

## ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 405]

### EFFLUENT LIMITATIONS GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR DAIRY PRODUCTS PROCESSING INDUSTRY POINT SOURCE CATEGORY

#### Proposed Guidelines

Notice is hereby given that effluent limitations 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) for the receiving stations subcategory (Subpart A), the fluid products subcategory (Subpart B), the cultured products subcategory (Subpart C), the butter subcategory (Subpart D), the cottage cheese and cultured cream cheese subcategory (Subpart E), the natural and processed cheese subcategory (Subpart F), the fluid mix for ice cream and other frozen desserts subcategory (Subpart G), the ice cream, frozen desserts, novelties, and other dairy desserts subcategory (Subpart H), the condensed milk subcategory (Subpart I), the dry milk subcategory (Subpart J), the condensed whey subcategory (Subpart K), and the dry whey subcategory (Subpart L) of the dairy products processing industry category of point sources 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.; Pub. 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 economically achievable, including treatment techniques, process and procedure innova-

tions, operating methods and other alternatives. The regulations proposed herein set forth effluent limitations guidelines, pursuant to section 304(b) of the Act, for the dairy products processing industry 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 dairy products processing industry category. The regulations proposed herein set forth the standards of performance applicable to new sources for the dairy products processing industry 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 405.15, 405.25, 405.35, 405.45, 405.55, 405.65, 405.75, 405.85, 405.95, 405.105, 405.115, and 405.125 proposed below provide pretreatment standards for new sources within the dairy products processing industry 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 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 (1) the source, flow and volume of water used in the process employed and the sources of waste and waste waters in the operation; and (2) the constituents of all waste water. The constituents of the waste waters which should be subject to effluent limitations guidelines 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 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," the "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, 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.

The pretreatment standards proposed herein are intended to be complementary to the pretreatment standards proposed for existing sources under Part 128 of Title 40. The basis for such standards are 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 § 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, §§ 405.15, 405.25, 405.35, 405.45, 405.55, 405.65, 405.75, 405.85, 405.95, 405.105, 405.115, and 405.125 below amend § 128.133 to require 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 dairy products processing category of point sources.

(i) Categorization. For the purpose of studying waste treatment and effluent limitations, the dairy manufacturing category was divided into twelve discrete subcategories based on the type of products manufactured.

(1) Subpart A—Receiving Stations Subcategory: The influence of size of plant, age, process modifications, and other factors do not affect the raw waste loads from any subcategory except receiving stations. This is primarily due to the simplicity of this operation. Here the data indicates a consistent difference in the waste loads generated by stations receiving milk in cans versus those receiving milk in bulk. Cans provide more surface area to which milk solids can adhere, thereby increasing the quantity going to waste. Under normal operations, and with good housekeeping, receiving stations do not constitute a major source of waste load.

(2) Subpart B—Fluid Products Subcategory: This subcategory includes market milk, flavored milk and cream (plain and whipped). The majority of products produced in this industry are included in this subcategory, and it also constitutes a major source of wastes. Flow and other waste water parameters vary widely in relation to the variations in processing schemes which are many.

(3) Subpart C—Cultured Products Subcategory: Cultured skim milk (cultured buttermilk), yogurt, sour cream, cultured cream cheese dips, and dips of various types are included in this subcategory. All of these products result in moderately high waste water coefficients primarily due to their high viscosity which causes more of the product to adhere to vessel walls and end up as waste.

(4) Subpart D—Butter Subcategory: This subcategory includes churned and continuous-process butter. The continuous process materially reduces potential waste by eliminating the buttermilk production and the washing step. Both methods of production produce moderately high waste coefficients.

(5) Subpart E—Cottage Cheese Subcategory: This subcategory involves only cottage cheese produced as cottage cheese curd and cultured cream cheese as opposed to rennet curd natural and processed cheese. The large amount of cheese fines, low pH, large amount of wash water used for curd wash, and higher acidity of the whey from cottage cheese causes this subcategory to produce the most visible source of waste water coefficient in the industry.

(6) Subpart F—Natural and Processed Cheese Subcategory: This subcategory includes the natural or hard curd cheese only. Because of the nature of the process and the stability of the curds there is less water used and less waste generated than in soft curd cheese processing. Additionally the whey from hard curd cheese processing is generally recoverable as a byproduct.

(7) Subpart G—Ice Cream Mix Subcategory: Fluid mix for ice cream and other frozen products produces about one fourth the waste water as that of the ice cream and novelties subcategory.

(8) Subpart H—Ice Cream, Frozen Desserts, Novelties and Other Dairy Desserts Subcategory: This subcategory includes ice cream, ice milk, sherbet, water ices, stick confections, frozen novelty products, frozen desserts, mellorine, puddings, and other dairy-based desserts. Ice cream manufacturing generates moderately high waste water coefficients whereas the other subprocesses produce about one half or less the quantity of wastes.

(9) Subpart I—Condensed Milk Subcategory: Condensed whole milk, condensed skim milk and condensed buttermilk are included in this subcategory. The waste water coefficients involved in this subcategory are moderate.

