

**ENVIRONMENTAL PROTECTION  
AGENCY**

[40 CFR Part 406]

[FRL 283-5]

**GRAIN MILLS MANUFACTURING POINT  
SOURCE CATEGORY**

**Effluent Limitations Guidelines for Existing  
Sources and Standards of Performance  
and Pretreatment Standards for New  
Sources**

Notice is hereby given that effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources set forth in tentative form below are proposed by the Environmental Protection Agency (EPA). On March 20, 1974, EPA promulgated a regulation adding Part 406 to Chapter 40 of the Code of Federal Regulations (39 FR 10512). 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 grain mills manufacturing point source category. The regulation proposed below will amend 40 CFR 406—grain mills manufacturing point source category by adding thereto the animal feed subcategory (Subpart G), the hot cereal subcategory (Subpart H), the ready-to-eat cereal subcategory (Subpart I) and the wheat starch and gluten subcategory (Subpart J) pursuant to sections 301, 304(b) and (c), 306(b) and 307(c) of the Federal Water Pollution Control Act as amended (33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316(b) and 1317(c); 86 Stat. 816 et seq.; P.L. 92-500) (the Act).

(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 achievable 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 procedure innovations, operating methods and other alternatives. The regulation proposed herein sets forth effluent limita-

tions and guidelines, pursuant to sections 301 and 304(b) of the Act, for the animal feed subcategory (Subpart G), the hot cereal subcategory (Subpart H), the ready-to-eat cereal subcategory (Subpart I) and the wheat starch and gluten subcategory (Subpart J) of the grain mills manufacturing point source category.

(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(b)(1)(B) of the Act 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(b)(1)(A) of the Act. The Administrator published in the FEDERAL REGISTER of January 16, 1973, (38 FR 1624) a list of 27 source categories, including the grain mills manufacturing category. The regulations proposed herein set forth the standards of performance applicable to new sources for the animal feed subcategory (Subpart G), the hot cereal subcategory (Subpart H), the ready-to-eat cereal subcategory (Subpart I) and the wheat starch and gluten subcategory (Subpart J) of the grain mills point source category.

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. Sections 406.76, 406.86, and 406.96, and 406.106 proposed below, provide pretreatment standards for new sources within the animal feed subcategory (Subpart G), the hot cereal subcategory (Subpart H), the ready-to-eat cereal subcategory (Subpart I) and the wheat starch and gluten subcategory (Subpart J), of the grain mills 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.

(b) *Summary and Basis of Proposed Effluent Limitations Guidelines for Existing Sources and Standards of Performance and Pretreatment Standards for New Sources*.

(1) *General methodology*. The effluent limitations, guidelines and standards of

performance proposed herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations and standards are 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 require development of separate limitations and standards 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 and standards of performance 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 are existent or capable of being designed for each segment. It also included an identification of, in terms of the amount of constituents and the chemical, physical, and biological characteristics of pollutants, 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 nonwater 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," "best available technology economically achievable" and the "best available demonstrated control technology, processes, operating methods, or other alternatives." 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, nonwater quality environmental impact (including energy requirements) and other factors.

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

The pretreatment standards proposed herein are intended to be complemen-

tary to the pretreatment standards proposed for existing sources under 40 CFR 128. The basis for such standards is set forth in the FEDERAL REGISTER of July 19, 1973, 38 FR 19236. The provisions of Part 128 are equally applicable to sources which would constitute "new sources," under section 306 if they were to discharge pollutants directly to navigable waters, except for section 128.133. That section provides a pretreatment standard for "incompatible pollutants" which requires application of the "best practicable control technology currently available," subject to an adjustment for amounts of pollutants removed by the publicly owned treatment works. Since the pretreatment standards proposed herein apply to new sources, sections 406.76, 406.86, 406.96 and 406.106 below amend section 128.133 to specify the application of the standard of performance for new sources rather than the "best practicable" standard applicable to existing sources under sections 301 and 304(b) of the Act.

(2) Summary of conclusions with respect to the animal feed subcategory (Subpart G), the hot cereal subcategory (Subpart H), the ready-to-eat cereal subcategory (Subpart I), and the wheat starch and gluten subcategory (Subpart J) of the grain mills point source category.

(1) *Categorization.* For the purpose of establishing effluent limitations guidelines and standards of performance, the animal feed, breakfast cereal, and wheat starch segment of the grain mills point source category has been divided into four subcategories:

(1) *Subpart G—Animal Feed Subcategory:* This subcategory includes those plants which utilize various grains, protein, and other additives at their facility for production of formula feed concentrates for poultry and livestock.

(2) *Subpart H—Hot Cereal Subcategory:* This subcategory includes those plants which produce various cereals from grains, principally wheat and oats, which in turn require further cooking prior to being eaten.

(3) *Subpart I—Ready-to-Eat Cereal Subcategory:* This subcategory includes those plants which process various grains and other products (whole grain wheat, rice, corn grits, oat flour, sugar, and minor ingredients) at their facility to produce various breakfast cereals ready for human consumption without cooking prior to being served.

