "Hair save" means the physical or mechanical removal of hair which has not been chemically dissolved, and either selling the hair as a by-product or disposing of it as a solid waste.

(f) "Chrome tan" means the process of converting hide into leather using a form of chromium.

(g) "Vegetable tan" means the process of converting hides into leather using chemicals either derived from vegetable matter or synthesized to produce effects similar to those chemicals.

(h) "Raw material" means the hides received by the tannery except for facilities covered by Subpart D and Subpart I where "raw material" means the hide or split in the condition in which it is first placed into a wet process.

(i) "Monthly average" means the arithmetic average of eight (8) individual data points from effluent sampling and analysis during any calendar month.

(j) "Interference" means the discharge of sulfides in quantities which can result in human health hazards and/or risks to human life, and an inhibition or disruption of POTW as defined in 40 CFR 403.3(i).

§ 425.03 Sulfide analytical method.

The following method is to be used for the determination of sulfide in alkaline wastewaters.

(a) *Outline of Method.* The sulfide solution is titrated with standard potassium ferricyanide solution in the presence of a ferrous dimethylglyoxime ammonia complex. The sulfide is oxidized to sulfur. Sulfite interferes and must be precipitated with barium chloride. Thiosulfate is not titrated

under the conditions of the determination. (Charlot, Ann. chim. anal., 1945, 27, 153; Booth, J. Soc. Leather Trades' Chemists, 1956, 40, 238).

(b) *Reagents.* (1) 0.1N potassium ferricyanide—32.925 g. per liter—this solution must be kept in the dark.

(2) Buffer. 200 g. NH_4Cl 200 ml. ammonia (Sp. g. 0.880) per liter

(3) Barium Chloride Solution—12.5 g. per liter 10 ml. of this solution will precipitate the equivalent of about 0.3 g. sodium sulfite.

(4) Indicator—10 ml. 0.6% $FeSo_4$ 50 ml. 1% dimethylglyoxime in ethanol 0.5 ml. conc. H_2SO_4.

(c) *Procedure.* (1) The liquor is filtered rapidly through glass wool or a coarse filter paper to remove suspended matter.

(2) 20 ml. buffer, 1 ml. indicator and excess barium chloride solution up to a maximum of 25 ml. are placed in a 250 ml. stoppered flask.

(3) A suitable sample of the sulfide solution containing, if possible between 0.04 and 0.08 g. sodium sulfide is added. The flask is stoppered and left for one minute to precipitate the sulfite.

(4) The solution is then titrated with the standard ferricyanide solution until the pink color is destroyed. During titration the solution sometimes goes a dirty color but near completion the pink color becomes more definite and disappears momentarily before the final end point is reached. The solution is titrated until there is no reappearance of the pink color after 30 seconds.

1 ml. O.1N ferricyanide=0.00390 g. Na_2S.

(i) In order to reduce loss of sulfide the determination should be carried out as rapidly as possible and the solution titrated with the minimum of agitation. It is recommended that a rough titration be made and then in further titrations the ferricyanide added rapidly to within 1 ml. of the expected value.

(ii) If it is suspected that the concentration of sulfite is high, and approaches that of the sulfide, the waiting time after the addition of barium chloride should be extended to ten minutes, to allow for complete precipitation of the barium sulfite.

Source: *Official Methods of Analysis,* Society of Leather Trades' Chemists, Fourth Revised Edition, Redbourn, Herts., England, 1965.

§ 425.04 Applicability of sulfide pretreatment standards.

(a) A POTW receiving wastewater from a facility subject to this part may require more stringent pretreatment standards for sulfide than those established by this part without EPA approval.

(b) The pretreatment standards for sulfide established by this Part will not apply if the POTW receiving wastewater from a facility subject to this Part certifies in writing with explanation of relevant factors considered, in accordance with the provisions of paragraph (c) of this section, that the discharge of sulfide from the facility does not interfere with the operation of the POTW. In making this determination, the POTW shall consider all relevant factors including but not limited to the following:

(1) The presence and characteristics, of other industrial wastewaters which can increase or decrease sulfide concentrations, pH, or both.

