Title 40—Protection of the Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

[FRL 444-5]

PART 407—CANNED AND PRESERVED FRUITS AND VEGETABLES PROCESSING INDUSTRY POINT SOURCE CATEGORY

Interim Final Rule Making

Notice is hereby given that effluent limitations and guidelines for existing sources to be achieved by the application of best practicable control technology currently available as set forth in interim final form below are promulgated by the Environmental Protection Agency (EPA). On March 21, 1974, EPA promulgated a regulation adding Part 407 to Title 40 of the Code of Federal Regulations (39 FR 10862). That regulation with subsequent amendments established effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources for the canned and preserved fruits and vegetables point source category. The regulation set forth below will amend 40 CFR Part 407, canned and preserved fruits and vegetables processing industry point source category, and will be applicable to "large" (as defined in the regulation below) existing sources for the canned and preserved fruits subcategory (Subpart F), the canned and preserved vegetables subcategory (Subpart G), and the canned and miscellaneous specialties subcategory (Subpart H) of the canned and preserved fruits and vegetables processing industry point source category pursuant to sections 301, 304 (b) and (c), of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1311, 1314 (b) and (c), 86 Stat. 816 et seq.; P.L. 92-500) (the Act). Simultaneously, the Agency is publishing in proposed form effluent limitations and guidelines for "medium" size existing sources in the subcategories described in these interim final regulations based on the best practicable control technology currently available and for "medium" and "large" existing sources to be achieved by the application of best available technology economically achievable, standards of performance for new point sources, and pretreatment standards for existing sources and for new sources.

(a) Legal authority.

(1) Existing point sources.

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

Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedural innovations, operating methods and other alternatives. The regulation herein sets forth effluent limitations and guidelines, pursuant to sections 301 and 304(b) of the Act, for the canned and preserved fruits subcategory (Subpart F), the canned and preserved vegetables subcategory (Subpart G), and the canned and miscellaneous specialties subcategory (Subpart H) of the canned and preserved fruits and vegetables processing industry point source category.

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

(2) New sources.

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

Section 306 also requires the Administrator to propose regulations establishing Federal standards of performance for categories of new sources included in a list published pursuant to section 306 of the Act. The regulations proposed herein set forth the standards of performance applicable to new sources for the canned and preserved fruits subcategory (Subpart F), the canned and preserved vegetables subcategory (Subpart G), and the canned and miscellaneous specialties subcategory (Subpart H) of the canned and preserved fruits and vegetables processing industry point source category.

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

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

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

(1) General methodology.

The effluent limitations and guidelines set forth herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations 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 for different segments of the point source category. The raw waste characteristics for each such segment were then identified. This included an analysis of the source, flow and volume of water used in the process employed, the sources of waste and waste waters in the operation and the constituents of all waste watre. The constituents of the waste waters which should be subject to effluent limitations were identified.

The control and treatment technologies existing within each segment were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which is existent or capable of being designed for each 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 impacts, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise and radiation were identified. The energy requirements of each control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available." In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, the age of equipment and facilities involved, the process employed, the engineering

aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors.

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

(2) Summary of conclusions with respect to the canned and preserved fruits subcategory (Subpart F), canned and preserved vegetables subcategory (Subpart G), and the canned and miscellaneous specialties subcategory (Subpart H) of the canned and preserved fruits and vegetables processing industry point source category.

(i) Categorization. The canned and preserved fruits and vegetables processing industry was divided into three discrete subcategories for the purpose of developing effluent limitations. These subcategories coincide with a breakdown of the category according to raw material, organic and volumetric waste load, processing operations, and processing capacity as outlined in the Development Document for the canned and preserved fruits and vegetables processing industry category. When a plant is subject to effluent limitations covering more than one commodity or subcategory, the plant discharge limitation shall be set by proration of limitations for each commodity or subcategory based on the total production covered by each commodity or subcategory.

(1) Subpart F—Canned and Preserved Fruits Subcategory.