(4) *Subpart J—Wheat Starch and Gluten Subcategory:* This subcategory includes those plants which utilize wheat flour as a raw material at their facility and through processes of physical separation and refinement produce starch and gluten (protein) components.

Factors such as raw materials used, age and size of production facilities, principal products and production processes, waste water characteristics, and applicable treatment methods substantiate and verify this categorization.

(ii) *Waste characteristics.* The known significant pollutant properties or con-

stituents of waste waters resulting from the manufacture of ready-to-eat cereals include BOD<sub>5</sub>, suspended solids, pH, and temperature. Temperature is not a significant pollutant parameter for process waste waters associated with wheat starch and gluten operations. These process waste waters have relatively high levels of nitrogen and phosphorus essential to and effectively removed by biological treatment. Wheat starch and gluten manufacturing process waste waters are particularly characterized by high BOD<sub>5</sub> and suspended solids concentrations having considerable potential polluting effect. No process waste water was found to result from the animal feed and hot cereal industries. The only water used in the animal feed manufacturing industry is the addition of a small amount of water for dust control during grain grinding and for steam used during the pelleting operation. In hot breakfast cereal manufacture, only dry milling and blending operations exist. Water is used only sometimes for tempering and increasing moisture content of the hot cereal product.

(iii) *Origin of waste water pollutants.* A discussion of water usage and the sources of pollutant discharges for the various subcategories of the animal feed, breakfast cereal, and wheat starch segment of the grain mills point source category are as described below:

(1) *Animal feed subcategory.* Process water used in the manufacturing process is as described above in section (2) (ii) entitled Waste Characteristics. No process waste water results from this manufacturing subcategory. (2) *Hot cereal subcategory.* Process water used in the manufacturing process is as described above in section (2) (ii) entitled Waste Characteristics. No process waste water results from this manufacturing subcategory. (3) *Ready-to-eat cereal subcategory.* Process water is used quite extensively for grain tempering, flavor solution make-up, cooking, extrusion, coating, clean-up of processing and conveying equipment, cooling purposes, and in wet scrubbers for air pollution control. Process waste water results primarily from condensed vapors from cooking operations, wet clean-up operations, and wet scrubber discharge. Spent noncontact cooling water is also generated. The principal pollutants associated with this subcategory are BOD<sub>5</sub>, suspended solids, pH, and temperature. The temperature of the untreated waste water stream (90° to 110° F) is due principally to the discharge of spent noncontact cooling water and hot water clean-up to the process waste water flow. The higher temperature results in the shredded cereal production due to the process waste water itself. Under present waste water handling procedures, waste water as leaving the plant site has not been found to be detrimental to conventional biological treatment systems and further evaporative cooling occurring through the treatment process is sufficient to reduce temperature to near ambient waste water characteristics without heat addition.

The largest waste load from ready-to-eat cereal manufacturing results from clean-up and washing operations. (4) *Wheat starch and gluten subcategory.* Water is used within this subcategory for dough making, dough washing, back washing of screens, counter current washing of centrifuge discharges, plant clean-up, boiler feed, and cooling purposes. The principal pollutants associated with this subcategory are BOD<sub>5</sub>, suspended solids, and pH. Principal waste water contributions result from starch milk screening, thickening, centrifugation, dewatering and B-starch concentration, and plant clean-up. This waste is characterized by high organic and suspended solids content being attributed largely to finely suspended starch particles from unrecovered starch in the process. Relatively high nitrogen and phosphorus concentrations contribute to the ready biodegradability of the waste. Cellulose fiber collected from screening devices necessitates a satisfactory disposal method for this solid waste.

(iv) *Treatment and control technology.* Waste water treatment and control technologies have been studied for each subcategory of the industry to determine what is (a) the best practicable control technology currently available, (b) the best available technology economically achievable, and (c) the best available demonstrated control technology, processes, operating methods or other alternatives.

Technologies such as waste equalization, activated sludge, waste stabilization lagoons, deep bed filtration, activated carbon filtration and reverse osmosis have been considered for the treatment and handling of process waste waters from the ready-to-eat cereal, and wheat starch and gluten manufacturing subcategories. Because of the general practice of discharging process waste waters from these subcategories to municipal sewage systems, many of these technologies are not currently practiced within these industries. Pilot plant studies and operational pretreatment facilities have amply and reliably demonstrated the ready biodegradability and amendability for treatment of both ready-to-eat cereal, and wheat starch and gluten plant wastes. The technologies considered are readily transferable due to their wide practice within other industrial categories or within the field of water treatment. Experiences with treatment of similar wastes provide evidence for anticipated removals of pollutants by applicable technologies.

The following is a discussion of the control and treatment technologies recommended for each subcategory as best practicable control technology currently available and best available technology economically achievable.

(1) *Recommended control and treatment—Animal feed subcategory.*

Since no process waste water results from operations within this subcategory, the best practicable control technology currently available and the best available technology economically achievable

recommend no discharge of process waste water pollutants to navigable waters.

