Title 40—Protection of the Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER N—EFFLUENT GUIDELINES AND STANDARDS

[FRL 489-3]

PART 430—PULP, PAPER, AND PAPERBOARD POINT SOURCE CATEGORY

Notice of Interim Final Rule Making

Notice is hereby given that effluent limitations and guidelines for existing sources to be achieved by the application of best practicable control technology currently available as set forth in interim final form below are promulgated by the Environmental Protection Agency (EPA). On May 29, 1974, EPA promulgated a regulation adding Part 430 to Title 40 of the Code of Federal Regulations (39 FR 18742). That regulation with subsequent amendments established effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources for the pulp, paper, and paperboard point source category. The regulation set forth below will amend 40 CFR 430-pulp, paper, and paperboard point source category and will be applicable to existing sources for the dissolving kraft subcategory (Subpart F); the market bleached kraft subcategory (Subpart G); the BCT bleached kraft subcategory (Subpart H); the fine bleached kraft subcategory (Subpart I); the papergrade sulfite subcategory (Subpart J); the low alpha dissolving sulfite pulp subcategory (Subpart K); the groundwood-chemi-mechanical subcategory (Subpart L); the groundwood-thermo-mechanical subcategory (Subpart M); the groundwood-CMN papers subcategory (Subpart N); the groundwood-fine papers subcategory (Subpart O); the soda subcategory (Subpart P); the deink subcategory (Subpart Q); the NI fine papers subcategory (Subpart R); the NI tissue papers subcategory (Subpart S); NI tissue (FWP) subcategory (Subpart T); high alpha dissolving sulfite pulp subcategory (Subpart U); and the papergrade sulfite market pulp subcategory (Subpart V) of the pulp, paper, and paperboard point source category pursuant to sections 301, 304 (b) and (c), of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1311, 1314 (b) and (c), 86 Stat. 816 et seq.; P.L. 92-500) (the Act). Simultaneously, the Agency is publishing in proposed form effluent limitations and guidelines for existing sources to be achieved by the application of best available technology economically achievable, standards of performance for new point sources, and pretreatment standards for existing sources and for new sources.

(a) Legal authority. (1) Existing point sources. Section 301(b) of the Act requires the achievement by not later than July 1, 1977, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of the Act. Section 301(b) also requires the achievement by not later than July 1, 1983, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of best available technology economically achieveable which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b) of the Act.

Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedural innovations, operating methods and other alternatives. The regulation herein sets forth effluent limitations and guidelines, pursuant to sections 301 and 304(b) of the Act, for the dissolving kraft subcategory (Subpart F); the market bleached kraft subcategory (Subpart G); the BCT bleached kraft subcategory (Subpart H); the fine bleached kraft subcategory (Subpart I); the papergrade sulfite subcategory (Subpart J); the low alpha dissolving sulfite pulp subcategory (Subpart K); the groundwood-chemi-mechanical subcategory (Subpart L); the groundwood-thermo-mechanical subcategory (Subpart L); the groundwood-thermo-mechanical subcategory (Subpart M); the groundwood-CMN papers subcategory (Subpart N); the groundwood-fine papers subcategory (Subpart O); the soda subcategory (Subpart P); the deink subcategory (Subpart Q); the NI fine papers subcategory (Subpart R); the NI tissue papers subcategory (Subpart S); NI tissue (FWP) subcategory (Subpart T); the high alpha dissolving sulfite pulp subcategory (Subpart U); and the papergrade sulfite market pulp subcategory (Subpart V) of the pulp, paper, and paperboard point source category.

Section 304(c) of the Act requires the Administrator to issue to the States and appropriate water pollution control agencies information on the processes, procedures or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under section 306 of the Act. The report or "Development Document" referred to below provides, pursuant to section 304(c) of the Act, information on such processes, procedures or operating methods.

(2) New sources. Section 306 of the Act requires the achievement by new sources of a Federal standard of performance providing for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

Section 306 also requires the Administrator to propose regulations establishing Federal standards of performance for categories of new sources included in a list published pursuant to section 306 of the Act. At page 7685 of this issue, regulations are proposed which set forth the standards of performance applicable to new sources for the dissolving kraft subcategory (Subpart F); the market bleached kraft subcategory (Subpart G); the BCT bleached kraft subcategory (Subpart H); the fine bleached kraft subcategory (Subpart I); the papergrade sulfite subcategory (Subpart J); the low alpha dissolving sulfite pulp subcategory (Subpart K); the groundwood-chemi-mechanical subcategory (Subpart L); the groundwood-thermo-mechanical subcategory (Subpart M); the groundwood-CMN papers subcategory (Subpart N); the groundwood-fine papers subcategory (Subpart O); the soda subcategory (Subpart P); the deink subcategory (Subpart Q); the NI fine papers subcategory (Subpart R); the NI tissue papers subcategory (Subpart S); NI tissue (FWP) subcategory (Subpart T); the high alpha dissolving sulfite pulp subcategory (Subpart U); and the papergrade sulfite market pulp subcategory (Subpart V) of the pulp, paper, and paperboard point source category.

Section 307(b) of the Act requires the establishment of pretreatment standards for pollutants introduced into publicly owned treatment works and 40 CFR 128 establishes that the Agency will propose specific pretreatment standards at the time effluent limitations are established for point source discharges.

Section 307(c) of the Act requires the Administrator to promulgate pretreatment standards for new sources at the same time that standards of performance for new sources are promulgated pursuant to section 306. In another section of the FEDERAL REGISTER regulations are proposed in fulfillment of these requirements.

(b) Summary and basis of interim final effluent limitations and guidelines for existing sources, proposed effluent limitations and guidelines for existing sources to be achieved by the application of the best available technology economically achievable, proposed standards of performance for new sources, and proposed pretreatment standards for both new and existing sources.

(1) General methodology. The effluent limitations and guidelines set forth herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations were appropriate for different segments within the category. This analysis included a determination of whether differences in raw material used, product produced, manufacturing process employed, age, size, waste water constituents and other factors required development of separate limitations for different segments of the point source category.

The raw waste characteristics for each such segment were then identified. This included an analysis of the source, flow and volume of water used in the process employed, the sources of waste and waste waters in the operation and the constituents of all waste water. The constituents of the waste waters which should be subject to effluent limitations were identified.

The control and treatment technologies existing within each segment were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which is existent or capable of being designed for each subcategory. It also included an identification, in terms of the amount of constituents and the chemical, physical, and biological characteristics of pollutants, of the effluent level resulting from the application of each of the technologies. The problems, limitations and reliability of each treatment and control technology were also identified. In addition, the non-water quality environmental impact, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise and radiation were identified. The energy requirements of each control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available." In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors.

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

(2) Summary of conclusions with respect to dissolving kraft subcategory (Subpart F); the market bleached kraft subcategory (Subpart G); the BCT bleached kraft subcategory (Subpart H); the fine bleached kraft subcategory (Subpart I); the papergrade-sulfite subcategory (Subpart J); the low alpha dissolving sulfite pulp subcategory (Subpart K); the ground wood-chemi-mechanical subcategory (Subpart L); the ground-wood – thermo – mechanical subcategory (Subpart M); the groundwood-CMN papers subcategory (Subpart N); the groundwood-fine papers subcategory (Subpart O); the soda subcategory (Subpart P); the deink subcategory (Subpart Q); the NI fine papers subcategory (Subpart R); the NI tissue papers subcategory (Subpart S); NI tissue (FWP) subcategory (Subpart T); the high alpha dissolving sulfite pulp subcategory (Subpart U); and the papergrade sulfite market pulp subcategory (Subpart V) of the pulp, paper, and paperboard point source category.

(i) Categorization. For the purpose of studying waste treatment and effluent limitations, the bleached kraft, groundwood, sulfite, soda, deink and non-integrated paper mills segment of the pulp, paper and paperboard manufacturing industry category was divided into seventeen discrete subcategories, primarily based on a consideration of the raw materials utilized, production processes employed, products produced, size and age of mills, waste water characteristics and treatability, and geographical location as outlined in the report entitled, "Development Document for Interim Final and Proposed Rulemaking for the Bleached Kraft, Groundwood, Sulfite, Soda, Deink and Non-Integrated Paper Mills Segment of the Pulp, Paper, and Paperboard Point Source Category."

(1) Subpart F—Dissolving Kraft Subcategory. This subcategory includes mills which produce a highly bleached pulp by a "full cook" process, utilizing a highly alkaline sodium hydroxide and sodium sulfide cooking liquor. Included in the manufacturing process is a "pre-cook" operation termed pre-hydrolysis. The principal product made by this process is a highly bleached and purified dissolving pulp used principally for the manufacture of rayon and other products requiring the virtual absence of lignin and a very high alpha cellulose content.

(2) Subpart G—Market Bleached Kraft Subcategory. This subcategory includes mills which produce a bleached pulp by a "full cook" process utilizing a highly alkaline sodium hydroxide and sodium sulfide cooking liquor. The product made by this process is papergrade market pulp.

(3) Subpart H—BCT Bleached Kraft Subcategory. This subcategory includes integrated pulp and paper mills which produce a bleached pulp by a "full cook" process utilizing a highly alkaline sodium hydroxide and sodium sulfide cooking liquor. The principal product made by this process is paper of low filler content including paperboard (B), coarse papers (C), and tissue papers (T).

(4) Subpart I—Fine Bleached Kraft Subcategory. This subcategory includes integrated pulp and paper mills which produce a bleached pulp by a "full cook" process utilizing a highly alkaline sodium hydroxide and sodium sulfide cooking liquor. The principal products made by this process are fine papers which include business, writing, and printing papers.

(5) Subpart J—Papergrade Sulfite Subcategory. This subcategory includes pulp and paper mills which produce pulp, usually bleached, by a "full cook" process using an acidic cooking liquor of bisulfites of calcium, magnesium, ammonia, or sodium containing an excess of free sulfite dioxide. The principal products made by this process are tissue and fine papers.

(6) Subpart K—Low Alpha Dissolving Pulp Subcategory. This subcategory includes mills which produce a highly bleached and purified pulp by a "full cook" process using very strong solutions of bisulfates of calcium, magnesium, ammonia, or sodium containing an excess of free sulfur dioxide. The pulps produced by this process are viscose, nitration, or cellophane grades and are used principally for the manufacture of rayon and other products requiring the virtual absence of lignin.