The chemical composition and physical character of fruits are different from either vegetables or food specialties. The processing of fruits involves a unique sequence of unit operations which results in an organic and volumetric waste load unlike that from vegetable production processes or from food specialty processes. The water usage and organic waste load resulting from fruit processing varies with the type of fruit processed. Accordingly, separate limitations have been established for twenty-two different fruit commodities and styles within the canned and preserved fruits subcategory. These commodities and styles include the following fruits: apricots; caneberries; sweet, sour and brined cherries; cranberries; dried fruit; grape juice canning and pressing; olives; canned and frozen peaches; pears; fresh and processed pickles and pickle salting stations; pineapples; plums; raisins; strawberries; and peeled tomatoes and tomato products.

While the technical analysis determined that separate limitations were needed for twenty-two different types of fruits within the canned and preserved fruits subcategory, an economic analysis determined that separate limitations were needed for three plant sizes within each commodity or style. The economic study was based on price effects, sales, investment, international trade, and other factors. As a result of the analysis on representative model plant groups, potential plant impacts were found to differ among small, medium and large size plants. Accordingly, no limitations have been established at this time for small plants which process less than 2,000 tons per year, and separate limitations have been established for large plants and proposed for medium size plants for each of the twenty-two different fruit commodities and styles.

The canned and preserved fruits subcategory consisting of these three size groups within each of the twenty-two commodities and styles is substantiated through analyses with respect to cost of raw materials, production processes, finished products, the treatability of wastes, and the size, age and location of plants.

(2) Subpart G—Canned and Preserved Vegetables Subcategory.

The chemical composition and physical character of vegetables are different from either fruits or food specialties. The processing of vegetables involves a unique sequence of unit operations which results in an organic and volumetric waste load unlike that from fruit production processes or from food specialty processing. The water usage and organic waste load resulting from the processing of vegetables varies with the type of vegetable. Thus, separate limitations have been established for twenty-six different vegetable commodities and styles within the canned and preserved vegetables subcategory. These commodities and styles include the following vegetables: asparagus; beets; broccoli; brussels sprouts; carrots; cauliflower; canned and frozen corn; dehydrated onions and garlic; dehydrated vegetables; dry beans; lima beans; mushrooms; canned onions; canned and frozen peas; pimentos; sauerkraut canning and cutting; canned and frozen snap beans; canned and frozen spinach; squash; sweet potatoes; and canned white potatoes.

While the technical analysis determined that separate limitations were needed for twenty-six different types of vegetables within the canned and preserved vegetable subcategory, an economic analysis determined that separate limitations were needed for three plant sizes within each commodity or style. The economic study was based on price effects, sales, investment, international trade, and other factors. As a result of the analysis on representative model plant groups, potential plant impacts were found to differ among small, medium and large size plants. Accordingly, no limitations have been established at this time for small plants which process less than 2,000 tons per year, and separate limitations have been established for large plants and proposed for medium size plants for each of the twenty-six different vegetable commodities and styles.

The canned and preserved vegetables subcategory consisting of these three size groups within each of the twenty-six commodities and styles is substantiated through analyses with respect to cost of raw materials, production processes, finished products, the treatability of wastes, and the size, age and location of plants.

(3) Subpart H—Canned and Miscellaneous Specialties Subcategory.

The chemical composition and physical character of food specialties are different from either fruits or vegetables. The production of food specialties involves a unique sequence of unit operations which results in an organic and volumetric waste load unlike that resulting from fruit or vegetable processing. The water usage and organic waste loads resulting from the production of food specialties varies with the type of specialty produced. Therefore, separate limitations have been established for ten specialty products within the canned and miscellaneous specialties subcategory. These commodities include the following specialties: added ingredients; baby food; potato, corn and tortilla chips; ethnic foods; jams and jellies; mayonnaise and dressings; soups; and tomato-starch-cheese canned specialties.

While the technical analysis determined that separate limitations were needed for ten different types of specialty products within the canned and miscellaneous specialties subcategory, an economic analysis determined that separate limitations were needed for three plant sizes within each commodity or style. The economic study was based on price effects, sales, investment, international trade, and other factors. As a result of the analysis on representative model plant groups, potential plant impacts were found to differ among small, medium and large size plants. Accordingly, no limitations have been established at this time for small plants which process less than 2,000 tons per year, and separate limitations have been established for large plants and proposed for medium size plants for each of the ten different specialty products.

The canned and miscellaneous specialties subcategory consisting of these three size groups within each of the ten specialty products is substantiated through analyses with respect to finished products, production processes, raw materials, the treatability of wastes, and the size, age and location of plants.