(10) Subpart J—Dry Milk Subcategory: Dry whole milk, dry skim milk and dry buttermilk are included in this subcategory. Waste water coefficients in this subcategory are low.

(11) Subpart K—Condensed Whey Subcategory: Condensed sweet and condensed acid whey are included in this subcategory. Low waste water coefficients are the case in this subcategory.

(12) Subpart L—Dry Whey Subcategory: Dry sweet whey and dry acid whey are products of this subcategory, and the waste water coefficients resulting are moderate.

(ii) Waste Characteristics. The pollutants contained in raw waste waters resulting from the dairy products processing category represent materials lost through direct processing of raw materials into finished products and materials lost through ancillary operations. The former group consists of milk, milk products and non-dairy ingredients (sugar, fruits, nuts, etc.), while the latter consist of cleaners and sanitizers used in cleaning equipment, lubricants (primarily soap and silicone-based) used in certain handling equipment, and sanitary and domestic sewage from toilets, washrooms and kitchens.

These wastes, with the possible exceptions of some lubricants, cleaners, sanitizers, and concentrated wheys (especially acid wheys), are readily degradable in typical biological treatment systems. Any refractory materials that are represented are generally present in relatively low concentrations.

On the basis of all evidence reviewed, it has been concluded that the waste water parameters of potential pollutional significance include BOD<sub>5</sub>, COD, suspended solids, pH, temperature, phos-

phorus in the form of phosphates, nitrogen in various forms, and chlorides.

(iii) Origin of waste water pollutants in the dairy products processing category. (1) Receiving Station Subcategory: Milk is received either by can or tank truck with can receiving being continued only in small plant operations. As presently designed, the plastic transfer hose between the tank trucks and the receiving station contains about a gallon of product and remains full of product after the tank truck is emptied. Unless special care is exercised, this product is lost to the drain each time a tank truck is disconnected. This represents a potential loss (waste load contribution) of 0.4 kg BOD<sub>5</sub> of milk received. Other wastes generated are a result of cleaning and sanitizing operations employed on cans, tank trucks, and receiving station equipment.

(2) Fluid Products Subcategory: Once the raw materials have been received and stored, they are usually sent through another phase of processing such as clarification, separation, and pasteurization before going on to final processing operations. It is these operations, product fill lines, and the actual product manufacturing and packaging that contributes the major waste load in the fluid products subcategory. These wastes result from spills, leaks, wasting of by-products, purging of lines during product change, product washing, and cleaning and sanitizing.

(3) Cultured Products Subcategory: The production of cultured products involves the same preliminary steps in processing as for fluid products, and the same sources of waste result. Essentially, the only difference lies in the increased difficulty of cleaning and sanitizing in cultured products processing. The greater viscosity of cultured products, compared to fluid products, causes more product to adhere to product lines, etc.

(4) Butter Subcategory: Butter production is also preceded by the basic steps in processing such as in fluid products manufacturing with similar wastes produced. Additional sources of waste arise from the actual making of butter in either the churn method or continuous-process. If the continuous-process method is used buttermilk and wash water are eliminated, thereby substantially reducing the quantity of waste water generated.

(5) Cottage Cheese Subcategory: The main differences between natural and cottage cheese production from a pollutant generation standpoint are the use of as much as 3 to 4 times as much wash water for curd wash, waste cream resulting from the cottage cheese creaming operation, high acidity, lower pH, and more cheese fines going to waste per unit of production. The acid whey produced in cottage cheese manufacturing constitutes the largest single source of "lost product" and visible polluting material in the industry by virtue of the lack of utilization of some 40 to 70 percent of this by-product.

(6) Natural and Processed Cheese Subcategory: Following the preliminary

processing steps similar to fluid products, natural and processed cheeses undergo the manufacturing step that is characteristic of the type of cheese product to be produced. In cheddar cheese, the whey draining during cheddaring (matting of the curd) and pressing should be collected and combined with the whey. In swiss cheese manufacturing, appreciable whey is lost in the transfer of the curd from the vat to the draining table. In provolone and mozzarella manufacturing, the milling, mixing and molding of the curd produces a high fat, high BOD<sub>5</sub>, low pH (5.1-5.3) and wash water which may contain 3 to 5 percent fat.

(7) Fluid Mix for Ice Cream and Other Frozen Desserts Subcategory: The preliminary processing steps are similar to fluid products. In additional steps, milk solids, fats and non-dairy materials (sugar and sequestering materials) are blended. Waste waters are similar to those of fluid products but incorporate minor amounts of non-dairy materials.

(8) Ice Cream, Frozen Dessert, Novelty, and Other Dairy Desserts Subcategory: Following preliminary processing steps similar to fluid products, further manufacturing processes in this subcategory introduce additional materials such as nuts, fruit juices, ice cream mix, bakery solids, chocolate, etc. In view of this, waste waters from the latter processes in this subcategory contain a wider variation of constituents.

(9) Condensed Milk Subcategory: The initial processes in this subcategory are similar to the fluid products subcategory, and subsequent processes involve such operations as condensing by evaporation, sweetening, packaging, and sterilizing which generate about 50 percent as much waste load as the preliminary processing steps.