(7) Subpart L—Groundwood—Chemi-Mechanical Subcategory. This subcategory includes pulp and paper mills which produce a pulp, with or without brightening, utilizing a chemical cooking liquor to partially cook the wood followed by mechanical defibration by refining at atmospheric pressure. The principal products made by this process are fine papers, newsprint, and molded fiber products.

(8) Subpart M—Groundwood—Thermo-Mechanical Subcategory. This subcategory includes pulp and paper mills which produce a pulp, with or without brightening, by a brief cook utilizing steam, with or without the addition of cooking chemicals such as sodium sulfite, followed by mechanical defibration by refiner which are under pressure. The principal products of this process are fine papers, newsprint, and tissue papers.

(g) Subpart N—Groundwood—CMN Papers Subcategory. This subcategory includes mills which produce pulp, with or without brightening, utilizing only mechanical defibration by either stone grinders or refiners. The principal products made by this process are pulp and papers of low filler content including coarse papers (C), molden fiber products (M), and newsprint (N).

(10) Subpart O—Groundwood—Fine Papers Subcategory. This subcategory includes pulp and paper mills which produce pulp, with or without brightening, utilizing only mechanical defibration by either stone grinders or refiners. The principal products made by this process are fine papers which includes business, writing, and printing papers.

(11) Subpart P—Soda Subcategory. This subcategory includes mills which produce a bleached pulp by a "full cook" process utilizing a highly alkaline sodium hydroxide cooking liquor. The principal products made by this process are printing, writing, and business papers.

(12) Subpart Q—Deink Subcategory. This subcategory includes mills which produce a pulp usually brightened or bleached from waste papers in which an alkaline treatment is utilized to remove contaminants such as ink and coating pigments. The principal products of this process are printing, writing and business papers, tissue papers, and newsprint.

(13) Subpart R—NI Fine Papers Subcategory. This subcategory includes non-integrated (ND) mills which produce fine papers from wood pulp or deinked pulp prepared at another site. The principal products of this process are printing, writing, business, and technical papers.

(14) Subpart S—NI Tissue Papers Subcategory. This subcategory includes non-integrated (ND) mills which produce tissue papers from wood pulp or deinked pulp prepared at another site. The prin-

cipal products of this process include facial and toilet papers, glassine, paper diapers, and paper towels.

(15) Subpart T—NI Tissue (FWP) Subcategory. This subcategory includes non-integrated (NI) mills which produce tissue papers from waste papers (FWP) without deinking. The principal products made by this process include facial and toilet papers, glassine, paper diapers, and paper towels.

(16) Subpart U—High Alpha Dissolving Sulfite Pulp Subcategory. This subcategory includes mills which produce a highly bleached and purified pulp by a "full cook" process using very strong solutions of bisulfites of calcium, magnesium, ammonia, or sodium containing an excess of free sulfur dioxide. The pulp produced by this process is principally acetate grade and the principal uses are for the manufacture of rayon and other products requiring the virtual absence of lignin.

(17) Subpart V—Papergrade Sulfite Market Pulp Subcategory. This subcategory includes mills which produce pulp, usually bleached, by a "full cook" process using an acidic cooking liquor of bsisulfites of calcium, magnesium, ammonia, or sodium containing an excess of free sulfur dioxide. The principal product made by this process is papergrade market pulp.

(ii) Waste characteristics. The significant pollutant parameters in waste waters resulting from the dissolving kraft subcategory, market bleached kraft subcategory, BCT bleached kraft subcategory, fine bleached kraft subcategory, papergrade sulfite subcategory, low alpha dissolving sulfite pulp subcategory, groundwood-chemi-mechanical subcategory, groundwood-thermo-mechanical subcategory, groundwood-CMN papers subcategory, groundwood-fine papers subcategory, soda subcategory, deink subcategory, NI fine papers subcategory, NI tissue papers subcategory, NI tissue (FWP) subcategory, high alpha dissolving sulfite pulp subcategory, and the papergrade sulfite market pulp subcategory of the pulp, paper and paperboard manufacturing category includes five day biochemical oxygen demand (BOD5), total suspended solids (TSS), pH, color (for bleached kraft and soda subcategories) and zinc (for groundwood subcategories).

Interim final effluent limitations and guidelines are established below to control each of the above pollutants. No limitations have been established for several waste water pollutants because (a) available data has indicated these pollutants are normally removed when BOD5 or TSS are removed, (b) they occur in insignificant quantities, or (c) technology is not available to control the pollutant discharges.

(iii) Origin of waste water pollutants.

The origin of waste water pollutants in the dissolving kraft, market bleached kraft, BCT bleached kraft, fine bleached kraft, papergrade sulfite, low alpha dissolving sulfite pulp, groundwood chemi-mechanical, groundwood-thermo-mechanical, groundwood-CMN papers, groundwood-fine papers, soda, deink, NI fine papers, NI tissue papers, NI tissue (FWP), high alpha dissolving sulfite pulp, and the papergrade sulfite market pulp subcategories result from the following applicable operations: woodyard, digestion and pulp washing, chemical recovery, cooking liquor preparation, pulp screening, bleaching, and papermaking. The primary continuous sources of waste water pollutants are the white water from the paper machine, evaporator and digester condensates, pulp washing and screening operations, and bleaching operations. Major intermittent sources of waste water pollutants are spills of spent cooking liquor, evaporator boilouts and carryover of spent liquor, spills in pulp screening and bleaching areas due to process imbalances, and papermaking system imbalances and wash-ups.

(iv) Treatment and control technology.

Waste water treatment and control technologies have been studied for each subcategory of the industry to determine what is the best practicable control technology currently available. For all subcategories, the best practicable control technology currently available includes (1) in-plant control technologies which are in common use and (2) end-of-pipe pollution control technologies.

In-plant wastewater procedures to control pollution include strict management control over housekeeping and water use practices, minimization of the intake of water by reuse, and recirculation of waste waters.

End-of-pipe pollution control technologies include preliminary screening, primary sedimentation, and biological treatment. The most commonly employed biological treatment systems presently used by mills within all of the subcategories are aerated stabilization basins and activated sludge treatment systems.

Pulp and paper mills subject to the regulations set forth below can achieve the effluent limitations through the use of the best practicable control technology currently available.

Best practicable control technology as known today, requires disposal of the pollutants removed from waste waters in this industry in the form of solid wastes and liquid concentrates. In most cases these are nonhazardous substances requiring only minimal custodial care. However, some constituents may be hazardous and may require special consideration. In order to insure long-term protection of the environment from these hazardous or harmful constituents, special consideration of disposal sites must be made. All landfill sites where such hazardous wastes are disposed should be selected so as to prevent horizontal and vertical migration of these contaminants to ground or surface waters. In cases where geologic conditions may not reasonably ensure this, adequate legal and mechanical precautions (e.g. impervious liners) should be taken to ensure long term protection to the environment from hazardous materials. Where appropriate, the location of solid hazardous materials disposal sites should be permanently recorded in the appropriate office of legal jurisdiction.

(v) Cost estimates for control of waste water pollutants.

Pollution control cost based on best practicable control technology currently available (BPCTCA) have been estimated for model mills within each subcategory for one to four mill sizes. Both aerated stabilization basins (ASB) and activated sludge treatment systems (A) were examined. Costs for the largest model mill in each subcategory are presented as cumulative costs as follow:

BPCTCA

[In millions of dollars]

Mill	Total investment costs		Total annual costs	
	ASB	A	ASB	A
Dissolving Kraft 907 kkg/d	21.6	27.2	5.0	6.2
Market Kraft 635 kkg/d	14.7	18.3	3.2	4.0
BCT Kraft 1,179 kkg/d	21.2	26.1	4.4	5.5
Fine Kraft 1,179 kkg/d	19.0	22.9	4.2	5.1
Papergrade sulfite 431 kkg/d	18.1	21.0	3.5	4.3
Low alpha dissolving sulfite 499 kkg/d	17.6	21.6	4.1	5.0
GW chem-mechanical 544 kkg/d	10.0	11.6	2.1	2.6
GW thermo-mechanical 544 kkg/d	7.5	8.9	1.6	2.0
GW CMN papers 454 kkg/d	8.5	9.9	1.8	2.1
GW fine papers 499 kkg/d	8.8	10.1	1.8	2.1
Soda 635 kkg/d	15.0	17.5	3.3	3.9
Deink 454 kkg/d	11.6	13.5	2.7	3.0
NI fine papers 254 kkg/d	3.0	3.0	.6	.6
NI tissue papers 403 kkg/d	5.2	5.2	1.0	1.0
NI tissue (FWP) 403 kkg/d	7.2	9.1	1.5	1.8
High alpha dissolving sulfite 499 kkg/d	17.6	12.6	4.1	5.0
Papergrade sulfite market 431 kkg/d	18.1	21.0	3.5	4.3

(vi) Energy requirements and non-water quality environmental impacts.

The energy requirements and the non-water quality environmental impacts associated with the pollution control technologies have been considered. Energy requirements to achieve the effluent limitations are relatively low: power required to operate the internal controls and the mechanically aerated biological systems will increase consumption an average of 2.5 percent. Solid wastes from treatment sludges and some odor from treatment systems are encountered, but no substantial impact can be identified.

The proper management of solid wastes resulting from pollution control systems must be practiced. Pollution control technologies generate many different amounts and types of solid wastes and liquid concentrates through the removal of pollutants. These substances vary greatly in their chemical and physical composition and may be either hazardous or non-hazardous. A variety of techniques may be employed to dispose of these substances depending on the degree of hazard.

If thermal processing (incineration) is the choice for disposal, provisions must be made to ensure against entry of hazardous pollutants into the atmosphere. Consideration should also be given to recovery of materials of value in the wastes.

For those waste materials considered to be non-hazardous where land disposal is the choice for disposal, practices similar to proper sanitary landfill technology may be followed. The principles set forth in the EPA's Land Disposal of Solid Wastes Guidelines 40 CFR 241 may be used as guidance for acceptable land disposal techniques.

For those waste materials considered to be hazardous, disposal will require special precautions. In order to ensure long-term protection of public health and the environment, special preparation and pretreatment may be required prior to disposal. If land disposal is to be practiced, these sites must not allow movement of pollutants to either ground or surface waters. Sites should be selected that have natural soil and geological conditions to prevent such contamination or, if such conditions do not exist, artificial means (e.g. liners) must be provided to ensure long-term protection of the environment from hazardous materials. Where appropriate, the location of solid hazardous materials disposal sites should be permanently recorded in the appropriate office of the legal jurisdiction in which the site is located.