(2) *Recommended control and treatment*—Hot cereal subcategory. Since no process waste water results from operations within this subcategory, the best practicable control technology currently available and the best available technology economically achievable recommend no discharge of process waste water pollutants to navigable waters.

(3) *Recommended control and treatment*—Ready-to-eat cereal subcategory. At present, all 47 cereal plants with one exception discharge their process waste waters to nearby municipal sewage systems. One plant presently provides no treatment of process waste waters prior to discharge to receiving waters. However, a municipal connection for this plant is presently planned. Best practicable control technology currently available would be applicable where direct discharge of process waste waters to navigable waters results, and for this subcategory would require that a plant achieve effluent levels of 70 mg/l BOD<sub>5</sub> and suspended solids at an average total process waste water flow of 5.8 l/kg (0.7 gal/lb) of cereal product. Since the process waste water is greatly attributable to clean-up operations, minimization of water usage for this purpose is an integral part of the technology. These levels of pollutant reductions are not currently practiced at any plant in the industry, since these plants currently convey process waste water to municipal sewage systems for treatment. However, the process waste water has been demonstrated to be readily treatable by conventional biological treatment, and the technology has been satisfactorily demonstrated to be capable of achieving the effluent levels through pilot plant and prototype installations. Achievement of the recommended effluent limitations and best practicable control technology currently available is based upon in-process control for minimization of clean-up water use, and end-of-pipe treatment including equalization and activated sludge. Sedimentation and sludge handling facilities are included. Corresponding BOD<sub>5</sub> and suspended solids reductions of 94 percent and 67 percent of the average waste load will result.

Best available technology economically achievable recommends that deep bed filtration be added with the treatment steps under best practicable control technology currently available. This addition will further reduce BOD<sub>5</sub> and suspended solids in the process waste water stream to 30 mg/l at the current average waste water flow. Corresponding percent removals are 97 and 87 percent for BOD<sub>5</sub> and suspended solids.

(4) *Recommended control and treatment*—Wheat starch and gluten category. Of the present 7 wheat starch and gluten plants, 6 discharge all process waste waters to municipal sewage systems. One plant utilizes the starch-laden process waste water from the wheat starch and gluten manufacturing process as a high-carbohydrate raw material in an associated distillery operation. Dis-

tillery effluent is presently being discharged without treatment to surface waters, however an elaborate treatment system is now under construction. In-plant control to reduce pollutants in wheat starch and gluten manufacturing by conventional techniques offers little potential. Waste water flow and loads attributable to clean-up operations are relatively insignificant in terms of total process waste water characteristics. The process inherently produces a waste water characterized by its extremely high BOD<sub>5</sub> (6,000 to 14,000 mg/l) and suspended solids (5100 to 15,000 mg/l) levels. The high BOD<sub>5</sub> concentration may be accounted for largely by high concentration of very finely suspended starch particles. Best practicable control technology currently available would be applicable where direct discharge of process waste waters to navigable waters results, and for this subcategory would require that a plant achieve effluent levels of 200 mg/l each, for BOD<sub>5</sub> and suspended solids, at an average total process waste water flow of 10 l/kg (1.2 gal/lb) of wheat flour processed. These levels of pollutant reduction are not currently achieved at any plant in the industry, since process waste water is generally discharged to municipal sewage facilities for treatment. Ready biodegradability of the process waste waters and their amendability to conventional treatment measures has been well demonstrated through operational and experimental full-scale systems, as well as pilot plant studies. With consideration of the high-strength nature of the waste and its polluting potential, and present practices as now demonstrated in the industry, a transfer of pollution control technology for this subcategory is necessary and appropriate. Applicable control technologies are known and readily transferable with reasonable expectancy for predicted pollutant removals based on past experience with treating similar high-strength waste. The high BOD<sub>5</sub> concentration being attributable in large part to suspended starch particles necessitates high removal of suspended solids through sedimentation and/or filtration. Best practicable control technology currently available is based upon minimization of inplant water use for clean-up and end-of-pipe treatment including pH, neutralization, equalization and activated sludge. Sedimentation, sludge handling and effluent chlorination are included. The recommended technology is capable of reliably achieving BOD<sub>5</sub> and suspended solids reduction of 98 and 97 percent, respectively.

Best available technology economically achievable recommends that deep bed filtration be added with the treatment steps under best practicable control technology currently available. This addition will further reduce BOD<sub>5</sub> and suspended solids in the process waste water stream to 50 mg/l and 40 mg/l, respectively, at the current average total waste water flow. Removal efficiency is 99 percent for both BOD<sub>5</sub> and suspended solids.

(5) *Solid waste control*. The application of these technologies requires that

solid waste control must be considered. Best practicable control technology and best available control technology as they are known today, require 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 non-hazardous substances requiring only minimal custodial care. However, some constituents may be hazardous and may require special consideration. In order to ensure 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. It should be noted that there is no evidence that the application of the recommended control and treatment technologies will result in any unusual solid waste disposal problems for this industry segment.