(10) Dry Milk Subcategory: Since this process begins with the receiving of condensed milk, waste loads for the receiving portion of this subcategory are about 50 percent higher than for fluid products. Most of the other waste contributions are quite uniform and small for the remaining processes in this subcategory.

(11) Condensed Whey Subcategory: The processes involved in this subcategory are similar to those for condensed milk processing except there are no separation, clarification and sweetening steps used for condensed whey. Waste load coefficients for both acid and sweet whey condensing are quite low.

(12) Dry Whey Subcategory: As with condensed whey and dried milk there is the lack of the separation and clarification steps. Instantizing is also not used for dried whey. The dried whey subcategory has a low waste coefficient as does dry milk.

(iv) Treatment and Control Technology. In-plant procedures to control pollution include: good housekeeping; control of spills; reduction and control of start-up and shut-down operations; reuse of waste water; salvage of raw materials and eventual reuse in final products; salvage of by-products such as whey and buttermilk for sale as feed or food products; initiation of management education and plant operator training pro-

grams to accomplish good housekeeping, reduce product loss, cut down water use, and achieve more efficient waste water treatment plant operation; installation of multiple-use CIP systems to minimize amount of cleaning compounds used and maximize rinse recovery; design of plant layout to minimize pipe length and storage tanks and provide waste segregation; and provide waste monitoring equipment and techniques. It is well documented that up to 50 percent waste reduction could generally be accomplished by management improvement alone.

"End-of-pipe" waste water treatment processes include sedimentation, grit removal, flotation, equalization, neutralization, nutrient addition, trickling filters activated sludge, aerated lagoons, stabilization ponds, disposal on land by spray irrigation, ridge and furrow irrigation, irrigation by truck, anaerobic sludge digestion, disposal of solids to landfill areas, sludge thickening, and disinfection. Segregation of process waste waters and cooling waters and condensates is practiced.

Air pollution control processes include precipitation, filtration, demisting, stack washing, cyclone separation and entrainment separators.

Solid waste control procedures involve disposal of wasted products and waste biological treatment sludges in landfill areas.

(v) Treatment and control technology within subcategories. In this industry, waste water treatment as such is not done according to the established subcategories, and it cannot be studied in that way. On the other hand, in-plant control technology can be related to subcategories but not in a way that is specific enough to be used without qualitative judgement of other potential in-plant technologies. In view of the above rationale, the following is presented in lieu of a subcategory breakdown of treatment and control technology.

Best practicable control technology currently available consists of in-plant and end-of-pipe technology and includes but is not limited to: plant management and employee education plans; improvement of standard equipment; alternative combinations of equipment and procedures; modification of waste control "systems" now in use; and "new concept" waste control systems. End-of-pipe treatment schemes, shown by exemplary plants to provide about 96 percent BOD<sub>5</sub> removal, and 90 percent suspended solids removal are represented by but not limited to the following: activated sludge; activated sludge plus sand filtration; other biological treatment plus sand filtration; and various irrigation systems.

Best available technology economically achievable also consists of in-plant and end-of-pipe technology. The technology includes all options available such as, but not limited to the following: Alternative water uses; water conservation; water stream segregation; water reuse; cascading water uses; by-product recovery; reuse of waste water constituents; good housekeeping; preventive maintenance; quality control (raw material, product, effluent); monitoring and alarm sys-

tems; "new concepts" for equipment improvement; and process changes and improvements. The end-of-pipe treatment processes to achieve best available technology economically achievable utilize the same processes as best practicable above, but demand improved operation and effectiveness.

New source performance standards are based on the best demonstrated technology currently available. This is the same in most cases as the best available technology economically achievable. In view of this, new performance standards are established at the same level as best available technology economically achievable.

(vi) Economic Impact Analysis. The estimated investment costs for 1977, based upon recommended technology, range between 10 and 90 percent of current fixed investment depending on the type of product and size of plant. Annual costs for the 1977 standards vary from 0.2 to 4.6 percent of sales. For 1983, it was assumed that the standards would be met through better in-plant controls and a more efficient treatment system and, therefore, that no additional investment and operating costs would be required.

These costs do not appear to seriously threaten the long-term production or viability of the industry. The proposed 1977 standards should result in price increases of from zero to 1.1 percent at the wholesale level. Furthermore, it is estimated that approximately 570 plant closures could result in 1977 due to the proposed guidelines. These plants represent only 0.8 percent of current industry production and about 3250 employees. In addition, it is estimated that approximately 480 communities might be affected by these potential closures. Since it was assumed that no incremental investment was needed for 1983, further price increases, plant closures, and related employment and community effects as a result of these guidelines were not estimated. Neither the 1977 nor the 1983 standards are expected to have any noticeable effects on the industry growth or the balance of trade.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the DAIRY PRODUCTS PROCESSING Industry Point Source Category" details the analysis undertaken in support of the regulations 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 economics effects of the proposed regulations 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 regulations, 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. Philip B. Wisman.