A discussion of energy requirements, solid wastes, and other non-water quality aspects of these regulations is included in Section VIII of the Development Document.

(vii) Economic impact analysis.

The results of the economic impact analysis do not indicate significant price increases for either 1977 or 1983. Prices on individual product lines should rise by only about 1 to 4% in 1977, and cumulatively, should be 3 to 7% in 1983. Econometric analysis of product sectors shows demand to be relatively inelastic permitting most firms to pass on the additional pollution control costs. No supply shortages leading to upward pressure on prices are expected to occur in the next several years.

A total of 8 mills or a maximum of 3% of industry capacity in any specific product sector is expected to close in 1977 and an additional 15 mils or 4.4% of capacity by 1983. In general, it appears that most mills vulnerable to closure due to the 1977 effluent limitations have already closed. The sulfite subcategories are expected to be the most heavily impacted in 1977 in terms of absolute tonnage closed as a result of the effluent limitations. The mills in question are small and have no secondary treatment and only partial chemical recovery.

Foreign trade is relatively unimportant to most plants except newsprint, dissolving pulp, and market pulp. The fact that pollution control regulations in foreign countries are generally comparable to our own indicates that foreign trade effects will be minimal.

Executive order 11821 and OMB circular A-107 establish criteria identifying major regulatory actions which require preparation and certification of inflationary impact statements. The Administrator has directed that all regulatory actions which are likely to result in annualized costs including capital charges which exceed $100 million in any calendar year require certification. Since the estimated total capital investment by 1977 for this segment of the pulp and paper industry is $1.5 billion, an inflationary impact statement is required and has been prepared.

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

The report entitled "Development Document for Interim Final and Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Bleached Kraft, Groundwood, Sulfite, Soda, Deink and Non-Integrated Paper Mills Segment of the Pulp, Paper, and Paperboard Point Source Point Source Category" details the analysis undertaken in support of the interim final regulation set forth herein and is available for inspection at the EPA Public Information Reference Unit, Room 2922 (EPA Library), Waterside Mall, 401 M St., SW., Washington, D.C., at all EPA regional offices, and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by this regulation or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the Environmental Protection Agency, Washington, D.C. 20460, Attention: Distribution Officer, WH-552.

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

(c) Summary of public participation.

Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of effluent limitations, guidelines and standards proposed for the pulp, paper, and paperboard category. An initial draft of the Development Document was sent to all participants and comments were solicited on that report. These comments were reviewed with a result that numerous significant changes were made to the draft regulations. A second draft of the Development Document entitled "Development Document for Advanced Notice of Proposed or Promulgated Rule Making for Effluent Limitations Guidelines and New Source Performance Standards for the Bleached Kraft, Groundwood, Sulfite, Soda, Deink, and Non-Integrated Paper Mills Segment of the Pulp, Paper, and Paperboard Mills Point Source Category" (August 1975) was also distributed for comments. The Advance Notice of Proposed or Promulgated Rulemaking was published in the FEDERAL REGISTER on September 5, 1975. The Agency published the Advance Notice rather than proposed the regulations in order to meet the court imposed deadline of January 30, 1976, while allowing the maximum possible participation of interested parties prior to promulgation of the effluent limitations as interim final. The following are the principal agencies and groups consulted: (1) Effluent Standards and Water Quality Information Advisory Committee (established under section 515 of the Act); (2) all State and U.S. Territory Pollution Control Agencies; (3) other public agencies, interest groups, and associations; (4) U.S. Department of the Interior; (5) U.S. Department of Health, Education and Welfare; (6) Environmental Defense Fund, Inc.; (7) Natural Resources Defense Council; (8) Water Pollution Control Federation; (9) National Wildlife Federation; (10) U.S. Department of Transportation; (11) Tennessee Valley Authority; (12) U.S. Department of Housing and Urban Development; (13) U.S. Department of Agriculture; (14) U.S. Nuclear Regulatory Commission; (15) U.S. Department of Defense; (16) U.S. Internal Revenue Service; (17) U.S. Federal Power Commission; (18) National Commission on Water Quality; (19) U.S. Federal Energy Administration; (20) Water Resources Council; (21) Office of Management and Budget; (22) Council on Environmental Quality; (23) U.S. Department of Treasury; (24) National Council for Air and Stream Improvement, Inc., Technical Association of the Pulp and Paper Industry; (25) American Paper Institute; (26) The American Society of Mechanical Engineers; (27) Businessman for the Public Interest; (28) The American Society of Civil Engineers; and (29) the Izaak Walton League.

The following responded with comments on the Advance Notice of Proposed Rulemaking: Ketchikan Pulp Co.; Alaska Lumber and Pulp Co., Inc.; Louisiana-Pacific Corp.; Kimberly-Clark Corp.; Potlatch Corp.; State of Florida; Hammermill Paper Co.; Nekoosa Edwards Paper Co., Inc.; Boise-Cascade Corp.; Crown Zellerbach Corp.; St. Regis Paper Co.; Niagara of Wisconsin Paper Corp.; State of Wisconsin; Flambeau Paper Co.; Union Camp Corp.; Bowater Inc.; The Proctor & Gamble Co.; Georgia-Pacific Corp.; Mead Corp.; American Paper Institute; Wasau Papers Corp.; P. H. Gladfelter Co.; National Council for Air and Stream Improvement, Inc.; Continental Can Co.; Scott Paper Co.; Connecticut Valley Coalition; Engineering Experiment Station, Georgia Institute of Technology; Illinois Environmental Protection Agency; Environmental Management Corp.; Weyherhauser Corp.; U.S. Dept. of Interior; U.S. Dept. of Health, Education, and Welfare; and Greater Portland Council of Governments.

The primary issues raised in the development of the interim final effluent limitations and guidelines and the treat-

ment of these issues herein are as follows:

(1) One comment was received that stated that the allowances for wet woodyard operations were realistic but that the added waste loads generated by the wet woodyard operations were not included in the costs of achieving BPCTCA.

The costs for a model mill within each subcategory to achieve BPCTCA were used in determining the overall economic impact. Since very few mills have wet woodyards and since the raw waste load from wet woodyards is relatively small when compared to the overall raw waste load, the effect on the cost of treatment of the mill's waste and the economic impact are minimal.

(2) Several commenters stated that the date base resulting from the mill surveys was biased, because the Agency selected those mills which utilized biological treatment facilities as the primary criterion for onsite surveys.

The Agency conducted two extensive efforts in collecting data and information. The primary criterion for mill selection for survey during the first effort was the existence of biological treatment facilities at the mill. The primary criterion during the second effort was mills with only primary treatment or less. The criteria for mill selection are more fully explained in the Development Document. As a result of this two year effort, an extensive and repersentative data base has been accumulated. For example, the raw waste load of the mills presently achieving the effluent limitations is generally about the same as for all other mills in any given subcategory.

(3) One commenter stated that the papergrade sulfite subcategory raw waste load was low because the mill used purchased chips as its raw material and therefore did not have a wet woodyard.

As explained in the Development Document, mills with wet woodyards receive an additional allowance in the regulation for BOD5 and TSS because of the higher waste loads. Therefore, further subcategorization to provide for wet woodyard raw waste load is unnecessary.

(4) One comment was received that questioned the basis for using purchased pulp as part of their furnish, the BOD5 load for integrated mills.

For integrated mills using purchased pulp as part of their furnish, the BOD5 loads were adjusted using raw waste loads from non-integrated fine and tissue mills. The discussion in the Development Document has been expanded and a sample calculation is shown.

(5) Several commenters stated that the zinc limitations for the four groundwood subcategories should be limited to only those mills within the subcategories that use zinc hydrosulfite as a bleaching agent. In addition, the commenters felt that the present zinc limitations were based upon inaccurate data. Data on zinc in effluents from mills using zinc hydrosulfite were provided.

The zinc limitations were carefully reviewed with the data provided and the regulations were revised so that the zinc limitations are applicable only to those mills within the four groundwood subcategories that use zinc hydrosulfite as a bleaching agent. The zinc limitations can be achieved by these groundwood mills by using sodium hydrosulfite as the bleaching agent and does not involve any major process change.

(6) Several comments were received that pointed out apparent typographical errors, inconsistencies, and inaccuracies in the Federal Register Notice, as well as in the Development Document.

The Agency has carefully reviewed each of the comments and made appropriate changes to the regulation and Development Document. It should be pointed out that none of the apparent inconsistencies or inaccuracies had any effect on the effluent limitations.

(7) One commenter stated that removal of sludges from aerated stabilization basins (ASB) may take months and that during the cleaning process, the TSS requirements will not be maintained as the TSS levels will increase greatly.

The cleaning of ASB's is an infrequent occurrence and should be conducted in a manner which will avoid treatment system upsets. If the cleaning operation cannot be accomplished without high TSS levels, the question of relief shall be determined by the NPDES permit issuing authority.

(8) A number of comments were received that stated that the 1977 TSS effluent limitations were overly stringent and should be revised upwards.

The TSS effluent limitations for many subcategories have been adjusted upwards as a result of extensive analysis. The TSS levels now required are no more stringent than the average of the TSS levels being achieved by mills using biological treatment facilities representative of BPCTCA.

(9) One commenter stated that the 1977 effluent limitations were excessively liberal and that the 1983 color limitations were especially liberal. Another commenter stated that the 1977 effluent limitations can be met by application of BPCTCA and that NPDES permits are generally more stringent that the 1977 effluent limitations.

Data available to the Agency indicate that the effluent limitations are appropriate. The 1977 limitations are based upon effluent levels from mills using treatment technologies representative of BPCTCA and a number of mills are presently achieving the limitations. It is to be anticipated that mills located in water quality limited situations will receive NPDES permits more stringent than the 1977 limitations if water quality standards would not be achieved with the effluent limitations set forth in the regulation.

Information available to the Agency at this time indicates that the 1983 color limitations are appropriate. However, the Agency is presently soliciting information and data regarding color reduction technologies and the color raw waste loads. Prior to promulgation of the 1983 color limitations, any data collected during these efforts will be considered in conjunction with the available data in making final determinations on the proposed limitations.

(10) One commenter recommended that non-integrated specialty paper mills should be considered on a mill by mill basis.