(ii) Waste characteristics.

The significant pollutant parameters in waste waters resulting from the fruits, vegetables, and specialties processing subcategories of the canned and preserved fruits and vegetables industry category include biochemical oxygen demand (BOD5), total suspended nonfilterable solids (TSS), pH and fecal coliforms. Oil and grease is also a significant pollutant in the specialties subcategory.

Several other waste water pollutants are found in these processing waste waters but these pollutants are considered to be of lesser importance because available data has indicated these pollutants are normally removed when BOD5 or TSS are removed or they occur in insignificant quantities.

Waste water from process steps such as peeling, trimming, slicing, transporting, blanching, and cooking, and water from periodic clean-up procedures are the principle waste water streams in fruit and vegetable processing. Some

process waste water occurs in the food specialty subcategory such as potato and other chip processing, but most of the waste results from clean-up operations. Raw waste load data have been collected on waste waters for each commodity in each subcategory of this industry, and information assembled on the treatment procedures required for the waste waters.

Raw waste loads vary from day to day and from season to season. A plant's waste management program should be designed with sufficient flexibility to handle the problems inherent in the industry due to expected raw material quality variations. Management should discuss unpredictable events such as drought and insect damage with regulatory personnel, and formulate an emergency plan to handle a situation where uncontrollable significant deterioration in raw material quality overwhelms the treatment facility.

(iii) Origin of waste water pollutants in the canned and preserved fruits and vegetables processing industry category.

Many of the process steps used in the canning, dehydrating or freezing of fruits, vegetables or specialties are common to the industry as a whole. Typically, the raw materials are received, washed and sorted to prepare them for subsequent processing. Some commodities are then peeled when the end product style is to be a solid form (slices, cubes or powder). If the final product is to be a juice or liquid, the peel may not be removed. Subsequent process steps following the peel removal in which water may be used are trimming, slicing, blanching, cooling, cooking, and can washing or cooling. Water transport may be used in one or more parts of the process and clean-up is common to each processing operation. Non-contact cooling water is used in most of these commodities in each subcategory and it is generally segregated from process water and handled separately with minimal or no treatment necessary. The character of the process waste clean-up waters are similar in that they contain biodegradable organic matter. Thus, the in-plant control measures and end-of-process treatment techniques are similarly effective in controlling and treating all fruit, vegetable or specialty processing wastes.

(iv) Treatment and control technology.

Waste water treatment and control technologies have been studied for each subcategory of the industry to determine what is: (a) the best practicable control technology currently available; (b) the best available technology economically achievable; and (c) the best demonstrated control technology, processes, operating methods or other alternatives. The best practicable control technology currently available includes standard in-plant control practices and "end-of-process" treatment for process waste water. In-plant procedures to control pollution include strict management control over housekeeping and water use practices, minimization of the intake of water by reuse and recirculation of waste waters, and dry clean-up procedures before washdown. The "end-of-process" technology includes materials recovery through screening and, for some commodities, sedimentation or flotation, and organic reduction through biological treatment, either aerated or aerobic lagoons, or activated sludge. An alternative to biological treatment for processors with sufficient quantities of suitable and available land is land treatment such as spray irrigation. However, this alternative is not available to plants processing brined products because of the high dissolved solids content in the process waste water.

Specific technology currently being utilized by plants in each subcategory include good in-plant housekeeping practices, materials recovery (usually screening and sometimes primary sedimentation or flotation to recover usable by-product solids or grease) and biological treatment. The treatment systems range from simple lagoon operations through an array of mechanically aerated modifications to activated sludge with final clarification. This range of technology was evaluated and the performance of all concepts was found to result in high quality effluents. Best practicable control technology currently available (BPCTCA) has been clearly documented as biological treatment. The various subcategories of fruit, vegetable, and specialty processing plants include treatment systems using at least aerobic or aerated lagoons. More capital intensive biological systems such as activated sludge treatment would achieve the same or better performance and would thus be an additional alternative within BPCTCA. Those plants not meeting the limitations are estimated to require modifications to existing facilities in the form of additional lagoons or the equivalent (i.e. modifications such as mechanical aeration or additional aerobic treatment). For example, some plants have treatment using an aerated lagoon but overall performance of the treatment at these plants is below accepted norms in BOD5 removal for this treatment system. In this case, the addition of an aerated chamber, increased aeration capacity, or other modifications may be reasonably expected to upgrade overall treatment system performance to required levels.