(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 dairy products processing 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. Territorial Pollution Control Agencies; (3) Pollution Control Council; (4) Water Resources Council; (5) Division of Environmental Planning; (6) The American Society of Mechanical Engineers; (7) Hudson River Sloop Restoration, Inc.; (8) The Conservation Foundation; (9) Businessmen for the Public Interest; (10) Environmental Defense Fund, Inc.; (11) Natural Resources Defense Council; (12) The American Society of Civil Engineers; (13) Water Pollution Control Foundation; (14) National Wildlife Federation; (15) New England Interstate Water Pollution Control Commission; (16) Ohio River Valley Sanitation Commission; (17) Delaware River Basin Commission; (18) the Dairy Industry Committee; (19) The National Milk Producers Federation; (20) U.S. Department of Commerce; (21) U.S. Department of the Interior; (22) U.S. Department of Health, Education, and Welfare; and (23) U.S. Department of Agriculture.

The following organizations responded with comments; Effluent Standards and Water Quality Information Advisory Committee; General Counsel of the United States Department of Commerce; United States Department of the Interior; United States Department of Agriculture; United States Department of Health, Education, and Welfare; United States Department of Defense; United States Water Resources Council; Missouri Department of Public Health and Welfare; Ohio State Environmental Protection Agency; Pennsylvania Environmental Protection Agency; Illinois Pollution Control Board; Texas Water Quality Control Board; New York State Department of Environmental Conservation; Wisconsin Department of Natural Resources; Michigan Department of Natural Resources; Florida Department of Pollution Control; Kentucky Department for Natural Resources and Environmental Protection; Washington Department of Ecology; Colorado Department of Health; Maine Department of Environmental Protection; North Carolina Department of Natural and Economic Resources; Hawaii Department of Health; California Water Resources Control Board; National Resources Defense

Council, Inc.; American Society of Civil Engineers; Business and Professional People for the Public Interest; Dairy Industry Committee; Dry Milk Association; Butter Institute; Whey Institute; National Milk Producers Federation; Kraftco Corporation; Carnation Company; H. P. Hood and Sons Company; Dairy Lea Inc.; Borden Inc.; Pet Inc.; and Land-O-Lakes Inc.

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

(1) It was suggested that a simpler method of calculating the BOD<sub>5</sub> input be established, and such has been done by adopting an approach developed by parties within the industry who have been leaders in this field of investigation. It should be noted that values resulting from the simplified method of calculation are in very close agreement with those obtained through the more complex calculation initially proposed.

(2) The inclusion of a number of additional factors (e.g., phosphorus, chloride, and surface active agents) within the controlled parameters was suggested. Upon careful review the additional parameters were rejected on the basis of one or more of the following: they are satisfactorily controlled and reduced by the control and treatment technologies required to meet the limitations established for the control parameters selected; they are present at such low levels in the wastes, especially combined wastes that would be discharged, as to be of little or no pollutional significance; and there are no proven technologies for their control or treatment that are within the realm of economic feasibility for the dairy products processing industry.

(3) It has been pointed out that there is an apparent discrepancy between the number of plant closures which could result in 1977 due to the proposed guidelines and the number of plants which have applied for a permit to discharge wastes to the navigable waters. The total number of permit applications in this category is something less than 500, while the number of plants which it is projected could possibly be closed from these regulations is approximately 570. From the information available it would appear that possibly: 1) Many plants which must apply for permits have not yet done so; 2) almost all dairy processing plants now discharge wastes to municipal sewers; or 3) the economic impact which has been estimated on the basis of statistical and average data does not reflect the real world.

Additional information and data which can clarify this apparent contradiction along with supporting statistical and economic information is specifically requested by EPA.

(4) It has been suggested that segmentation of the dairy products processing industry on the basis of plant size or economic impact should be considered. The EPA has considered these possibili-

ties on the basis of available information; however, certain additional information about small dairy product processing plants could be helpful in evaluating the desirability of further segmentation or in establishing a range of effluent standards for small processing plants.

Additional information detailing the present-in-place-waste treatment systems, connection or possible connection to municipal sewers and the potential for using irrigation disposal of wastes is requested relative to the following dairy product processing operations which have milk equivalent inputs less than the value shown: (1) Butter (150,000 lb/day); (2) cheese (80,000 lb/day); (3) condensed or evaporated milked (150,000 lb/day); (4) ice cream and frozen desserts (24,000 lb/day); (5) fluid products (215,000 lb/day); (6) cottage cheese (20,000 lb/day); and (7) fluid milk receiving (54,000 lb/day).

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 regulations are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which is 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 is essential to the development of the regulations. In the event comments address the approach taken by the Agency in establishing an effluent limitation 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 sections 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, SW., 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 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).

Dated: December 7, 1973.

JOHN QUARLES,  
Acting Administrator.

**PART 405—EFFLUENT LIMITATIONS GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR THE DAIRY PRODUCTS PROCESSING INDUSTRY POINT SOURCE CATEGORY**

**Subpart A—Receiving Stations Subcategory**

- Sec.  
405.10 Applicability: Description of receiving stations subcategory.  
405.11 Specialized definitions.  
405.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.14 Standards of performance for new sources.  
405.15 Pretreatment standards for new sources.