Non-integrated specialty paper mills have been omitted from these regulations because additional data are required. However, the Agency expects to collect and analyze additional information and data and develop effluent limitations for these mills in the near future.

(11) Several commenters stated that the papergrade sulfite raw waste load used as a basis for 1983 effluent limitations was too low.

The 1983 papergrade sulfite raw waste load was based upon a mill using BATEA in-plant controls as discussed in the Development Document. The Agency does not specify the technology that must be used to achieve the effluent limitations, and each mill can determine the appropriate technology for its individual situation. In this regard, the Development Document presents data for a mill with a raw waste load which is about 45% higher than the BATEA raw waste load yet achieves through external treatment a final effluent BOD5 level which is well below the BATEA limitations.

(12) Two commenters felt that the disposal of sludge from primary and secondary treatment was not given proper recognition in the Development Document. In addition, the commenters stated that land disposal of sludge was not always available and that the Agency should have included sludge incineration in the costs presented in the Development Document.

The Agency recognizes that sludge disposal is a sometimes difficult and expensive task. In view of this there is added material in the Development Document addressing sludge disposal as well as a short discussion of reuse of primary sludges in the manufacturing process. The Agency also recognizes that sludge disposal by incineration will be necessary at some mills because of a lack of available landfill sites, and cost of sludge incineration as well as land disposal are presented in the Development Document.

(13) Several comments were received that pointed out apparent inconsistencies in the effluent limitations for the groundwood—chemi - mechanical (GW - CMP) and the groundwood—thermo-mechanical (GW-TMP) subcategory in relation to the other two groundwood subcategories. The commenters observed that even though the GW-CMP and GW-TMP subcategories had raw waste loads higher than the other two groundwood subcategories, the effluent limitations were more stringent.

The Agency has closely examined the available data for these subcategories and has revised the effluent limitations accordingly. Because of the limited number of mills with external treatment facilities in these subcategories, the revised limitations are based upon the capabil-

ities of the treatment facilities representative of BPCTCA in the other groundwood subcategories.

(14) One comment was received that stated that mills using both bleached kraft and groundwood pulping on the same site should receive an additional color allowance for the color contributed by the groundwood operation.

The 1983 color effluent limitations are based upon bleached graft mills, and it is expected that the color contribution of the groundwood operation would be accounted for in the NPDES permit.

(15) One comment was received that stated that the woodyard allowance should be based upon the pulping process (i.e., yield). Another commenter felt that the season of harvest and the type of wood should be considered in developing the woodyard allowance.

The Agency recognizes that different processes and wood types result in different yields and that the wood species and season of harvest may affect the water extractables beneath the bark. However, available data shows that the relative contribution of the woodyard to the overall raw waste load is minor, and that the effect of these factors (season, yields, species) on the woodyard raw waste load is also relatively minor. Thus, these factors play an insignificant role in their contribution to the total raw waste load. These facts, in conjunction with a liberal woodyard allowance representing the maximum 30 consecutive days of discharge from mills using wet woodyards, resulted in an allowance which more than adequately allows for the variations in woodyard operations.

(16) Two commenters felt that non-integrated paper mills producing glassine paper should not be included in the non-integrated tissue papers subcategory.

Several mills producing glassine papers were included in the data base upon which the effluent limitations for the non-integrated tissue papers subcategory were based. There were no significant differences between raw waste loads generated by mills producing tissue papers and mills producing glassine papers. Therefore, the inclusion of non-integrated paper mills producing glassine papers in the non-integrated tissue papers subcategory is reasonable.

(17) One comment was received that stated that the daily maximum effluent limitations were too stringent for the non-integrated paper mill subcategories and that the daily maximum should be established which is four times the 30 day maximum limitations.

The daily maximum effluent limitations for the non-integrated paper mill subcategories were based upon use of long term and daily data from representative mills in each of the subcategories. The ratio of maximum day to the annual average was used to determine a variability factor which was utilized to set the daily maximum limitation. This methodology adequately accounts for variability in treatment plant performance and sets realistic effluent limitations.

(18) Two commenters stated that the number of paper machines at a mill directly affected the raw waste load and additional subcategorization was warranted.

The Agency has closely examined the raw waste load and the number of paper machines at mills covered by these regulations and does not feel that further subcategorization is warranted. The data shows that mills with a large number of paper machines frequently achieve lower raw waste loads than mills with only a few paper machines.

(19) Several commenters stated that the costs presented in the Development Document were low, and examples were provided comparing their own cost estimates with those in the Development Document.

The costs presented in the Development Document were prepared for model mills within each of the subcategories. For these models, costs were derived as incremental to assumed in-place controls, and incorporated an additional assumption that only primary end-of-pipe treatment systems were in-place. In comparison with existing situations, the latter assumption is considered conservative since many plants have already installed more complete biological treatment. An engineering consulting firm reviewed the costs for the American Paper Institute and submitted comments to the Agency in which it was pointed out that the Agency costs were higher or comparable to their own estimates. The Agency cost estimates were used in the economic impact analysis, and the general approach involved use of "worst case" engineering designs of the appropriate technology in order to determine the maximum economic impact that could be expected. Thus, the EPA costs and impact would be expected to be higher than will actually be incurred. An example of this approach was in the Agency's selection of a 14-day detention time aerated stabilization basin (ASB) on which to base the costs of achieving the limitations; a number of mills are achieving the limitations using ASB's with only eight days detention time.

(20) A number of comments were received that stated that effluent limitations for the sulfite subcategories should not be based upon data from the bleached kraft subcategories as the treatabilities of the waste are different. Several of the commenters felt that the sulfite mills with biological treatment systems should be recognized by the Agency as representative of BPCTCA.

The effluent limitations for the sulfite subcategories have been revised and were derived from data from full scale and pilot plant biological treatment facilities at sulfite mills. Data was used from recent pilot plant operations at sulfite mills because the biological treatment systems referenced by the commenters are not representative of BPCTCA. The effluent limitations are appropriate and can be achieved by proper application of technology. Reference to effluent levels being achieved at bleached kraft mills was made as an example of proper application of technology.

(21) A number of commenters stated that the selection of pollutant parameters should be based upon the class of receiving waters. The commenters stated that BOD5, TSS and pH should not be regulated at mills discharging into marine waters.

The class of receiving waters is an impermissible basis upon which to establish effluent limitations. To set effluent limitations and NSPS under Sections 301, 304(b), and 306 of the Act based upon receiving water quality either through variations in the numerical limitations or through variations in parameters utilized in the limitations would violate the clear intent of Congress that similar plants regardless of their location or the nature of the receiving waters into which they discharge meet similar technologically based effluent limitations and standards of performance.

(22) A number of comments were received that stated that mixed media filtration of biological treatment effluents should not be required as part of BATEA. The commenters felt that the biological solids were not a significant pollutant and did not justify the large expenditure and energy consumption associated with the filtration technology. In addition, data was provided from a filtration pilot plant at a mill covered by these regulations with the conclusion that the 1983 TSS limitations cannot be achieved by the filtration technology.

The Agency believes that the TSS in the effluents from the biological treatment systems at the mills covered by these regulations are a significant pollutant parameter and the benefits of removal of the TSS justify the costs and energy consumption. It should be pointed out that removal of the biological TSS by filtration technologies generally results in concurrent removal of a portion of the remaining BOD5 in the waste water. The costs and energy consumption associated with the achievement of the 1983 limitations are shown in Section VIII of the Development Document. The Agency has developed the 1983 TSS limitations based upon full scale applications of the filtration technology in other industry categories. The Agency believes that the required BATEA TSS levels are warranted for the pulp and paper industry and that technologies such as filtration are available which can achieve the effluent limitations.

The Agency is presently soliciting data and information regarding the capabilities of TSS removal technologies, such as filtration technologies and chemical coagulation and clarification technologies. Any data collected during these efforts will be considered in conjunction with presently available data in making final determinations on the TSS 1983 limitations and NSPS prior to promulgation.

(23) One comment was received that stated that the Agency should identify the biological treatment system at mill 110 in the Development Document as better than BPCTCA. The commenter recommended that the Agency recog-

nize the effects of climatic changes on biological treatment efficiencies in the regulations.

The Agency has shown in the Development Document that biological treatment facilities can be designed in order to minimize climatic effects (i.e. extreme cold temperatures) upon biological treatment efficiencies. Mill 110 is located where winters are extreme, and the treatment facilities at mill 110 include a 12 to 13 day ASB followed by a clarifier. This length of detention results in decreased waste water temperatures, decreased biological oxidation rates, and higher effluent levels during the winter months and therefore, is not representative of BPCTCA for this location. In order to achieve the effluent limitations, the treatment system at mill 110 should be upgraded to minimize the impacts of temperature on the effluent reduction capabilities of the present treatment facilities. Normally, BPCTCA for this location would be shorter detention time biological treatment facilities, such as activated sludge, which would minimize the impact of ambient temperatures on the waste water temperatures and thereby lessen the impact on the biological treatment effectiveness. The Agency recognizes that effective design and operation of biological treatment facilities minimizes the effects of climate on effluent qualities but does not necessarily eliminate the effects. These effects are accounted for in the regulations because the limitations are based upon the maximum 30 consecutive days of pollutant discharged from mills located throughout the country and using systems representative of BPCTCA.

(24) One commenter stated that the treatment facility at mill 152 in the Development Document should be recognized as BPCTCA and that the effluent limitations should be adjusted accordingly.

The treatment facility at mill 152 has an ASB with only five days detention time whereas mills with eight to 14 day ASB's are commonly utilized and can normally achieve the effluent limitations. It should be pointed out that the exception to this is in locations where extreme climatical conditions would adversely impact biological treatment effectiveness (i.e., comment No. 23). The effluent limitations for the soda subcategory were based upon the operation of external treatment facilities in the bleached kraft subcategories, because the manufacturing process and the raw waste loads are similar between soda and bleached kraft pulp and paper mills.

(25) Several commenters stated that BATEA has not been fully demonstrated and thus the 1983 effluent limitations should be deferred until a later date.

The 1983 limitations fully meet the statutory requirements and are based on the best available technology economically achievable. In every case, this technology has been demonstrated to be available by 1983 either on the basis of pilot plant or full scale operation. Rulemaking is being pursued at this time to provide the industry the maximum opportunity to plan for and implement the technology to meet the 1983 effluent limitations.