(2) The characteristics of the sewer/interceptor collection system which either minimize or enhance opportunities for release of hydrogen sulfide gas.

(3) The characteristics of the receiving POTWs headworks, preliminary and primary treatment systems, and sludge holding and dewatering facilities which either minimize or enhance opportunities for release of hydrogen sulfide gas.

(4) The occurrence of any prior sulfide related interference as defined in § 425.02(j).

(c)(1) On March 7, 1983, a POTW which intends to certify that the sulfide pretreatment standard should not apply must publish, in a local newspaper with the largest circulation, a notice that presents the findings supporting this determination consistent with paragraph (a) of this section. Allowance for public hearing of these findings also must be provided. The POTW shall identify all existing facilities to which the sulfide pretreatment standard otherwise established by this part would not apply.

(2) On June 5, 1983, a POTW which intends to certify that the sulfide pretreatment standard should not apply must file a written certification with the Regional Water Management Division Director, Environmental Protection Agency, in the appropriate Regional Office. This certification shall include the findings supporting this determination and the results of public comments, and public hearing(s) if held.

(3) On July 5, 1983, EPA shall acknowledge to the POTW receipt of any certification submitted under paragraphs (c)(1) and (c)(2) of this section, and shall indicate to the POTW the adequacy of the submission based upon a review of the factors set forth in paragraph (b) of this section.

(4) Within 30 days of the date of receipt of adequate submissions under paragraphs (c)(1), (c)(2), and (c)(3) of this secion, EPA shall publish a notice in the Federal Register identifying those facilities to which the sulfide pretreatment standards of this part shall not apply.

(5) A POTW may certify that the sulfide pretreatment standards of this part should not apply to a new source planning to discharge into the POTW. This certification must be submitted prior to the commencement of discharge, and must conform at a minimum with criteria in paragraph (b) of this section and the general procedures and intervals of time contained in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this section.

§ 425.05 Compliance date for pretreatment standards for existing sources (PSES).

Existing sources subject to PSES shall comply by November 25, 1985. The Consent Decree in *NRDC* v. *Train,* 12 ERC 1833 (D.D.C. 1979) specifies a compliance date for PSES of no later than June 30, 1984. EPA will be moving for a modification of that provision of the Decree. Should the Court deny that motion, EPA will be required to modify this compliance date accordingly.

§ 425.06 Monitoring requirements.

Compliance with monthly average discharge limitations is required regardless of the number of samples analyzed and averaged.

Subpart A—Hair Pulp, Chrome Tan, Retan-Wet Finish Subcategory

§ 425.10 Applicability; description of the hair pulp, chrome tan, retan-wet finishing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which, either exclusively or in addition to other unhairing and tanning operation, processes raw or cured cattle or cattle-like hides into finished leather by chemically dissolving the hide hair, chrome tanning, and retan-wet finishing.

§ 425.11 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1000 lb) of raw material	
BOD5	9.1	4.1
TSS	13.2	6.0
Oil and Grease	3.8	1.7
Total Chromium	0.23	0.09
pH	(1)	(1)

[1] Within the range 6.0 to 9.0

§ 425.12 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.11.

§ 425.13 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.11.

§ 425.14 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1000 lb) of raw material	
BOD5	5.3	2.4
TSS	7.7	3.5
Oil and Grease	2.2	1.0
Total Chromium	0.14	0.05
pH	(1)	(1)

[1] Within the range 6.0 to 9.0

§ 425.15 Pretreatment standards for existing sources (PSES).

(a) Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	
Total chromium	12	8
pH	(1)	(1)

[1] Within the range 7.0 to 10.0.

(b) Any existing source subject to this subpart which processes less than 275 hides/day shall comply with § 425.15(a), except that the Total Chromium limitations contained in § 425.15(a) do not apply.