(v) *Cost estimates for control of waste water pollutants*. Since the animal feed and hot cereal subcategories do not result in the generation of process waste waters, the only subcategories having cost importance for control of process waste water pollutants are ready-to-eat cereal, and wheat starch and gluten manufacture. Within the ready-to-eat cereal subcategory, all plants presently discharge, or anticipate the discharge (in only one case) of all process waste waters to municipal sewage systems. Investment costs and total annual costs for this subcategory to achieve the proposed best practicable control technology currently available effluent limitations guidelines may be estimated to be \$811,800 and \$199,200, respectively. This assumes that the one plant planning for discharge of its process waste water to municipal facilities does not effect such a connection, and that separate waste handling and treatment are then necessary prior to discharge to navigable waters.

Process waste water from 6 of the wheat starch and gluten plants in the U.S. is discharged to municipal systems; process waste water from the remaining plant is utilized as a raw material in an adjacent distillery. The distillery wastes are presently discharged untreated to navigable waters; however, extensive treatment facilities are now being constructed to substantially reduce pollutant loads. In view of present practices, no significant investment and annual costs may be presently attributable or foreseen for this subcategory to achieve the proposed effluent limitation guidelines for best practicable control technology currently available. This estimate

is based on the assumption that only surface dischargers are affected by the proposed guidelines.

The investment and total annual costs to achieve the proposed best available technology economically achievable effluent limitations guidelines for all subcategories within the segment are estimated similarly as above, except that the investment and total annual costs for the ready-to-eat cereal subcategory are \$875,300 and \$223,100, respectively. The higher costs reflect the increased level of effluent pollutant reduction associated with the proposed best available technology economically achievable. No investment and total annual costs may be attributable to the animal feed, hot cereal, and wheat starch and gluten subcategories. This estimate is based on the assumption that only surface dischargers are affected by the proposed guidelines with no credit given for those facilities which employ technology representative of a portion of the best available technology economically achievable. This estimate also includes those costs associated with best practicable control technology currently available.

(vi) *Energy requirements and non-water quality environmental impacts.* The process waste water treatment and control technologies required to achieve the best practicable control technology currently available and the best available technology economically achievable do not require unusually high energy requirements. Power would be needed for aeration, pumping, centrifugation, and other unit operations. Power requirements to achieve the levels of technology are in the range of 75 to 310 kw (100 to 500 hp) for ready-to-eat cereal plants and 150 to 220 kw (200 to 300 hp) for wheat starch and gluten plants. This level of energy demand is generally less than one percent of the total energy requirements of an average-sized ready-to-eat cereal or wheat starch and gluten plant. It is concluded that the energy needs for achieving waste water treatment where discharge of process waste waters results, constitute only a small portion of the energy demands of the entire industry. These added demands could be accommodated readily by purchased and in-house power sources. The fact that essentially all ready-to-eat cereal, and wheat starch and gluten plants now discharge to municipal sewage systems supports the conclusion that no appreciable energy increase will likely result with continuation of present practices. Because of no process waste water discharge for the animal feed and hot cereal subcategories, no additional pollution control measures are required, and therefore no related energy requirements.

There is no evidence that application of the proposed effluent limitations guidelines will result in any unusual air or solid waste disposal problems. Some potential odors from any biological treatment system exist particularly when treating high organic content wastes. However, this ever-present po-

tential may be eliminated or minimized through the selection, design, and operation of biological treatment systems. Considerable amounts of solids created in biological treatment of ready-to-eat cereal and wheat starch manufacturing waste are subject to conventional methods of handling and disposal e.g., digestion, dewatering, disposal in a sanitary landfill, or incineration. Disposal of solid material so as not to contribute pollutants to navigable waters is necessary and can be technologically accomplished.

(vii) *Economic impact analysis.* All ready-to-eat cereal plants are, or will be in the near future, connected to municipal treatment systems and will incur no costs as a result of these guidelines. Regardless, the costs of compliance for this segment will be low; either return on investment (after-tax) would fall 0.3 percent at most, or price increases would be a maximum of 0.7 percent. Additional price increase for 1983 requirements would be less than 0.1 percent. Industry production, employment and growth would not be significantly affected.

Of the seven existing wheat starch plants, none are direct dischargers. However, in the future, these plants have the option of continuing to use a municipal system or of investing in pollution control facilities. Some plants are giving serious consideration to the latter alternative due to the rising costs of municipal treatment. BPT is a financially viable alternative for most wheat starch plants. However, two plants probably would close if it became necessary to construct a waste treatment installation in compliance with BPTCA guidelines.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Animal Feed, Breakfast Cereal, and Wheat Starch Segment of the Grain Mills Point Source Category" details the analysis undertaken in support of the regulation being proposed herein and is available for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, 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 proposed regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed 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 EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Phillip B. Wisman.

On June 14, 1973, the Agency published procedures designed to insure that, when certain major standards, regulations, and guidelines are proposed, an explanation of their basis, purpose and

environmental effects is made available to the public (38 FR 15653). The procedures are applicable to major standards, regulations and guidelines which are proposed on or after December 31, 1973, and which prescribe national standards of environmental quality or require national emission, effluent or performance standards and limitations.