(26) A number of comments were received that stated small mills should be subcategorized or given an additional allowance because the costs of achieving the effluent limitations were more per ton of product than for a large mill.

The economic impact analysis which focused both upon small mills and large mills showed no significant impact upon the subcategories covered by these regulations. (See also comment No. 57.)

(27) Several comments were received that stated that if water quality standards were being achieved in 1977 then any additional treatment to achieve 1983 effluent limitations would be treatment for treatment's sake. It was recommended that 1983 limitations be deferred until application of BATEA can be shown to have value to the environment.

The Act provides no authority to exempt dischargers from BATEA requirements based upon water quality. In any event, attainment by 1977 of the water quality standards is only one element of the overall effort to clean up the Nation's waters. BATEA will result in removal of significant quantities of pollutants and move the Nation closer to the expressed goal of Congress to eliminate the discharge of pollutants by 1985.

(28) A number of commenters stated that mills located in Alaska should be subcategorized separately because of the higher costs of treatment and because of energy effects, non-water quality impacts, and the limited space available for biological treatment.

The dissolving sulfite subcategory which includes the only two pulp mills in Alaska has been further subcategorized based upon process and product considerations. The low alpha dissolving sulfite pulp subcategory includes a total of three mills, two in Alaska and one in the State of Washington. The mill in Washington produces both dissolving and papergrade pulp and thereby will be subject to effluent limitations based upon the aggregate of production attributed to each subcategory. Thus, the two Alaskan mills are the only mills which will be entirely subject to the effluent limitations for the low alpha dissolving sulfite pulp subcategory. Moreover, the economic impact analysis did not show any significant impact on the two Alaskan mills.

(29) Several commenters asserted that the Agency should provide a range of effluent limitations instead of a single limitation, as the range would allow the Regional Administrators to determine the appropriate limitations for each mill depending upon the specific conditions at the mill.

The Agency considers that the limitations already represent ranges taking into account differences in processes used and other factors. The 28 industries noted in Section 306 of the Act have already broken some of the broad industrial groups into subgroups such as the chemical industry into inorganic chemicals, organic chemicals, plastics and synthetics, petrochemicals, soaps and detergents, fertilizers, and rubber. The pulp and paper industry has been broken into 5 initial subcategories in the first segment of the industry and 17 additional subcategories which are covered by these regulations. This is in addition to separate regulations for builders papers and board mills and timber products. Subcategorization has been used to take all appropriate factors into account with different limitations for each subcategory. Factors other than those which affected subcategorization were considered but the data base clearly indicates that these factors are not significant. The numerical limitation represent an average 30 day value plus maximum daily values which in themselves represent a range.

(30) Several comments were received that stated that subcategories should be established for mills discharging into marine waters. These commenters felt that BPCTCA for these mills is no treatment other than primary treatment and discharge through diffuser outfall pipes. Several other commenters stated that BPCTCA for mills discharging to large water bodies (rivers, lakes, oceans) should also be diffusers.

As stated in the Conference Report (S. Rept. 92–1236), "The Administrator is expected to be precise in his guidelines under subsection (b) of this section (304), so as to assure that similar point sources with similar characteristics, regardless of their location or the nature of the waters into which the discharge is made, will meet similar effluent limitations."

The discharge of untreated or partially treated waste waters to the marine environment through diffuser type outfalls would also undermine another important Congressional objective. As stated in the Conference Report, "The Conference substitute specifically bans pollution dilution as an alternative to waste treatment." (Leg. Hist. at 284). In fact, the result would be diametrically opposed to the finding of the Senate Committee on Public Works that "The use of any river, lake, stream, or ocean as a waste treatment system is unacceptable." (Leg. Hist. at 1425).

(31) Several comments were received that stated that the sulfite subcategories should be further subcategorized to recognize the effects of age, cooking liquor, product, size, bleaching, and geographical location upon raw waste load. Data were provided showing the effects of product on raw waste load in the dissolving sulfite subcategory and suggestions were made relative to providing an allowance for calcium base papergrade mills. It was recommended that the definitions of the sulfite subcategories be more precise.

The Agency has carefully reviewed the data submitted along with all of the other available data. Both the dissolving sulfite subcategory and the papergrade sulfite subcategory were further subcategorized into two subcategories each.

Process and product considerations were the primary bases for subcategorization. The Agency thoroughly evaluated all possible factors, such as the effects of age, cooking liquor, product, size, bleaching, and geographical location, upon raw waste loads from sulfite mills. Any variations in raw waste load relating to the above factors are taken into account in the four subcategories. The discussion in Section IV and V of the Development Document has been expanded to thoroughly explain the relationships (or lack of) between the above factors and raw waste loads. In addition, the definitions of the subcategories have been made more precise where appropriate.

(32) Several comments were received that stated that the methodology used in determining the 1977 effluent limitations was inadequate because the influent raw waste concentration was not considered in the development of the limitations. The commenters stated that the use of flow and effluent concentrations from separate mills led to inconsistencies in treatment efficiencies necessary to achieve the effluent limitations in several subcategories.

The discussion in the Development Document has been expanded to more precisely explain the methodology utilized in development of the effluent limitations. The raw waste concentrations were carefully considered in relation to the final effluent concentrations in determination of the effluent limitations. The effluent limitations were appropriately determined by using average subcategory flows and effluent concentrations shown to be achievable based upon the analyses of influent and effluent concentrations for mills within the subcategories. The Agency reexamined the basis for the effluent limitations of the subcategories in question and changes in the limitations were made where appropriate.

(33) Several commenters stated that the Agency should not base the 1977 limitations on mills operating treatment facilities discharging into water quality limited receiving waters. One commenter stated that the BPCTCA should only be based on mills operating treatment systems prior to passage of the FWPCA of 1972 and not located on water quality limited receiving waters.

Congress required EPA to set requirements for 1977 based upon "the average of the best" mills in the applicable industry category in terms of treatment performance. This requirement makes no exception for mills achieving this performance due to water quality requirements. Congress' intent was that the limitations be based on the average of the best *existing* mills, which means all mills which commenced construction prior to proposal of NSPS (See Section 306(a)(2) of the Act) (i.e. the date of the NSPS notice).

(34) A number of comments were received that stated that the Agency has not examined the total cost in relation to the effluent reduction benefits. The commenters also stated that the effluent reduction efficiencies of the treatment technologies were not specified by the Agency.

The Agency has closely examined the total costs in relation to the effluent reduction benefits as fully shown in the Development Document. Section VIII of the Development Document presents total costs of achieving the effluent limitations and standards of performance whereas effluent reduction benefits are shown in Section VII through IX. The Agency has carefully examined and described the technologies that can achieve the effluent limitations and standards of performance and these are discussed in Section VII of the Development Document. Most of the technologies identified as capable of achieving the limitations are used in treatment trains, and it is most appropriate to specify the effluent reduction capabilities of the treatment train rather than the individual unit operations. The effluent reductions of the identified treatment trains are shown in Sections VIII, IX, X, and XI of the Development Document. It should be pointed out that Agency did specify effluent reduction capabilities for those treatment technologies which are generally used as an incremental step in treatment, such as filtration technologies in BATEA.

(35) Several commenters stated that the methodology used to determine 1983 limitations should be revised because the Agency made unsupported judgments concerning raw waste load reduction at the best mills. The commenters also stated that the Agency did not use representative mills to determine the 1983 limitations and the methodology of using raw waste flows and final effluent concentrations discourages water reuse practices within the mills.

The 1983 limitations were based upon the best mill in each subcategory that was demonstrating extensive inplant controls and highly efficient external treatment performance. The Agency carefully examined each mill selected to assure that it was representative of the subcategory. Estimates were made of further reduction of the raw waste load which could be achieved by the best mills by installation of BATEA in-plant controls not presently used. These raw waste loads representative of the best mills in each subcategory were used together with the performance of the BATEA external control technologies to determine the limitations. As shown in the Development Document, the installation of BATEA in-plant controls results in substantially reduced raw waste loads in most subcategories. Use of raw waste flow data from the best mills and final effluent concentrations does not discourage water reuse practices. The discussion of BATEA limitations development has been expanded in the Development Document to more fully explain the methodology used.

The Agency is presently soliciting additional information and data regarding the pollution reduction capabilities of BATEA inplant control technologies. Any information and data collected during these efforts will be considered in conjunction with available data in making any appropriate revisions to the proposed 1983 limitations and NSPS prior to promulgation.

(36) One commenter stated that the papergrade sulfite limitations were overly stringent and that two of the three sulfite mills that he operated would have to close if the mills had to achieve the limitations.

The Agency has carefully reviewed the effluent limitations established for the sulfite subcategories. In addition to the establishment of additional subcategories, the Agency has examined the treatment technologies presently in use by sulfite mills and in some cases has revised the effluent limitations to reflect actual treatment system performance. Costs are assessed to achieve the effluent limitations upon a subcategory basis and not on a mill by mill basis. The economic impact analysis shows no significant overall impact upon the sulfite subcategories.

(37) A number of comments were received concerning the variability analysis and the variability factors used to determine the effluent limitations and standards of performance. Several commenters felt that the Agency should use log normal distribution on which to base the analysis and to develop variability factors for each subcategory. In addition, comments were received that stated that the Agency should include more activated sludge systems in the variability analysis as the analysis was based primarily upon aerated stabilization basins. Also, the commenters felt that the Agency should evaluate the effects of raw waste load variability on final effluent variability.

The variability analysis was revised as a result of the comments received and the revised analysis is discussed in Section VII of the Development Document. Briefly, the Agency has developed variability factors for each subcategory, as appropriate, based upon log normal distributions. The factors are based upon mills within each of the subcategories which operate external treatment systems representative of BPCTCA. The most commonly used type of biological treatment facilities are ASB's, and many are therefore included in the variability analysis. However, a number of activated sludge systems are included in the variability analysis, and the final determination of the variability factors for each subcategory took into account the variability experienced by both aerated stabilization basins and activated sludge systems. The Agency recognizes that raw waste load variability has some effect upon final effluent variability and the effects are taken into account through the variability analysis. The discussion in the Development Document has been expanded to more fully explain the variability analysis.

(38) Two comments are received that stated that the standards of performance for new sources (NSPS) would require filtration in order for mills to achieve the required TSS levels.

The TSS NSPS can be achieved through the use of inplant control technologies, primary treatment, and biological treatment followed by chemical coagulation and clarification. The available data shows that the NSPS can be achieved without the use of filtration technologies.