§ 425.16 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in § 425.15.

Subpart B—Hair Save, Chrome Tan, Retan-Wet Finish Subcategory

§ 425.20 Applicability; description of the hair save, chrome tan, retan-wet finish subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured cattle or cattle-like hides into finished leather by hair save unhairing, chrome tanning, and retan-wet finishing.

§ 425.21 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	8.2	3.7
TSS	11.8	5.4
Oil and grease	3.4	1.5
Total chromium	0.21	0.08
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.22 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.21.

§ 425.23 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.21.

§ 425.24 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	6.9	3.1
TSS	9.9	4.5
Oil and grease	2.9	1.3
Total chromium	0.18	0.08
pH	(1)	(1)

[1] Within the range 6.0 to 9.0

§ 425.25 Pretreatment standards for existing sources (PSES).

Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart that

introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	
Total Chromium	12	8
pH	(1)	(1)

[1] Within the range 7.0 to 10.0

§ 425.26 Pretreatment standards for new sources (PSNS)

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in § 425.25.

Subpart C—Hair Save or Pulp, Non-Chrome Tan, Retan-Wet Finish Subcategory

§ 425.30 Applicability; description of the hair save or pulp, non-chrome tan, retan-wet finish subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured cattle or cattle-like hides into finished leather by hair save or pulp unhairing, vegetable tanning or alum, syntans, oils and other agents for tanning, and retan-wet finishing.

§425.31 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	6.9	3.1
TSS	9.9	4.5
Oil and grease	2.9	1.3
Total chromium	0.18	0.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§425.32 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.31.

§425.33 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.31.

§425.34 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	5.9	2.7
TSS	8.5	3.9
Oil and grease	2.4	1.1
Total chromium	0.15	0.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§425.35 Pretreatment standards for existing sources (PSES).

(a) Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing sources subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	
Total Chromium	12	8
pH	(1)	(1)

[1] Within the range 7.0 to 10.0.

(b) Any existing source subject to this subpart which processes less than 350 hides/day shall comply with § 425.35(a), except that the Total Chromium limitations contained in § 425.35(a) do not apply.

§ 425.36 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in § 425.35.

Subpart D—Retan-Wet Finish-Sides Subcategory

§ 425.40 Applicability; description of the retan-wet finish-sides subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes previously tanned hides and skins (grain side only) into finished leather by retan-wet finishing.

§ 425.41 Effluent limitations representing the degree of effluent reduction attainable by the control technology currently available (BPT).

Except as provided in 40 CFR 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	6.7	3.0
TSS	9.7	4.4
Oil & Grease	2.8	1.3
Total Chromium	0.17	0.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.42 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD*5*, TSS, Oil and Grease, and pH contained in § 425.41.

§ 410.43 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.41.

§ 425.44 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD*5*	6.3	2.8
TSS	9.1	4.2
Oil & Grease	2.7	1.2
Total Chromium	0.16	0.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.45 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total Chromium	19	12
pH	(1)	(1)

[1] Within the range 6.0 to 10.0.

§ 425.46 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR 403, and achieve the pretreatment standards contained in § 425.45.

Subpart E—No Beamhouse Subcategory

§ 425.50 Applicability; description of the no beamhouse subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes cattle hides, sheepskins, or splits (hair previously removed and pickled) into finished leather by chrome or non-chrome tanning, and retan-wet finishing.

§ 425.51 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD*5*	8.2	3.7
TSS	11.8	5.4
Oil & Grease	3.4	1.5
Total Chromium	0.21	0.08
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.52 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology (BCT): The effluent limitations are those for BOD*5*, TSS, Oil and Grease, and pH contained in § 425.51.

§ 425.53 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.51

§ 425.54 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD*5*	5.3	2.4
TSS	7.7	3.5
Oil & Grease	2.2	1.0
Total Chromium	0.14	0.05
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.55 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total chromium	19	12
pH	(1)	(1)

[1] Within the range 6.0 to 10.0.