Best available technology economically achievable (BATEA) is substantially the same for all subcategories. Principal modifications for BPCTCA to achieve BATEA are in treatment and control to optimize in-plant water and waste management controls. The end-of-process technology includes BPCTCA biological treatment—either aerated or aerobic lagoons, or activated sludge—plus multimedia filtration. Filtration is a technology that has been demonstrated in both the fruits and vegetables subcategories and can be readily transferred to the similar biological effluents from the specialties subcategory. Reductions in the raw organic load (expressed as BOD5) and the final organic and suspended solids load are commensurate with levels at or near reductions already achieved by several plants in the fruits, vegetables, and specialties subcategories.

There is an additional fifty percent of the fruit and vegetable industry that is presently using land treatment. Therefore many plants are presently achieving an effluent reduction greater than required by the application of the best available control technology economically achievable and most have no discharge of pollutants to navigable waters. This technology is used with and without holding ponds in all regions of the country.

The application of technology for greatly reduced water use is not required for this industry but would facilitate land disposal. Experience has shown that good management practices assure that land disposal and irrigation systems can be maintained commensurate with crop need and soil tolerance.

Treatment required to achieve the best available demonstrated control technology, processes, operating methods or other alternatives for new sources is the same as from best available control technology economically achievable.

Solid residue and sludge are potential problems because of the need for periodic disposal. Solid waste is being handled by processors in most subcategories as animal feed. In some cases, however, solid waste cannot be handled as feed and wastes must be handled properly to assure no landfill or associated problems develop.

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

(v) Cost estimates for control of waste water pollutants. The costs associated with the control and treatment technologies have been considered in an economic impact analysis discussed in (vii) below. Costs per individual plant for meeting the 1977 limitations with aerated lagoons varied from $40,000 for small plants to as much as $565,000 for a large plant. The corresponding annual costs ranged from $9,000 to $156,000. Activated sludge costs were higher, ranging from $162,000 to $1,809,000 with the cor-

responding annual costs from $36,000 to $364,000. The investment costs for spray irrigation ranged from $46,000 to $880,000.

Based on 275 plants discharging to navigable waters through aerated lagoons, the total industry investment to meet the 1977 limitations would be $33.5 million and the total annual cost would be $9.7 million. However, plants less than 1,816 kkg (2,000 tons) per year are excluded from achievement of effluent limitations, and also most plants have some type of treatment currently in-place. When these factors are considered, the total industry investment cost is estimated to be $24.5 million and the annual cost is estimated to be $7.6 million.

The estimated cost to meet BATEA limitations is estimated to be about $40 million with annual costs about $10 million. These costs do not make any allowance for treatment currently in-place and do not include filtration for plants less than 9,080 kkg (10,000 tons) per year.

Thus the total industry cost to meet BPCTCA and BATEA limitations with aerated lagoons is almost $65 million and the annual cost is about $17.6 million.

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

The energy requirements associated with the control and treatment technologies have been considered. The estimated energy consumption of the recommended technologies is discussed and listed in Section VIII of the Development Document. The added energy requirements asosciated with the operation of the treatment facilities are expected to constitute only a small fraction of total plant energy consumption.

The maintenance of air quality, in terms of particulates, will be unaffected by the recommended waste water treatment technologies. Odor from landfills can be a problem, and from lagoons and oxidation ponds when not operated or maintained properly. However, covers or enclosures can be used in some cases if a localized problem exists.

Principal noise sources at treatment facilities are mechanical aerators, air compressors, and pumps. By running air compressors for diffused air systems below their rated critical speed and by providing inlet and exhaust silencers, noise effects can be effectively reduced. In no proposed installation would noise levels exceed the guidelines established in the Occupational Safety and Health Standards of 1972.

(vii) Economic impact analysis. Plants processing less than 2,000 tons of raw materials per year are not covered by the interim final or proposed limitations. These plants were excluded because neither aerated lagoons nor activated sludge waste treatment systems were economically feasible. Because direct dischargers affected by the proposed and interim final limitations represent a small fraction of total industry production, they may be unable to pass pollution control costs on to the consumer in the form of higher prices.