The Agency is presently soliciting information and data regarding the effluent reduction capabilities of chemical coagulation and clarification technologies. Any information and data collected during those efforts will be considered in conjunction with available data in making appropriate revisions to the proposed NSPS prior to promulgation.

(39) One commenter stated that the variability analysis should include sulfite mills because the variability of effluents from sulfiite mills is different than kraft mills. The commenter recommended that a separate variability factor be established for sulfite mills.

The Agency has expanded the variability analysis and has included several sulfite mills with biological treatment systems in the analysis. Separate variability factors have been established for the sulfite subcategories, and these are shown in the Development Document. However, it should be pointed out that the variability factors used in determining the effluent limitations were based upon the bleached kraft variability factors. Analysis of the six sulfite mills with biological treatment facilities showed less variability of final effluent qualities than the analysis of 24 bleached Kraft mills with biological treatment facilities. Use of the bleached kraft variability factors in determining the sulfite effluent limitations actually results in less stringent limitations and was considered appropriate for the following reasons: (1) the analyses showed that final effluent variability is frequently more related to the characteristics of the biological treatment facilities than to the characteristics of the raw waste load, and (2) the statistical reliability of the analysis was greater for the bleached kraft analysis than for the sulfite analysis because of the number of mills in the analysis.

(40) A number of comments were received that stated that the Agency did not consider many of the non-water quality impacts of the regulations, such as upon air pollution, solid waste generation and disposal, and energy consumption.

The impact of these regulations upon non-water quality aspects of the environment have been seriously considered, and the discussion in the Development Document concerning impacts upon air pollution, solid waste, and energy consumption has been expanded to provide the reader with a more thorough understanding of any impacts associated with the implementation of the regulations.

(41) One commenter stated that the variance procedure was inadequate because it did not consider costs.

The exclusion of economic factors from the variance provision is required by the Act and its legislative history. Section 301(c) provides the exclusive mechanism for modification of effluent limitations based upon individual economic hardship. The intent was that the Agency examine the economic impact of achieving the 1977 effluent limitations on a class or category of plants basis and that individual relief was only made available with respect to the 1983 effluent limitations.

(42) One comment was received that stated that the Agency obscured the cost of spent sulfite liquor (SSL) recovery at sulfite mills by including the cost in a footnote in the cost tables in the Development Document. The commenter recommended that the Agency include the costs of SSL recovery in the main part of the table.

Separation of the SSL recovery costs into a separate figure from the costs of other in-plant controls and external treatment costs allows the reviewer to determine the incremental costs of the treatment. In addition, it would be inappriate to include the total cost of SSL recovery systems with the costs of the other in-plant and external control technologies since many mills (25 of 28 sulfite mills) already have SSL recovery systems.

(43) Two commenters stated that the limitations for sulfite subcategories required higher percentage removals of BOD5 by external treatment systems than for kraft mills. The commenters recommended that the sulfite limitations be revised upwards in order to provide more equitable treatment requirements.

The Agency has determined that percentage removal rates is not an appropriate measurement among subcategories since higher percentage removals can generally be achieved by treatment of higher raw waste loads.

(44) A number of comments were received that stated that the energy requirements shown in the Development Document for achieving the effluent limitations were low. Data was provided for individual mill situations to support their contention.

The energy requirements presented in the Development Document were prepared for model mills within each of the subcategories in order to assess overall energy and cost impacts. The data provided to the Agency was incorporated into the Development Document where appropriate

(45) One comment was received that stated that mills cannot afford to install SSL recovery and biological treatment simultaneously.

The economic impact analysis has shown that mills can achieve the 1977 effluent limitations which are based upon SSL recovery and biological treatment and still remain economically competitive.

(46) Several comments were received that stated that the Agency should determine its effluent limitations based upon cost equity and not upon raw waste loads and final effluent qualities.

The Agency has established effluent limitations in the manner which was required by Congress. Sections 301 and 304 of the Act require that costs are to be assessed for the class of plants and not on an individual mill basis. See S. Rept. 92–1236 (Conf. Rept.).

(47) One commenter felt that the 1977 effluent limitations for the bleached kraft fine papers subcategory were too stringent and not realistic.

The 1977 effluent limitations for the bleached kraft fine papers subcategory were based upon the average performance of the best mills in the subcategory operating treatment facilities representative of BPCTCA. A number of plants are already achieving the limitations. However, the Agency has made the TSS limitations less stringent following further analysis of the TSS levels presently being achieved by the external treatment technologies presently in use by the best mills.

(48) Several commenters stated that mills which have biological treatment facilities and must discharge at controlled rates to comply with water quality limits should not be required to meet the 30 day and maximum daily limitations set forth in this regulation.

The Agency recognizes that the use of biological treatment systems followed by long term storage with controlled short term release is a treatment mechanism to meet NPDES permit requirements. It is expected that these mills will receive NPDES permits which require pollutant limitations which are equivalent to or more stringent, where required under other sections of the Act, than the effluent limitations set forth below.

(49) Two comments were received that questioned the validity of TSS measurements using the standard method analytical technique. The commenters stated that measurements of TSS involving effluents from biological treatment systems were not reproducible and the commenters recommended that the TSS effluent limitations be deferred until an accurate analytical technique is available.

The TSS effluent limitations were based upon information and data received from mills using treatment facilities representative of BPCTCA. The Agency conducted thorough evaluations of the analytical techniques used for determining the TSS levels at those mills to assure that proper testing procedures were followed. The Agency thereby believes the data used in determining the effluent limitations were valid. Moreover, the standard method analytical technique for TSS measurement has been in use by tens of thousands of industrial as well as municipal dischargers for many years, and numerous pollution control facilities have been designed and installed on the basis of historical TSS data determined by the standard method analytical procedure. Therefore, the Agency believes that deferance of the TSS limitations would be inappropriate. The comment has been referred to the appropriate Agency programs which continually review analytical techniques.

(50) One commenter stated that current market conditions have forced interruptions in normal production. The commenter requested that the effects of intermittent production upon treatment plant performance be considered in the determination of the effluent limitations. It was suggested that an additional variability factor be developed which would allow for treatment plant upsets as a result of intermittent production schedules.

The Agency recognizes that production interruptions can have detrimental effects upon treatment plant performance. The existing data base includes these effects as produced by the normally practiced holiday shutdowns. The increased frequency of production interruptions currently experienced is a short-term situation and cannot be considered as typical requiring the imposition of an additional allowance. Skillful operation of the treatment facility and the cooperation of the production plant will minimize the effects of intermittent production upon treatment efficiency.

(51) Several comments were received that stated that production should be defined as the "highest average level sustained for seven consecutive days of normal production" rather than the "annual average." The commenters expressed concern that the base year chosen could limit production below actual capacity.

The Agency believes that using the annual average production for determination of effluent limitations is appropriate. Selection of the base year used in the permit writing process would not be appropriate in these regulations because the NPDES authority should have flexibility in determining a base year which reflects demonstrated production capacity or committed growth.

(52) One commenter stated that the Agency should make a detailed appraisal as to the effects the treatment technologies identified would have on quantities of solid waste produced and on the potentially detrimental environmental consequences of their disposal.

Consideration of solid waste generation and disposal has been closely examined by the Agency. The Agency recognizes that solid waste generated by the treatment facilities represents a potentially detrimental impact upon the environment if not disposed of properly. Disposal of solid waste can be accomplished without detrimental environmental impacts but this task requires conscientious efforts and some expenditures. The cost of solid waste disposal are included in the costs of achieving the effluent limitations and are presented in Section VIII of the Development Document. Solid waste and its potential nonwater quality impacts are also discussed in the Development Document in Section VIII.

(53) Several commenters indicated that the Agency has inappropriately selected BOD5 as a significant pollutant parameter.

BOD5, as noted in the Development Document, does not in itself cause direct harm to a water system but it does exert an indirect effect by depressing the oxygen content of the water. Obvously this is not the only reason for selecting BOD5 as a pollutant parameter. Historically BOD5 has been used as an indicator of other pollutants in organic waste streams which either cannot be accurately determined by present test methods or cannot be measured with tests that are uncomplicated enough to be of general use. One of these pollutants is the total organic matter which may exert an oxygen demand over a longer period of time than the five days of the test. It has been shown that pulp and paper wastes may contain long term BOD far in excess of the 5 day BOD.

Compounds contributing to the total organic waste load from pulp and paper mills include terpenes, resin acids, fatty acids, phenols, formic acid, acetic acid, saccharinic acids and other organic acids. These compounds also contribute to the toxicity of pulp and paper mill waste waters. A recent publication demonstrates that biological treatment systems are successful in reducing several of the above compounds from kraft mill waste waters. Resin acids, fatty acids, terpenes, hydrocarbons, and phenols were found to be reduced to the same extent as the overall BOD removal efficiency.

The available tests for toxicity are quite expensive, complicated and subject to variabilities for many reasons. However, data shows that pulp and paper mill waste waters are highly toxic, and considerable data exists to show that toxicity of pulp mill waste can be reduced along with appropriate reductions of BOD in the waste.

Oil and grease in a pulp and paper waste is not readily discernible by the normal test methods because of interferences from lignins and other wood products. Foam is a parameter that is generaly considered unacceptable in a receiving water. Again, these parameters can be reuced to acceptable levels with appropriate reductions of BOD5.

(54) A large number of comments were recieved that stated that special allowances should be established for mills subject to climatological extremes (i.e. temperature).

The effects of temperature upon biological treatment efficiencies should be accounted for in the design and operation of biological treatment systems (i.e., short term detention time biological treatment systems such as activated sludge are much less affected by climatic conditions than are long term detention time systems such as aerated stabilization basins). See the Development Document (Section VIII).

(55) Several commenters suggested an approach to developing BPCTCA limitations. Essentially, the approach involved determining average BOD5 raw waste loads for the industry and applying 85% reduction which was said to be representative of biological treatment.

The BPCTCA limitations are based upon mills which treat their waste waters by technologies representing BPCTCA. Thus, mill operating data are the bases for the limitations and not the application of an assumed pollutant reduction efficiency.

(56) Several comments were received which stated that the total suspended solids concentrations resulting from testing methods utilizing filter paper (nonstandard methods) should be accounted for in the development of the effluent limitations and standards. A conversion factor for nonstandard methods to standard methods of 3 to 1 was suggested for use in the evaluation of data.