The Agency determined to implement these procedures in order to insure that the public was apprised of the environmental effects of its major standards-setting actions and was provided with detailed background information to assist it in commenting on the merits of a proposed action. In brief, the procedures call for the Agency to make public the information available to it delineating the major nonenvironmental factors affecting the decision, and to explain the viable options available to it and the reasons for the option selected.

The procedures contemplate publication of this information in the FEDERAL REGISTER, where this is practicable. They provide, however, that where, because of the length of these materials, such publication is impracticable, the material may be made available in an alternate format.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Animal Feed, Breakfast Cereal, and Wheat Starch Segment of the Grain Mills Point Source Category" contains information available to the Agency concerning the major environmental effects of the regulation proposed below, including:

(1) the pollutants presently discharged into the Nation's waterways by manufacturers of animal feed, hot cereal, ready-to-eat cereal, and wheat starch and gluten, and the degree of pollution reduction attainable from implementation of the proposed guidelines and standards (see particularly Sections IV, V, VI, IX, X, and XD);

(2) the anticipated effects of the proposed regulation on other aspects of the environment including air, and solid waste disposal (see particularly Section VIII);

(3) options available to the Agency in developing the proposed regulatory system and the reasons for its selecting the particular levels of effluent reduction which are proposed (see particularly Sections VI, VII, and VIII).

The supplementary report entitled "Economic Analysis of Proposed Effluent Guidelines for Animal Feed, Breakfast Cereal and Wheat Starch Segment of the Grain Mills Point Source Category", July, 1974, contains an estimate of the cost of pollution control requirements and an analysis of the possible effects of the proposed regulation on prices, production levels, employment, communities in which animal feed, hot cereal, ready-to-eat cereal, and wheat starch and gluten manufacturing plants are located, and international trade. In addition, the Development Document describes, in Section VIII, the cost and energy con-

sumption implications of the proposed regulations.

The two reports described above in the aggregate exceed 200 pages in length and contain a substantial number of charts, diagrams, and tables. It is clearly impracticable to publish the material contained in these documents in the FEDERAL REGISTER. To the extent possible, significant aspects of the material have been presented in summary form in foregoing portions of this preamble. Additional discussion is contained in the following analysis of comments received and the Agency's response to them. As has been indicated, both documents are available for inspection at the Agency's Washington, D.C. and regional offices and at State water pollution control agency offices. Copies of each have been distributed to persons and institutions affected by the proposed regulations or who have placed themselves on a mailing list for this purpose. Finally, so long as the supply remains available, additional copies may be obtained from the Agency as described above.

When this regulation is promulgated, 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 will be available through the National Technical Information Service, Springfield, Virginia, 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 animal feed, breakfast cereal, and wheat starch segment of the grain mills point source category. All participating agencies have been informed of project developments. An initial draft of the Development Document was sent to all participants and comments were solicited on that report. 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) New England Interstate Water Pollution Control Commission; (4) Ohio River Valley Sanitation Commission; (5) Delaware River Basin Commission; (6) American Feed Manufacturers Association; (7) Cereal Institute; (8) Gerber Products Company; (9) Malt-O-Meal Company; (10) Van Brode Milling Company, Inc.; (11) Standard Milling Company; (12) Loma Linda Foods; (13) Far-Mar Company; (14) Midwest Solvents; (15) A. E. Staley Manufacturing Company; (16) Centennial Mills; (17) New Era Milling Company; (18) Baker/Beech-Nut; (19) CPA International, Inc.; (20) National Oats Company; (21) Pillsbury Company; (22) The American Society of Mechanical Engineers; (23) The Conservation Foundation; (24) Businessmen for the Public Interest; (25) Environmental Defense Fund, Inc.; (26) Natural Resource

Defense Council; (27) The American Society of Civil Engineers; (28) Water Pollution Control Federation; and (29) National Wildlife Federation.

The following responded with comments: General Mills, Inc.; American Food Manufacturers Association; State of Colorado Department of Public Health; United States Water Resources Council; Research Division, Far-Mar Co., Inc.; Baker/Beech-Nut Corporation; Kellogg Company; Nabisco Inc.; State of Michigan Department of Natural Resources; Minnesota Pollution Control Agency; A. E. Staley Manufacturing Company; New York State Department of Environmental Conservation; The Pillsbury Company, CPC International, Inc.; U.S. Department of Agriculture; Centennial Mills; Delaware River Basin Commission; U.S. Department of Health, Education, and Welfare; National Oats Company; and the U.S. Department of the Interior.

The primary issues raised in the development of the proposed effluent limitations guidelines and standards of performance and the treatment of these issues herein are as follows:

(1) A common criticism was that maximum effluent limitations for BATEA and new source performance standards were suggested based on daily values.

Maximum effluent limitations stipulated for these two technology levels are intended to be based on the maximum daily average of daily values for 30 consecutive days, as indicated for BPCTCA. The proposed guidelines have been amended accordingly.