**Subpart B—Fluid Products Subcategory**

- 405.20 Applicability: Description of fluid products subcategory.  
405.21 Specialized definitions.  
405.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.24 Standards of performance for new sources.  
405.25 Pretreatment standards for new sources.

**Subpart C—Cultured Products Subcategory**

- 405.30 Applicability: Description of cultured products subcategory.  
405.31 Specialized definitions.  
405.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.34 Standards of performance for new sources.  
405.35 Pretreatment standards for new sources.

**Subpart D—Butter Subcategory**

- 405.40 Applicability: Description of the butter subcategory.  
405.41 Specialized definitions.  
405.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.44 Standards of performance for new sources.  
405.45 Pretreatment standards for new sources.

**Subpart E—Cottage Cheese and Cultured Cream Cheese Subcategory**

- Sec.  
405.50 Applicability: Description of the cottage cheese and cultured cream cheese subcategory.  
405.51 Specialized definitions.  
405.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.54 Standards of performance for new sources.  
405.55 Pretreatment standards for new sources.

**Subpart F—Natural and Processed Cheese Subcategory**

- 405.60 Applicability: Description of natural and processed cheese subcategory.  
405.61 Specialized definitions.  
405.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.64 Standards of performance for new sources.  
405.65 Pretreatment standards for new sources.

**Subpart G—Fluid Mix For Ice Cream and Other Frozen Desserts Subcategory**

- 405.70 Applicability: Description of the fluid mix for ice cream and other frozen desserts subcategory.  
405.71 Specialized definitions.  
405.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.74 Standards of performance for new sources.  
405.75 Pretreatment standards for new sources.

**Subpart H—Ice Cream, Frozen Desserts, Novelties and Other Dairy Desserts Subcategory**

- 405.80 Applicability: Description of the ice cream, frozen dessert, novelties and other dairy desserts subcategory.  
405.81 Specialized definitions.  
405.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.84 Standards of performance for new sources.  
405.85 Pretreatment standards for new sources.

**Subpart I—Condensed Milk Subcategory**

- Sec.  
405.90 Applicability: Description of the condensed milk subcategory.  
405.91 Specialized definitions.  
405.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.94 Standards of performance for new sources.  
405.95 Pretreatment standards for new sources.

**Subpart J—Dry Milk Subcategory**

- 405.100 Applicability: Description of the dry milk subcategory.  
405.101 Specialized definitions.  
405.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.104 Standards of performances for new sources.  
405.105 Pretreatment standards for new sources.

**Subpart K—Condensed Whey Subcategory**

- 405.110 Applicability: Description of the condensed whey subcategory.  
405.111 Specialized definitions.  
405.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.114 Standards of performance for new sources.  
405.115 Pretreatment standards for new sources.

**Subpart L—Dry Whey Subcategory**

- 405.120 Applicability: Description of the dry whey subcategory.  
405.121 Specialized definitions.  
405.122 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.  
405.123 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.  
405.124 Standards of performance for new sources.  
405.125 Pretreatment standards for new sources.

**Subpart A—Receiving Stations Subcategory**

**§ 405.10 Applicability: Description of receiving stations subcategory.**

The provisions of this subpart are applicable to discharges resulting from the operation of receiving stations engaged in the assembly and reshipment of bulk milk for the use of manufacturing or processing plants.

**§ 405.11 Specialized definitions.**

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

(a) For receiving stations receiving only bulk milk in tank trucks.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.32 kg/kkg of BOD5 input (0.032 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb).
TSS -----	Maximum for any one day 0.32 kg/kkg of BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

(b) For receiving stations receiving only milk in cans.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.45 kg/kkg of BOD5 input (0.045 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.20 kg/kkg of BOD5 input (0.020 lb/100 lb).

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
TSS -----	Maximum for any one day 0.45 kg/kkg of BOD5 input (0.045 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.20 kg/kkg of BOD5 input (0.020 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

(c) For receiving stations receiving milk in both bulk and cans, the effluent limitations shall be weighted averages based on the proportion of the total receipts that are received by each mode.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

(a) For receiving stations receiving only bulk milk in tank trucks.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.05 kg/kkg of BOD5 input (0.005 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.05 kg/kkg of BOD5 input (0.005 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

(b) For receiving stations receiving only milk in cans.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.10 kg/kkg of BOD5 input (0.010 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
TSS -----	Maximum for any one day 0.10 kg/kkg of BOD5 input (0.010 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

(c) For receiving stations receiving milk in both bulk and cans the effluent limitations shall be weighted averages based on the proportion of the total receipts that are received by each mode.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

(a) For receiving stations receiving only bulk milk in tank trucks.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.05 kg/kkg of BOD5 input (0.005 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.05 kg/kkg of BOD5 input (0.005 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

(b) For receiving stations receiving only milk in cans.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.10 kg/kkg of BOD5 input (0.010 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
TSS -----	Maximum for any one day 0.10 kg/kkg of BOD5 input (0.010 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

(c) For receiving stations receiving milk in both bulk and cans, the effluent limitations shall be weighted averages based on the proportion of the total receipts that are received by each mode.