The TSS analytical measurement techniques are discussed in the Development Document, and data for mills utilizing nonstandard methods were not used in development of the limitations. Conversion factors for nonstandard methods to standard methods range from less than 1 to more than 10 depending upon the effluent stream sampled. Thus, the Agency feels that use of a conversion factor is not applicable. The TSS data determined by nonstandard methods is presented in the appropriate tables in the Development Document.

(57) One commenter felt that additional subcategories should be added for small mills. Suggestiones were provided for what constitutes a small mill and how the limitations should be increased for small mills.

In developing the subcategories, many factors were evaluated as possible bases for establishing subcategories. One of these factors was the size of mills. The Agency concluded that size of mills was not a significant factor for subcategorization because the waste water characteristics and control technologies are independent of plant size. A number of figures are presented in Section IV in the Development Document which confirm the independence of plant size and raw waste load. (See also comment No. 26 regarding economic impact on small mills.)

(58) Several commenters stated that the limitations for TSS should be removed or replaced by a settleable solids limitation as the suspended solids in the final effluent from pulp and paper mill biological treatment systems are biological organisms generated during treatment for the removal of BOD and not the fibrous materials contained in mill raw wastes. It was argued that the fibrous materials in the raw waste are removed by primary treatment and that the biological suspended solids in the final effluent from the biological treatment system characteristically do not settle. It was stated that the biological solids do not settle and cause problems of sludge beds in receiving waters and that no harm is caused to the environment other than an exertion of BOD which is regulated by the BOD5 limitations.

The Agency believes that the TSS in final effluents from pulp and paper mill biological treatment systems are harmful to aquatic environments. The Agency concurs that the fibrous materials in the raw waste should settle out in a well designed and operated primary treatment system. As discussed in Section VI of the Development Document, the Agency believes that the TSS from pulp and paper mill biological treatment sys-

tems have the following detrimental effects upon receiving water environments: (1) increases in the turbidity of the receiving water resulting in reduced light transmission and accompanying effects, such as reduced photosynthesis, (2) aesthetic effects, (3) settling of suspended solids to the bottom of receiving waters, and (4) exertion of BOD by the biological suspended solids. Limiting just settleable solids would exclude a portion of the total suspended solids which should be controlled, and therefore the TSS limitation was not removed from the regulation.

(59) Comments were received that stated that BPCTCA limitations will require mills to install both internal and external controls. It was argued that, in effect, this pushes the 1983 limitations up to 1977 because the intent of the Act was to emphasize external treatment to meet the 1977 limitations and to emphasize internal controls in 1983. It was also suggested that since the 1983 internal technologies are essentially being required in 1977, the costs of achieving BPCTCA limitations will be substantially higher and the economic impact may be significant.

It is the opinion of the Agency that the Act does not preclude considering some in-plant control changes as part of BPCTCA. Section 304(b)(1)(B) includes consideration of "the process employed" and "process changes" as part of the determination of BPCTCA. Where an in-plant change can be implemented by 1977 and meets the other requirements of Section 304(b)(1), there is no reason to differentiate such control measure from any other control measure or practice imposed as part of BPCTCA. The in-plant changes which have been identified as available in 1977 are practices which are in common use in the industry.

(60) It was suggested by several commenters that the color limitation should be removed from the regulations because color has not been established as a pollutant and its inclusion for BATEA is not justified.

As discussed in Section VI of the Development Document, the Agency believes that color is a major pollutant parameter and has the following detrimental effects: (1) color in receiving waters retards sunlight transmission and interferes with photosynthesis thereby reducing productivity of the aquatic community; (2) color alters the natural stream color and is thereby aesthetically displeasing; (3) color has a detrimental effect upon downstream municipal and industrial water users, as color, even when not visually apparent (i.e. turbid streams), must be removed before use in municipal and industrial water supplies; (4) color bodies complex with metal ions, such as iron or copper, forming tar-like residues which remove metals from the stock available to stream organisms for normal metabolism, and the complexes can have direct inhibitory effects on some of the lower scale organisms in the aquatic community; (5) color is an indicator of toxic compounds discharged to the aquatic environment; and (6) color in receiving waters affects fish productivity and fish movements.

(61) One commenter felt that the limitations and standards for bleached kraft mills producing market pulp should be more stringent than for bleached kraft mills producing paper products.

The available data show that raw waste loads generated by bleached kraft market pulp mills are generally higher than bleached kraft mills producing paper products. This apparent anomaly can be attributed to the higher degree of cooking, bleaching, and washing which is usually practiced by bleached kraft market pulp mills. Effluent limitations and standards for bleached kraft market pulp mills are therefore less stringent than for bleached kraft mills producing paper products.

(62) Several commenters felt that the exclusion of some of the higher data points in the data analysis was not justified and had the effect of lowering the effluent limitations and standards.

Analysis of mill waste water data sometimes showed excursions in the data which were not considered to be normal operation of a particular plant. These data points were only excluded after extensive investigations into the cause of the excursion. The Agency believes that normal variability should be included in the data base upon which effluent limitations and standards are based; however, conditions not representative of normal practice or BPCTCA should not be included as part of the data base.

(63) Several comments were received that stated that BPCTCA for the sulfite subcategory should include (1) spent sulfite liquor (SSL) recovery, (2) secondary (aerated stabilization basins or activated sludge) treatment, and (3) reasonable in-plant pollution control measures.

The Agency agrees with these comments and the effluent limitations for 1977 for sulfite mills have been developed based upon (1) SSL recovery, (2) biological treatment, and (3) in-plant control measures as normally practiced within the industry.

(64) A number of commenters stated that the TSS in biological treatment system effluents are not related to the mill raw waste TSS and should be recognized as biological TSS in the Development Document.

The three general types of TSS occurring in biological treatment system effluents include (1) cellulose fiber, (2) mineral materials, and (3) biological TSS. Fibers and, for many mills, mineral type TSS are lost during the manufacturing process into the process waste waters. Most of the raw waste load TSS should be removed by primary treatment with most of the remaining TSS removed by secondary treatment. The majority of the TSS in the final effluents from well designed and operated secondary treatment systems should be biological TSS which were created in oxidizing the soluble BOD5 in the waste water. Mills with inadequately designed or operated primary treatment facilities generally have high TSS levels in the effluent from their secondary treatment facilities. The relative proportions of the fiber, mineral, and biological TSS in secondary treatment effluents can be considered as an indicator of the design and operation of the primary treatment as well as the secondary treatment facilities. Thus, effluents from well designed and operated primary and secondary treatment facilities should contain mostly biological TSS with only some fiber and mineral TSS. The Development Document was revised to reflect that the TSS in secondary treatment effluents are mostly biological TSS and as such are more related to the raw waste BOD5 than the raw waste TSS. The harmful effects of biological TSS are discussed in the Development Document.

(65) Two comments were received that stated that the raw waste load used in establishing BPCTA effluent limitations for sulfite mills should be the raw waste load generated prior to SSL recovery. The rationale presented by the commenters was that SSL recovery is not economical as is liquor recovery in kraft mills.

The BPCTCA effluent limitations for sulfite mills were based upon raw waste loads from mills practicing SSL recovery. SSL recovery is an internal pollution control measure and since it is commonly practiced by the large majority of sulfite mills (25 of 28 sulfite mills have SSL recovery systems), it is included in BPCTCA. SSL recovery may not be economical at the present time, but internal pollution control measures are not necessarily economical. Internal measures which control pollution and have a net return on the investment are normally considered to be integral parts of the manufacturing process, such as liquor recovery by kraft mills. Thus, BPCTCA for sulfite mills includes commonly used internal controls (i.e. SSL recovery) and secondary treatment (i.e. biological treatment).

(66) Several comments were received that stated that the underlying data were not available and that they were thereby unable to formulate complete comments.

The entire data base used in developing the effluent limitations and all other pertinent information is available to the public at the Agency headquarters in Washington, D.C., during regular business hours, Monday through Friday. Moreover, this information has been available for some time and requests by interested persons for access have been promptly handled.

(67) Several comments were received that stated that pH should not be included as a pollutant parameter and should only be limited by the specific water quality requirements at each mill. Other commenters felt that the pH range should be expanded to 5.0 to 9.0 because recent data have shown that TSS removal efficiencies by BPCTCA were enhanced at pH levels between 5.0 and 6.0.

The harmful effects of pH levels are thoroughly discussed in Section VI of the Development Document and is an

appropriate pollutant parameter for regulation. As discussed previously, the class of receiving waters is an impermissible basis upon to base effluent limitations. The Agency has carefully reviewed the data submitted and has expanded the pH range to 5.0 to 9.0. The data showed that pH levels between 5.0 and 6.0 enhanced the TSS levels in effluents from the biological treatment facilities. It appears that there may be an optimum pH level for each specific biological treatment system treating pulp and paper mill waste waters which is between 5.0 to above 7.0 which will result in low levels of TSS as well as BOD5 in the final effluents. The data also showed substantial reductions in the numbers of coliforms in the effluents when the pH was between 5.0 and 6.0.

(68) Questions have been raised concerning the availability of standards or guidelines applicable to the disposal of solid wastes resulting from the operation of pollution control systems.

The principles set forth in "Land Disposal of Solid Wastes Guidelines" (40 CFR 241) may be used as guidance for acceptable land disposal techniques. Potentially hazardous wastes may require special considerations to ensure their proper disposal. Additionally, state and local guidelines and regulations should be considered wherever applicable.

(69) One comment was received that stated that a separate subcategory should be established for sulfite mills with continuous digesters. Information and data were provided.

The information and data have been reviewed by the Agency and no determination has been made at this time. The Agency is continuing to evaluate the appropriateness of making separate provisions for sulfite mills with continuous digesters.

The Agency is subject to an order of the United States District Court for the District of Columbia entered in *Natural Resources Defense Council* v. *Train* et. al. (Cv. No. 1609-73) which requires the promulgation of regulations for this industry category no later than January 30, 1976. This order also requires that such regulations become effective immediately upon publication.

The Agency has distributed and received comments upon a draft development document as well as the Advance Notice Development Document and has considered these comments, made appropriate changes to the regulation and made responses to the comments received in the preamble. However, due to the time constraints imposed by the court order referred to above, no formal proposal of the effluent regulations has been published. The Agency has determined pursuant to 5 USC § 553(b) that formal notice and comment on the interim final regulations prior to promulgation would be impracticable and contrary to the public interest. Good cause is also found for these regulations to become effective immediately upon publication.