(2) One comment was made expressing apprehension regarding establishment of effluent guidelines limitations requiring very high (greater than 90 percent) removals of BOD5 and suspended solids without such technology now being demonstrated on a full-scale basis in the ready-to-eat cereal and wheat starch and gluten manufacturing subcategories. Particular concern is shown for limitations for the wheat starch industry, in the lack of "demonstrated" technology.

The biological and physical treatability of both wheat starch and ready-to-eat cereal process waste water has been evaluated and reliably demonstrated through use of present in-place pretreatment facilities and further pilot plant studies. The waste is readily biodegradable, and treatment levels can be reasonably predicted for this type waste and known treatment measures. Effective and efficient treatment of process waste waters may be expected through transfer of treatment technologies from other applications, and such technologies are readily available for use.

The fact that this industry does not employ such technology in wide spread use does not, therefore, preclude establishing these levels of control. The treatment mechanisms utilized in establishing the specific effluent limitation guidelines and standards for this industry have been based on a transfer of technology for treatment of similar high-strength food processing wastes, and knowledge

of waste-water pollutant characteristics and waste water treatment efficiencies. Substantive comments and data are solicited in regard to the effectiveness of treatment technologies applicable to these subcategories and the resultant effluent limitations and standards as proposed.

(3) One comment was made that the pollutant removal efficiencies required by the proposed effluent limitation guidelines cannot be achieved within a reasonable economic framework.

The economic impact of the proposed effluent limitation guidelines have been thoroughly evaluated within the document "Economic Analysis of Proposed Effluent Guidelines for Animal Feed, Breakfast Cereal and Wheat Starch Segments of the Grain Mill Point Source Category," prepared in conjunction with the Development Document. All ready-to-eat cereal plants are, with one exception, connected to municipal waste treatment systems. However, should it become necessary for plants in this segment to have separate waste treatment facilities, industry production, employment, and growth would not be significantly affected. No wheat starch plants are currently directly discharging process waste waters to navigable waters. The economic analysis indicates that if a plant found it necessary to install independent pollution control equipment, it would remain financially viable.

(4) A comment was made that subcategorization of the wheat starch industry is necessary for appropriate consideration of size and age of plants. At least an allowance for older and larger plants should be made.

An analysis of data currently available to the agency does not indicate a justification for subcategorization of wheat starch industry on the basis of plant size and age. This conclusion is fully discussed in Section V of the Development Document.

(5) A comment was made that more stringent requirements should be adopted for the ready-to-eat and wheat starch manufacturing subcategories. More stringent limitations are required by at least one state pollution control agency.

The detailed technical and economic evaluation of these industry subcategories support the reasonableness and expected achievability of the proposed limitations. Since essentially all plants now discharge their entire process waste water to municipal systems, little benefit would result in relation to cost for additional pollutant removal. Land applications were also considered as an integral part of the waste treatment and disposal system at new plant sites, thereby permitting further reduction of pollutant loads discharged to navigable waters.

(6) A comment was made that a no discharge of process waste water pollutants limitation for the Animal Feed and Hot Cereal Manufacturing Subcategories is inappropriate since waste water is attributable to clean-up from these operations and air pollution control devices.

Consideration of the use of clean-up water incidental to such manufacturing processes should be made.

Field investigation and plant surveys conducted in development of proposed effluent limitation guidelines for the animal feed and hot cereal industries concluded that no process waste water is generated in these operations. This result was verified by numerous visits to plants in these industrial categories and discussions with responsible plant personnel.

(7) One comment was made that climatic factors have not been appropriately considered as influencing the consistent efficiency of biological systems in achieving the effluent limitations as proposed.

Treatment efficiency may reasonably be expected to be influenced by variable temperature conditions and winter conditions in northern climates. However, variability of treatment efficiency with climate may be compensated for in the design and operation of the treatment facilities.

(8) A comment was made that effluent limitations for temperature, phosphorus, nitrogen and bacteriological qualities were not stipulated even though these parameters were identified as those having possible pollutional significance.

Temperature is a potential pollutant only for ready-to-eat cereal manufacturing process waste water. However, under present waste handling and disposal practices the temperature is satisfactorily reduced to technologically acceptable levels. The temperature characteristic of the process waste water is reduced satisfactorily by waste water conveyance, and by biological and physical treatment measures commonly employed by municipal treatment systems or to be employed at future on-site treatment facilities. Heated waste is commonly added to other unheated waste water components to effect substantial reduction in the temperature characteristic of the composite process waste water load. Based on present knowledge and data, no justification exists for limitation of temperature under present practices and waste disposal procedures.