§ 425.56 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR 403, and achieve the pretreatment standards contained in § 425.55.

Subpart F—Through-the-Blue Subcategory

§ 425.60 Applicability; description of the through-the-blue subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured cattle or cattle-like hides through the blue tanned state by hair pulp unhairing and chrome tanning; no retan-wet finishing is performed.

§ 425.61 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	3.0	1.3
TSS	4.3	1.9
Oil & Grease	1.2	0.6
Total Chromium	0.08	0.03
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.62 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.61.

§ 425.63 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.61.

§ 425.64 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	2.0	0.88
TSS	2.8	1.3
Oil and grease	0.8	0.4
Total chromium	0.05	0.02
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.65 Pretreatment standards for existing sources (PSES).

Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/1)	
Sulfide	24	
Total chromium	12	6
pH	(1)	(1)

[1] Within the range 7.0 to 10.0.

§ 425.66 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment must comply with 40 CFR Part 403, and must achieve the pretreatment standards contained in § 425.65.

Subpart G—Shearling Subcategory

§ 425.70 Applicability; description of the shearling subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured sheep or sheep-like skins with the wool or hair retained into finished leather by chrome tanning, and retan-wet finishing.

§ 425.71 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT Limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	13.2	5.9
TSS	19.1	8.7
Oil and grease	5.6	2.5
Total chromium	0.34	0.12
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.72 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.71.

§ 425.73 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.71.

§ 425.74 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	13.2	5.9
TSS	19.1	8.7
Oil and grease	5.6	2.5
Total chromium	0.34	0.12
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.75 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total chromium	19	12
pH	(1)	(1)

[1] Within the range 6.0 to 10.0.

§ 425.76 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and must achieve the pretreatment standards contained in § 425.75.

Subpart H—Pigskin Subcategory

§ 425.80 Applicability; description of the pigskin subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured pigskins into finished leather by chemically dissolving or pulping the hair and tanning with chrome, then retan-wet finishing.

§ 425.81 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	7.0	3.2
TSS	10.1	4.6
Oil and grease	3.0	1.3
Total chromium	0.18	0.07
pH	(1)	(1)

[1] Within the range 6.0 to 6.9.

§ 425.82 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease and pH contained in § 425.81.

§ 425.83 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.81.

§ 425.84 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	5.8	2.6
TSS	8.3	3.8
Oil and grease	2.4	1.1
Total chromium	0.15	0.05
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.85 Pretreatment standards for existing sources (PSES).

Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	
Total chromium	12	8
pH	(1)	(1)

[1] Within the range 7.0 to 10.0.

§ 425.86 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in § 425.85.

Subpart I—Retan-Wet Finish-Splits Subcategory

§ 425.90 Applicability; description of the retan-wet finish-splits subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes previously unhaired and tanned splits into finished leather by retan-wet finishing.

§ 425.91 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT Limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	4.2	1.9
TSS	6.1	2.8

Pollutant or pollutant property	BPT Limitations	
	Maximum for any 1 day	Maximum for monthly average
Oil & Grease	1.8	0.79
Total Chromium	0.11	0.04
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.92 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD*5*, TSS, Oil and Grease, and pH contained in § 425.91.

§ 425.93 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 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.91.

§ 425.94 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 lb) of raw material	
BOD*5*	3.5	1.6
TSS	5.1	2.3
Oil & Grease	1.5	0.66
Total Chromium	0.09	0.03
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.95 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and must achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total Chromium	19	12
pH	(1)	(1)

[1] Within the range 6.0 to 10.0.

(b) Any existing source subject to this subpart which processes less than 3,600 splits/day shall comply with § 425.95(a), except that the Total Chromium limitations contained in § 425.95(a) do not apply.

§ 425.96 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in § 425.95.

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