Interested persons are encouraged to submit written comments. Comments should be submitted in triplicate to the Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460, Attention: Distribution Officer, WH-552. Comments on all aspects of the regulation are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which are available, or which may be relied upon by the Agency, comments should identify and, if possible, provide any additional data which may be available and should indicate why such data are essential to the amendment or modification of the regulation. In the event comments address the approach taken by the Agency in establishing an effluent limitation or guideline EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of sections 301 and 304(b) of the Act.

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

All comments received on or before March 22, 1976, will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202). In the event that the final regulation differs substantially from the interim final regulation set forth herein the Agency will consider petitions for reconsideration of any permits issued in accordance with these interim final regulation.

In consideration of the foregoing, 40 CFR Part 430 is amended as set forth below.

Dated: February 2, 1976.

RUSSELL E. TRAIN,
Administrator.

Part 430 is amended by adding Subparts F through U to read as follows:

Subpart F—Dissolving Kraft Subcategory

Sec.
430.60 Applicability; description of the dissolving kraft subcategory.
430.61 Specialized definitions.
430.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart G—Market Bleached Kraft Subcategory

430.70 Applicability; description of the market bleached kraft subcategory.
430.71 Specialized definitions.
430.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart H—BCT Bleached Kraft Subcategory

Sec.
430.80 Applicability; description of the BCT bleached kraft subcategory.
430.81 Specialized definitions.
430.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart I—Fine Bleached Kraft Subcategory

430.90 Applicability; description of the fine bleached kraft subcategory.
430.91 Specialized definitions.
430.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart J—Papergrade Sulfite Subcategory

430.100 Applicability; description of the papergrade sulfite subcategory.
430.101 Specialized definitions.
430.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart K—Low Alpha Dissolving Sulfite Pulp Subcategory

430.110 Applicability; description of the low alpha dissolving sulfite pulp subcategory.
430.111 Specialized definitions.
430.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart L—Groundwood-Chemi-Mechanical Subcategory

430.120 Applicability; description of the groundwood - chemi - mechanical subcategory.
430.121 Specialized definitions.
430.122 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart M—Groundwood-Thermo-Mechanical Subcategory

430.130 Applicability; description of the groundwood - thermo-mechanical subcategory.
430.131 Specialized definitions.
430.132 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart N—Groundwood-CMN Papers Subcategory

430.140 Applicability; description of the groundwood-CMN papers subcategory.
430.141 Specialized definitions.
430.142 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart F—Dissolving Kraft Subcategory

§ 430.60 Applicability; description of the dissolving kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of dissolving pulp by kraft mills.

§ 430.61 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD_5	25.65	13.35
TSS	35.85	19.3
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD_5	51.3	26.7
TSS	71.7	38.6
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that proportion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD_5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD_5	2.2	1.1
TSS	3.1	1.7

Subpart G—Market Bleached Kraft Subcategory

§ 430.70 Applicability; description of the market bleached kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of market pulp by bleached kraft mills.

§ 430.71 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and

methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	15.2	7.9
TSS	20.4	15.85
pH	Within the range 5.0 to 9.0.	
(English units (pounds per ton of product)		
BOD5	30.4	15.8
TSS	58.8	37.7
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that portion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

Subpart H—BCT Bleached Kraft Subcategory

§ 430.80 Applicability; description of the BCT bleached kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of paper board, coarse paper, and tissue paper by integrated bleached kraft mills.

§ 430.81 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

(d) Intergrated bleached kraft mills are those in which all or part of the bleached kraft pulp is processed into paper at the same mill.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	13.35	6.95
TSS	28.05	15.1
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	26.7	13.9
TSS	56.1	30.2
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that portion of the total mills productin due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

Subpart I—Fine Bleached Kraft Subcategory

§ 430.90 Applicability; description of the fine bleached kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and fine paper by integrated bleached kraft mills.

§ 430.91 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

(d) Integrated bleached kraft mills are those in which all or part of the bleached kraft pulp is processed into paper at the same mill.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	10.05	5.7
TSS	23.0	12.4
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	21.9	11.4
TSS	46.0	24.8
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that portion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section.

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.53
TSS	1.55	.83
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

Subpart J—Papergrade Sulfite Subcategory

§ 430.100 Applicability; description of the papergrade sulfite subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper by integrated papergrade sulfite mills.

§ 430.101 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

(d) Integrated sulfite mills are those in which all or part of the sulfite pulp is processed into paper at the same mill.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State

has the authority to issue NPDES permits) that the factors relating to the equipment or facilities involved, the process applied, or other such factors relate to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other valiable information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent that the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitaitons, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	37.6	19.6
TSS	44.6	24.0
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	75.2	39.2
TSS	89.2	48.0
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that proportion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

Subpart K—Low Alpha Dissolving Sulfite Pulp Subcategory

§ 430.110 Applicability; description of the low alpha dissolving sulfite pulp subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp by low alpha dissolving sulfite mills.

§ 430.111 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	42.9	22.35
TSS	50.85	27.4
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	85.8	44.7
TSS	101.7	54.8
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that portion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

Subpart L—Groundwood-Chemi-Mechanical Subcategory

§ 430.120 Applicability; description of the groundwood-chemi-mechanical subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper by groundwood chemi-mechanical mills.

§ 430.121 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment of facilities involved, the process applied, or other such factors related to such discharger are fundamentaly different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	13.5	7.05
TSS	1945	10.45
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	27.0	14.1
TSS	38.9	20.9
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that proportion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

(c) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a):

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
Zinc	0.09	0.045
English units (pounds per ton of product)		
Zinc	0.18	0.09

Subpart M—Groundwood-Thermo-Mechanical Subcategory

§ 430.130 Applicability; description of the groundwood-thermo-mechanical subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper by groundwood-thermo-mechanical mills.

§ 430.131 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	9.6	5.0
TSS	17.05	9.2
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	19.2	10.0
TSS	34.1	18.4
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that portion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

(c) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a):

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
Zinc	0.07	0.035
English units (pounds per ton of product)		
Zinc	0.14	0.07

Subpart N—Groundwood-CMN Papers Subcategory

§ 430.140 Applicability; description of the groundwood-CMN papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and coarse paper, molded pulp products, and newspaper by groundwood mills.

§ 430.141 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing: (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	8.55	4.45
TSS	14.7	7.9
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	17.1	8.9
TSS	29.4	15.8
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that portion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

(c) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a):

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
Zinc	0.11	0.055
English units (pounds per ton of product)		
Zinc	0.22	0.11

Subpart O—Groundwood-Fine Papers Subcategory

§ 430.150 Applicability; description of the groundwood-fine papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and fine paper by groundwood mills.

§ 430.151 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, ESPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD_5	7.7	4.0
TSS	13.5	7.3
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD_5	15.4	8.0
TSS	27.0	14.6
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that proportion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD_5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD_5	2.2	1.1
TSS	3.1	1.4

(c) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a):

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
Zinc	0.09	0.045
English units (pounds per ton of product)		
Zinc	0.18	0.09

Subpart P—Soda Subcategory

§ 430.160 Applicability; description of the soda subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper by soda mills.

§ 430.161 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a

point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	13.85	7.2
TSS	24.85	13.4
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	27.7	14.4
TSS	49.7	26.8
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that portion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

Subpart Q—Deink Subcategory

§ 430.170 Applicability; description of the deink subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper by deink mills.

§ 430.171 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

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

In establishing the limitations set forth in this section, EPA took into account all informations it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the dicharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations much be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other liimtations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	18.15	9.45
TSS	26.35	14.2
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	36.3	18.9
TSS	52.7	28.4
pH	Within the range 5.0 9.0.	

Subpart R—NI Fine Papers Subcategory

§ 430.180 Applicability; description of the NI fine papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of fine paper by non-integrated mills.

§ 430.181 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	8.2	4.25
TSS	11.0	5.9
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	16.4	8.5
TSS	22.0	11.8
pH	Within the range 5.0 to 9.0.	

Subpart S—NI Tissue Papers Subcategory

§ 430.190 Applicability; description of the NI tissue papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of tissue papers by non-integrated mills.

§ 430.191 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise thes regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	11.4	6.25
TSS	10.25	5.0
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	22.8	12.5
TSS	20.5	10.0
pH	Within the range 5.0 to 9.0.	

Subpart T—NI Tissue (FWP) Subcategory

§ 430.200 Applicability; description of the NI tissue (FWP) subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of tissue paper from waste paper by non-integrated mills.

§ 430.201 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations: Maximum for any 1 day	Effluent limitations: Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	12.3	6.4
TSS	17.6	9.45
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	24.6	12.8
TSS	35.2	18.9
pH	Within the range 5.0 to 9.0.	

Subpart U—High Alpha Dissolving Sulfite Pulp Subcategory

§ 430.210 Applicability; description of the high alpha dissolving sulfite pulp subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp by high alpha dissolving sulfite mills.

§ 430.211 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	52.3	20.3
TSS	62.5	33.65
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	104.6	52.6
TSS	125.0	67.3
pH	Within the range 5.0 to 9.0.	

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that proportion of the total mills production due to the use of logs from wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

Subpart V—Papergrade Sulfite Market Pulp Subcategory

§ 430.220 Applicability; description of the papergrade sulfite market pulp subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp by papergrade sulfite market mills.

§ 430.221 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

(b) Production shall be defined as the annual average off the machine (air-dry tons).

(c) Wet woodyard operations shall mean: (1) Log ponds used for defreezing logs prior to processing; (2) log transport and defreeze flumes; (3) log washing; and (4) wet debarking.

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

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	1.1	0.55
TSS	1.55	.85
English units (pounds per ton of product)		
BOD5	2.2	1.1
TSS	3.1	1.7

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to that proportion of the total mills production due to the use of logs and wet woodyard operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the limitations set forth by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kilograms per 1,000 kg of product)		
BOD5	40.0	20.85
TSS	49.5	26.65
pH	Within the range 5.0 to 9.0.	
English units (pounds per ton of product)		
BOD5	80.0	41.7
TSS	99.0	53.3
pH	Within the range 5.0 to 9.0.	

[FR Doc.76-4370 Filed 2-18-76;8:45 am]