Nitrogen and phosphorus are present in significant concentrations in process waste waters from wheat starch and gluten manufacturing (350 to 400 mg/l and 75 to 140 mg/l respectively). In consideration of the attendant high BOD<sub>5</sub> characteristics of this waste, the phosphorus and nitrogen levels are judged necessary to achieve effective and efficient biological treatment. Available evidence indicates that nitrogen and phosphorus levels are very substantially reduced to concentrations equivalent to effluent quality expected from conventional biological treatment facilities for domestic waste. Therefore, nitrogen and phosphorus levels in treated process waste water which is in compliance with the proposed effluent limitations guidelines are not judged to warrant separate, specific limitations. Achievement of acceptable nitrogen and phosphorus levels are a consequence of and attendant to

attaining the proposed effluent limitation guidelines for other stipulated pollutant parameters. On the contrary, nitrogen and phosphorus concentration in ready-to-eat cereal process waste waters are generally insignificant, and these materials must be added to accomplish effective biological treatment of the waste, as presently practiced at one pretreatment facility in the industry.

Bacteriological considerations are of importance in the process waste water itself only when sanitary waste from human sources is added to the total process waste water stream. The process waste and sanitary waste where resulting in a combined waste discharge are readily accommodated by municipal treatment systems under present practices without deleterious effects. On-site treatment of composite process waste water would likely require separation of the process-related waste stream and the human waste contribution. No justification for limitation of bacteriological qualities for any of the various subcategories is presently justified based on existing pollution control practices.

(9) A comment was made that lagooning may not be an acceptable treatment alternative for plants located in municipalities.

Alternative C technology for both ready-to-eat cereal, and wheat starch and gluten manufacturing subcategories includes the utilization of a waste stabilization lagoon for treatment and control of process waste water. However, this technology was only one of several technologies available for treatment of these wastes. Other technologies which are not land-dependent were noted, and were recommended as appropriate methods to achieve the proposed effluent limitation guidelines.

(10) One comment was made that the limitations should be adjusted upward to account for variability in treatment system performance and that allowances should be made for sudden shocking of the treatment system during plant cleanup operations.

The need for flexibility in the effluent limitations guidelines to take into account variation in biological treatment system performance and upsets in plant operation is recognized and has been properly considered in the proposed effluent limitation guidelines. The effluent limitation for all required technology levels (best practicable control technology currently available, best available technology economically achievable, and new source performance standards) allow a maximum daily average pollutant load of 3.0 times the average 30-day values to account for such variances.

Interested persons may participate in this rulemaking by submitting written comments in triplicate to the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman. Comments on all aspects of the proposed 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 development of the regulations. In the event comments address the approach taken by the Agency in establishing an effluent limitations guideline or standard of performance, EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of section 301, 304(b), 306 and 307 of the Act.

A copy of all public comments will be available for inspection and copying at the EPA Information Center, Room 227, West Tower, Waterside Mall, 401 M Street S.W., Washington, D.C. A copy of the preliminary draft contractor report, 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 October 17, 1974 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 F.R. 21202).

Dated: September 5, 1974.

JOHN QUARLES,  
*Acting Administrator.*

**PART 406—GRAIN MILLS EFFLUENT LIMITATIONS GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR THE GRAIN MILLS POINT SOURCE CATEGORY**

**Subpart G—Animal Feed Subcategory**

- |        |   |
|--------|---|
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| 406.70 | Applicability; description of the animal feed subcategory.  |
| 406.71 | Specialized definitions.  |
| 406.72 | Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. |
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| 406.74 | Reserved.   |
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**Subpart H—Hot Cereal Subcategory**

- |        |   |
|--------|---|
| 406.80 | Applicability; description of the hot cereal subcategory.   |
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- Sec.  
406.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 406.84 Reserved.
- 406.85 Standards of performance for new sources.
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- Subpart I—Ready-To-Eat Cereal Subcategory
- 406.90 Applicability: description of the ready-to-eat cereal subcategory.
- 406.91 Specialized definitions.
- 406.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 406.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 406.94 Reserved.
- 406.95 Standards of performance for new sources.
- 406.96 Pretreatment of standards for new sources.
- Subpart J—Wheat Starch and Gluten Subcategory
- 406.100 Applicability: description of the wheat starch and gluten subcategory.
- 406.101 Specialized definitions.
- 406.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 406.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 406.104 Reserved.
- 406.105 Standards of performance for new sources.
- 406.106 Pretreatment standards for new sources.
- Subpart G—Animal Feed Subcategory

**§ 406.70 Applicability; description of the animal feed subcategory.**

The provisions of this subpart are applicable to discharges resulting from the manufacturing of animal feeds (formula feed concentrate) for poultry and livestock utilizing various grains, proteins, and other additives as raw materials.

**§ 406.71 Specialized definitions.**

For the purpose of this subpart:

(a) The general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

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

(a) 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 subcategory 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.

(b) 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: There shall be no discharge of process waste water pollutants to navigable waters.

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

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 available technology economically achievable: There shall be no discharge of process waste water pollutants to navigable waters.

**§ 406.74 [Reserved]**

**§ 406.75 Standards of performance for new sources.**

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

**§ 406.76 Pretreatment standards for new sources.**

The pretreatment standards under section 307(c) of the Act for a source

within the animal feed subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows: "In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 406.75: *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

**Subpart H—Hot Cereal Subcategory**

**§ 406.80 Applicability; description of the hot cereal subcategory.**

The provisions of this subpart are applicable to discharges resulting from the production of various cereal from grains, principally wheat and oats, requiring cooking prior to normal human consumption.