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

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, receiving stations subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title, except that for the purposes of this section, § 128.133 of this title shall be

amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.14, of this title: *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 be correspondingly reduced for that pollutant.

#### Subpart B—Fluid Products Subcategory

##### § 405.20 Applicability: Description of fluid products subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of market milk (ranging from 3.5 percent fat to fat-free), flavored milk (chocolate and others) and cream (of various fat concentrations, plain and whipped).

##### § 405.21 Specialized definitions.

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 1.80 kg/kkg of BOD5 input (0.180 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg of BOD5 input (0.060 lb/100 lb).
TSS -----	Maximum for any one day 1.80 kg/kkg of BOD5 input (0.180 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg of BOD5 input (0.060 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

##### § 405.24 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.12 kg/kkg for BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.12 kg/kkg for BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

##### § 405.25 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, fluid products subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title, except that for the purposes of this section,

§ 128.133 of this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.24, of this title: *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 be correspondingly reduced for that pollutant."

#### Subpart C—Cultured Products Subcategory

##### § 405.30 Applicability: Description of cultured products subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of cultured products, including cultured skim milk (cultured buttermilk) yogurt, sour cream and dips of various types.

##### § 405.31 Specialized definitions.

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 3.20 kg/kkg of BOD5 input (0.320 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.80 kg/kkg of BOD5 input (0.080 lb/100 lb).
TSS -----	Maximum for any one day 3.20 kg/kkg of BOD5 input (0.320 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.80 kg/kkg of BOD5 input (0.080 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology, economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.88 kg/kkg of BOD5 input (0.088 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb). 0.88 kg/kkg of BOD5 input (0.088 lb/100 lb).
TSS-----	Maximum for any one day Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

§ 405.34 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.88 kg/kkg of BOD5 input (0.088 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
TSS-----	Maximum for any one day 0.88 kg/kkg of BOD5 input (0.088 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 kg/kkg lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

§ 405.35 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, cultured products subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this

title except that for the purposes of this section, § 128.133 of this title shall be amended to read as follows: "In addition to the prohibitions set forth in section 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.34, of this title; 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 be correspondingly reduced for that pollutant."

**Subpart D—Butter Subcategory**

§ 405.40 Applicability: Description of butter subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of butter, either by churning or continuous process.

§ 405.41 Specialized definitions.

For the purpose of this subpart: (a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 2.60 kg/kkg of BOD5 input (0.260 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.81 kg/kkg of BOD5 input (0.081 lb/100 lb).
TSS-----	Maximum for any one day 2.60 kg/kkg of BOD5 input (0.260 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.81 kg/kkg of BOD5 input (0.081 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.26 kg/kkg of BOD5 input (0.026 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.13 kg/kkg of BOD5 input (0.013 lb/100 lb).
TSS-----	Maximum for any one day 0.26 kg/kkg of BOD5 input (0.026 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.13 kg/kkg of BOD5 input (0.013 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

§ 405.44 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.26 kg/kkg of BOD5 input (0.026 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.13 kg/kkg of BOD5 input (0.013 lb/100 lb).
TSS-----	Maximum for any one day 0.26 kg/kkg of BOD5 input (0.026 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.13 kg/kkg of BOD5 input (0.013 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

§ 405.45 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, butter subcategory, which is an industrial 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 navigable waters), shall be the standard set



forth in Part 128 of this title, except that for the purposes of this section, § 128.133 of this title, shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.44 of this title: *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 be correspondingly reduced for that pollutant."

#### Subpart E—Cottage Cheese and Cultured Cream Cheese Subcategory

##### § 405.50 Applicability: Description of cottage cheese and cultured cream cheese subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of cottage cheese and cultured cream cheese.

##### § 405.51 Specialized definitions.

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g., lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

Effluent characteristic	Effluent limitation
BOD5-----	Maximum for any one day 18.24 kg/kkg of BOD5 input (1.824 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 4.56 kg/kkg of BOD5 input (0.456 lb/100 lb).
TSS-----	Maximum for any one day 18.24 kg/kkg of BOD5 input (1.824 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 4.56 kg/kkg of BOD5 input (0.456 lb/100 lb). Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitation
BOD5-----	Maximum for any one day 2.20 kg/kkg of BOD5 input (0.220 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 1.07 kg/kkg of BOD5 input (0.107 lb/100 lb).
TSS-----	Maximum for any one day 2.20 kg/kkg of BOD5 input (0.220 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 1.07 kg/kkg of BOD5 input (0.107 kg/kkg lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

##### § 405.54 Standards of performance for new sources.

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitation
BOD5-----	Maximum for any one day 2.20 kg/kkg of BOD5 input (0.220 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 1.07 kg/kkg of BOD5 input (0.107 lb/100 lb).
TSS-----	Maximum for any one day 2.20 kg/kkg of BOD5 input (0.220 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 1.07 kg/kkg of BOD5 input (0.107 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

##### § 405.55 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, cottage cheese and cultured cream cheese subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title except that for the purposes of this section, § 128.133, of

this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.54 of this title: *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 be correspondingly reduced for that pollutant."