Only plants producing more than 10,000 tons per year of raw materials will be affected by the interim final limitations. Profitability of these plants may fall to an average return on investment of 4.8 percent from a current average return of 6.3 percent. Impacts on production, industry growth, employment, balance of trade and local economies are not expected to be significant.

The proposed BPCTCA limitations for plants processing between 2,000 and 10,000 tons per year (medium size plants) may cause 10 plants to close. The incremental costs necessary to meet BATEA limitations are minimal, and as a result, no additional closures are expected. 800 jobs could be lost due to plant closures in this segment. Production losses will be less than 0.5 percent of total current production. Proposed BATEA limitations for plants processing more than 10,000 tons per year may result in 3 plant closures. Approximately 450 jobs could be lost, but total production losses will be insignificant. However, community and regional impacts could be serious. Many fruit and vegetable processing plants are located in small towns and rural areas. Single plants generally employ 80 to 150 persons and serve as a market for local farmers. Closure of one plant in a small town could result in severe local economic dislocations. Although exports of fruit and vegetable products will not be affected by these limitations, the existing trend of increasing imports of such products such as mushrooms, strawberries, blueberries and tomato paste could be accentuated.

The projection for possible closures expected to result from proposed and interim final limitations are based on the assumption that most plants will be able to install aerated lagoons. Aerated lagoons are the lower cost alternative, but applicable only in situations where land is available. However, if all plants find it necessary to use the activated sludge option due to unavailability of land, closures from BPCTCA might rise to as many as 33 and an additional 23 shutdowns could result from BATEA. The EPA especially invites comment on this issue.

Executive Order 11821 (November 27, 1974) requires that major proposals for legislation and promulgation of regulations and rules by Agencies of the executive branch be accompanied by a statement certifying that the inflationary impact of the proposal has been evaluated.

OMB Circular A-107 (January 28, 1975) prescribes guidelines for the identification and evaluation of major proposals requiring preparation of inflationary impact certification. The circular provides that during the interim period prior to final approval by OMB of criteria developed by each Agency, the Administrator is responsible for identifying these regulations which require evaluation and certification. The Administrator has directed that all regulatory actions which are likely to result in capital investment exceeding $100 million or annualized costs in excess of $50 million will require certification. As previously mentioned, the capital investment and annualized costs associated with compliance to this regulation are estimated to be less than these amounts.

The supplementary report entitled "Economic Analysis of Interim Final Effluent Guidelines—Fruit and Vegetable Processing Industry" contains estimates of the cost of pollution control requirements and an analysis of the possible effect of the interim final and proposed regulation on prices, production levels, employment, communities in which processors are located, and international trade. In addition, the Development Document describes, in Section VIII, the cost and energy consumption implications of the inferim final and proposed regulations.

The report entitled "Development Document for Interim Final and Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Fruits, Vegetables and Specialties Processing Segments of the Canned and Preserved Fruits and Vegetables Point Source Category" details the analysis undertaken in support of the regulation being proposed herein and is available for inspection in the EPA Public Information Reference Unit, Room 2404, 401 M Street, SW., Washington, D.C. 20460, at all EPA regional offices, and at State water pollution control offices. The supplementary analysis prepared for EPA of the possible economic effects of the interim final and proposed regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulation or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 F.R. 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the Environmental Protection Agency, Effluent Guidelines Division (WH-552), 401 M Street, SW., Washington, D.C. 20460, Attn: Distribution Officer.

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

(c) Summary of public participation.

Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of effluent limitations, guidelines and standards proposed for the canned and preserved fruits and vegetables processing industry point source category. All participating agencies have been informed of project developments. An initial draft of the Development Document was sent to all participants and comments were solicited on that report. The following are the principal agencies and groups consulted: (1) Effluent Standards and Water Quality Information Advisory Committee (established under section 515 of the Act); (2) all

State and U.S. Territory Pollution Control Agencies; (3) other public agencies, interest groups, and associations; Ohio River Valley Sanitation Commission; Delaware River Basin Commission; U.S. Department of the Interior; U.S. Department of Commerce; U.S. Department of Health, Education, and Welfare; The Conservation Foundation; Environmental Defense Fund, Inc.; Natural Resources Defense Council; American Society of Civil Engineers; Water Pollution Control Federation; National Wildlife Federation; American Institute of Chemical Engineers; American Frozen Food Institute; National Canners Association; American Dehydrated Onion and Garlic Association; National Kraut Packers Association; Pickle Packers International, Inc.; Mushroom Processors Association; Associated Pimento Canners; Canners League of California; Potato Chip Institute International; and numerous processors.