**§ 406.81 Specialized definitions.**

For the purpose of this subpart:

(a) The general definitions, abbreviations and methods of analysis set forth in 40 CFR Part 401 shall apply to this subpart.

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

(a) 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 subcategory 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.

(b) 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: There shall be no discharge of process waste water pollutants to navigable waters.

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

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 available technology economically achievable: There shall be no discharge of process waste water pollutants to navigable waters.

**§ 406.84 [Reserved]**

**§ 406.85 Standards of performance for new sources.**

The following standards of performance establish the quantity or quality of pollutants or pollutant properties controlled by this section, which may be discharged by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

**§ 406.86 Pretreatment standards for new sources.**

The pretreatment standards under section 307(c) of the Act for a source within the hot cereal subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows: "In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 406.85; provided that, if the publicly owned treatment works which receives the pollutants is

committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

**Subpart I—Ready-To-Eat Cereal Subcategory**

**§ 406.90 Applicability; description of the ready-to-eat subcategory.**

The provisions of this subpart are applicable to discharges resulting from the processing of various grains and other materials (whole grain wheat, rice, corn grits, oat flour, sugar, and minor ingredients) to produce various breakfast cereals normally available for human consumption without cooking.

**§ 406.91 Specialized definitions.**

For the purpose of this subpart:

(a) The general definitions, abbreviations and methods of analysis set forth in 40 CFR Part 401 shall apply to this subpart.

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

(a) 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 subcategory 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.

(b) 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 one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) kg/kg of cereal product		
BOD <sub>5</sub> .....	1.2.....	0.49
TSS.....	1.2.....	0.49
pH.....	Within the range 6.0 to 9.0.....	.....
(English units) lb/1000 lb of cereal product		
BOD <sub>5</sub> .....	1.2.....	0.49
TSS.....	1.2.....	0.49
pH.....	Within the range 6.0 to 9.0.....	.....

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

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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) kg/kg of cereal product		
BOD <sub>5</sub> .....	0.60.....	0.29
TSS.....	0.45.....	0.15
pH.....	Within the range 6.0 to 9.0.....	.....
(English units) lb/1000 lb of cereal product		
BOD <sub>5</sub> .....	0.60.....	0.29
TSS.....	0.45.....	0.15
pH.....	Within the range 6.0 to 9.0.....	.....

**§ 406.94 [Reserved]**

**§ 406.95 Standards of performance for new sources.**

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:



PROPOSED RULES

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) kg/kg of cereal product		
BOD <sub>5</sub> .....	0.60.....	0.20
TSS.....	0.45.....	0.15
pH.....	Within the range 6.0 to 9.0.....	
(English units) lb/1000 lb of cereal product		
BOD <sub>5</sub> .....	0.60.....	0.20
TSS.....	0.45.....	0.15
pH.....	Within the range 6.0 to 9.0.....	

§ 406.96 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the ready-to-eat cereal subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR 128, except that, for the purpose of this section, 40 CFR 28.133 shall be amended to read as follows: "In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 406.95; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

Subpart J—Wheat Starch and Gluten Subcategory

§ 406.100 Applicability; description of the wheat starch and subcategory.

The provisions of this subpart are applicable to discharges resulting from those industrial operations utilizing wheat flour as a raw material for production of wheat starch and gluten (protein) components through conventional processes of physical separation and subsequent refinement.

§ 406.101 Specialized definitions.

For the purpose of this subpart:

(a) The general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

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

(a) 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.

(b) 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 one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) kg/kg of raw material (wheat flour)		
BOD <sub>5</sub> .....	6.0.....	2.0
TSS.....	6.0.....	2.0
pH.....	Within the range 6.0 to 9.0.....	
(English units) lb/1000 lb of raw material (wheat flour)		
BOD <sub>5</sub> .....	6.0.....	2.0
TSS.....	6.0.....	2.0
pH.....	Within the range 6.0 to 9.0.....	

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

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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) kg/kg of raw material (wheat flour)		
BOD <sub>5</sub> .....	1.5.....	0.60
TSS.....	1.2.....	0.40
pH.....	Within the range 6.0 to 9.0.....	
(English units) lb/1000 lb of raw material (wheat flour)		
BOD <sub>5</sub> .....	1.5.....	0.60
TSS.....	1.2.....	0.40
pH.....	Within the range 6.0 to 9.0.....	

§ 406.104 [Reserved]

§ 406.105 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) kg/kg of raw material (wheat flour)		
BOD <sub>5</sub> .....	3.0.....	1.0
TSS.....	3.0.....	1.0
pH.....	Within the range 6.0 to 9.0.....	
(English units) lb/1000 lb of raw material (wheat flour)		
BOD <sub>5</sub> .....	3.0.....	1.0
TSS.....	3.0.....	1.0
pH.....	Within the range 6.0 to 9.0.....	

§ 406.106 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the wheat starch and gluten subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended

to read as follows: "In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 406.105; provided that, if the publicly owned treatment works which receives the pollutants is

committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

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