#### Subpart F—Natural and Processed Cheese Subcategory

##### § 405.60 Applicability: Description of natural and processed cheese subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of natural cheese (hard curd) and processed cheeses.

##### § 405.61 Specialized definitions.

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

##### § 405.62 Effluent limitations guidelines representing the degrees of effluent reduction attainable by the application of the best practicable control technology currently available.

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

(a) For plants processing over 75,000 lbs/day of milk.

Effluent characteristics	Effluent limitation
BOD5-----	Maximum for any one day 0.84 kg/kkg of BOD5 input (0.084 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.28 kg/kkg of BOD5 input (0.028 lb/100 lb).
TSS-----	Maximum for any one day 0.84 kg/kkg of BOD5 input (0.084 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.28 kg/kkg of BOD5 input (0.028 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

(b) For plants processing less than 75,000 lb/day of milk.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 2.52 kg/kkg of BOD5 input (0.252 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.84 kg/kkg of BOD5 input (0.084 lb/100 lb).
TSS-----	Maximum for any one day 2.52 kg/kkg of BOD5 input (0.252 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.84 kg/kkg of BOD5 input (0.084 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

(a) For plants processing over 75,000 lb/day of milk.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
TSS-----	Maximum for any one day 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

(b) For plants processing less than 75,000 lb/day of milk.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.24 kg/kkg of BOD5 input (0.024 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb).
TSS-----	Maximum for any one day 0.24 kg/kkg of BOD5 input (0.024 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or

pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

(a) For plants processing over 75,000 lb/day of milk

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
TSS-----	Maximum for any one day 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.06 kg/kkg of BOD5 input (0.006 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

(b) For plants processing less than 75,000 lb/days of milk.

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.24 kg/kkg of BOD5 input (0.024 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb).
TSS-----	Maximum for any one day 0.24 kg/kkg of BOD5 input (0.024 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.12 kg/kkg of BOD5 input (0.012 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, natural and processed cheese subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title except that for the purposes of this section, § 128.133, of this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.64, of this title: *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified per-

centage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

**Subpart G—Fluid Mix For Ice Cream and Other Frozen Desserts Subcategories**

**§ 405.70 Applicability; description of fluid mix for ice cream and other frozen desserts subcategory.**

The provisions of this subpart are applicable to discharges resulting from the manufacture of the fluid mixes for ice cream and other frozen desserts for later freezing in other plants; it does not include freezing of the products as one of the affected operations.

**§ 405.71 Specialized definitions.**

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g., lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended no-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 1.80 kg/kkg of BOD5 input (0.180 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg of BOD5 input (0.060 lb/100 lb).
TSS-----	Maximum for any one day 1.80 kg/kkg of BOD5 input (0.180 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg of BOD5 input (0.060 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best

available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, fluid mix for ice cream and other frozen desserts subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128, of this title, except that for the purposes of this section, § 128.133, of this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.74, of this title: *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 be correspondingly reduced for that pollutant."

**Subpart H—Ice Cream, Frozen Desserts, Novelties and Other Dairy Desserts Subcategory**

**§ 405.80 Applicability: Description of ice cream, frozen desserts, novelties and other dairy desserts subcategory.**

The provisions of this subpart are applicable to discharges resulting from the manufacture of ice cream, ice milk, sherbert, water ices, stick confections, frozen novelties products, frozen desserts, melon, pudding, and other dairy product based desserts.

**§ 405.81 Specialized definitions.**

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 7.20 kg/kkg of BOD5 input (0.720 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 2.40 kg/kkg of BOD5 input (0.240 lb/100 lb).
TSS -----	Maximum for any one day 7.20 kg/kkg of BOD5 input (0.720 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 2.40 kg/kkg of BOD5 input (0.240 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or

pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.70 kg/kkg of BOD5 input (0.070 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.35 kg/kkg of BOD5 input (0.035 lb/100 lb).
TSS -----	Maximum for any one day 0.70 kg/kkg of BOD5 input (0.070 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.35 kg/kkg of BOD5 input (0.035 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.70 kg/kkg of BOD5 input (0.070 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.35 kg/kkg of BOD5 input (0.035 lb/100 lb).
TSS -----	Maximum for any one day 0.70 kg/kkg of BOD5 input (0.070 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.35 kg/kkg of BOD5 input (0.035 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The pretreatment standards under section 307(c) of the Act for a source within the dairy products processing industry, ice cream, frozen desserts, novelties, and other dairy desserts subcategory which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title except that for the purposes of this section, § 128.133, of this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard

of performance for new sources specified in § 405.84, of this title: *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 be correspondingly reduced for that pollutant."

**Subpart I—Condensed Milk Subcategory**  
**§ 405.90** Applicability; description of condensed milk subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of condensed whole milk, condensed skim milk, sweetened condensed milk and condensed buttermilk.

**§ 405.91** Specialized definitions.

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g., lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.90 kg/kkg of BOD5 input (0.990 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.40 kg/kkg of BOD5 input (0.040 lb/100 lb).
TSS -----	Maximum for any one day 0.90 kg/kkg of BOD5 input (0.090 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.40 kg/kkg of BOD5 input (0.040 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be dis-

charged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS -----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, condensed milk subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title, except that for the purposes of this section, § 128.133, of this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.94, of this title: *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 be correspondingly reduced for that pollutant."

**Subpart J—Dry Milk Subcategory**

**§ 405.100** Applicability; description of dry milk subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of dry whole milk, dry skim milk, and dry buttermilk.

**§ 405.101** Specialized definitions.

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 1.50 kg/kkg of BOD5 input (0.150 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg BOD5 input (0.060 lb/100 lb).
TSS -----	Maximum for any one day 1.50 kg/kkg of BOD5 input (0.150 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg of BOD5 input (0.060 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.22 kg/kkg of BOD5 input (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
TSS-----	Maximum for any one day 0.22 kg/kkg of BOD5 input (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.22 kg/kkg of BOD5 input (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
TSS-----	Maximum for any one day 0.22 kg/kkg of BOD5 input (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, dry milk subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title, except that for the purposes of this section, § 128.133, of this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.104, of this title: *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 be correspondingly reduced for that pollutant."

**Subpart K—Condensed Whey Subcategory**  
**§ 405.110 Applicability; description of condensed whey subcategory.**

The provisions of this subpart are applicable to discharges resulting from the manufacture of condensed sweet whey and condensed acid whey.

**§ 405.111 Specialized definitions.**

For the purpose of this subpart:  
(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.90 kg/kkg of BOD5 input (0.090 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.40 kg/kkg of BOD5 input (0.040 lb/100 lb).
TSS-----	Maximum for any one day 0.90 kg/kkg of BOD5 input (0.090 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.40 kg/kkg of BOD5 input (0.040 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants

or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS-----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
TSS-----	Maximum for any one day 0.16 kg/kkg of BOD5 input (0.016 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.08 kg/kkg of BOD5 input (0.008 lb/100 lb).
pH-----	Within the range of 6.0 to 9.0.

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

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, condensed whey subcategory, which is an industrial 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 navigable waters) shall be the standard set forth in Part 128 of this title, except that for the purposes of this section, § 128.133, of this title shall be amended to read as follows: "In addition to the prohibitions set forth

in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.114, of this title: *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 be correspondingly reduced for that pollutant."

**Subpart L—Dry Whey Subcategory**

**§ 405.120 Applicability; Description of dry whey subcategory.**

The provisions of this subpart are applicable to discharges resulting from the manufacture of sweet or acid dry whey.

**§ 405.121 Specialized definitions.**

For the purpose of this subpart:

(a) The term "BOD5 input" shall mean the biochemical oxygen demand of the materials entered into process. It can be calculated by multiplying the fats, proteins and carbohydrates by the factors of 0.890, 1.031 and 0.691 respectively. Organic acids (e.g. lactic acids) should be included as carbohydrates.

(b) The following abbreviations shall have the following meaning: (1) "BOD5" shall mean five day biochemical oxygen demand; (2) "TSS" shall mean total suspended non-filterable solids; (3) "kg" shall mean kilogram(s); (4) "kkg" shall mean 1000 kilograms; and, (5) "lb" shall mean pound(s).

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

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

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5-----	Maximum for any one day 1.50 kg/kkg of BOD5 input (0.150 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg of BOD5 input (0.060 lb/100 lb).
TSS -----	Maximum for any one day 1.50 kg/kkg of BOD5 input (0.150 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.60 kg/kkg of BOD5 input (0.060 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged after application of the best available technology economically achievable by a point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.22 kg/kkg of BOD5 input (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
TSS -----	Maximum for any one day 0.22 kg/kkg of BOD5 input (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The following limitations constitute the quantity or quality of pollutants or pollutant properties which may be discharged reflecting the greatest degree of effluent reduction 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 by a new point source subject to the provisions of this subpart:

<i>Effluent characteristic</i>	<i>Effluent limitation</i>
BOD5 -----	Maximum for any one day 0.22 kg/100 kg BOD5 (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
TSS -----	Maximum for any one day 0.22 kg/kkg of BOD5 input (0.022 lb/100 lb). Maximum average of daily values for any period of thirty consecutive days 0.11 kg/kkg of BOD5 input (0.011 lb/100 lb).
pH -----	Within the range of 6.0 to 9.0.

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

The pretreatment standards under section 307(c) of the Act, for a source within the dairy products processing industry, dry whey subcategory, which is an industrial 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 navigable waters), shall be the standard set forth in Part 128 of this title, except that for the purposes of this section, § 128.133 of this title shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 405.124 of this title: *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 be correspondingly reduced for that pollutant.

[FR Doc.73-26699 Filed 12-19-73;8:45 am]