The following responded with comments: Effluent Standards and Water Quality Information Advisory Committee; National Canners Association; National Kraut Packers Association; Pickle Packers International; Mushroom Processors Association; Agripac, Inc.; Artichoke Industries, Inc.; Beaver Valley Canning Co.; Carnation Company; Comstock Foods, Borden, Inc.; Dean Foods Co.; Duffy-Mott Co., Inc.; Flavorland Foods, Inc.; Frito-Lay, Inc.; General Foods Corp.; Gentry International, Inc.; Gerber Products Co.; Green Giant Co.; Grocery Store Products Co.; Humpty-Dumpty Potato Chip Co.; Kennett Canning Co.; Kraft Foods; Lakeside Packing Co.; Larsen Co.; Meridian Foods, Inc.; North Carolina Dept. of Natural and Economic Resources; Ocean Spray Cranberries, Inc.; Snyders Potato Chips; Stayton Canning Co. Coop; Stokely-Van Camp, Inc.; Jones-Normel Foods, Inc.; Welch Foods, Inc.; State of Florida; State of Vermont; State of Colorado Department of Health; Vlasic Foods, Inc.; West Foods, Inc.-Castle & Cooke; Basic Vegetable Products, Inc.; Redi Foods; Sterling Cooperative, Inc.; Hunt Wesson Foods, Inc.; U.S. Dept. of Transportation; Campbell Soup Co.; California Vegetable Concentrates Inc.; American Dehydrated Onion & Garlic Assn.; U.S. Dept. of the Interior; American Frozen Food Institute; Michigan Water Resources Commission; Heinz Co.; Del Monte Corp.; Tillie Lewis Foods, Inc.; and University of Georgia, College of Agriculture.

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

1. A number of commenters expressed concern about the use of the log normal distribution and suggested that its use was simply a device utilized to make up for the inadequacies in the analysis of the collected data.

The EPA prepared a data distribution analysis to determine the natural distribution of the major waste water parameters. A standard normal distribution model was studied and found to be inadequate for most cases because the range of data was large and the data tended to be skewed with a few relatively large values. Also, the normal distribution allowed for negative values which do not occur in actuality for the pollutant parameters being examined. The log normal distribution was investigated and found to describe the raw waste data collected from this industry segment better than the normal distribution. It was determined that more than 75 percent of the flow ratios and 85 percent of the BOD5 ratios were described better by the log normal distribution than by the normal distribution. The log normal distribution is the distribution commonly used for only positive values which are skewed right to allow for a few large values. The set of the logarithms of values in the distribution conforms to the normal distribution and standard, readily available, statistical techniques can be employed, Because the log normal distribution model described the data distribution better than the normal distribution, the log normal distribution was used to establish the raw waste loads within each subcategory.

2. The comment was made that the use of the mean of the log normal distribution to establish raw waste loads would require some processors to install in-plant controls or install technology in addition to BPCTCA to meet the 1977 limitations.

The raw waste loads for each commodity were based on the mean of the log normal distribution of all the available data for each commodity and each sample was weighted equally. The utilization of the mean value represents a waste load that is typical of processing plants with a concern for water and waste conservation practices. Most plants below the mean waste load have achieved this load through becoming aware of and implementing common, normally practiced in-plant water and waste management techniques, such as turning off hoses and faucets when not in use. These good housekeeping practices are commonly employed at most of these plants and have become an integral part of effective plant management. Plants with waste loads above the mean value are capable of readily achieving the mean waste load with effective plant management and the associated concern for water usage and waste management. No installation of specialized internal or external technology in addition to good in-plant practices is necessary. The variation experienced in the collected water and waste loading data for similar process configurations among different plants indicate that waste loads can be significantly reduced without adversely affecting the quality of the product. Throughout the various subcategories, about 130 plants or about 50 percent of all surveyed plants report they presently achieve the established mean raw waste loads. Thus, the log mean value is the most representative value and the best value for the typical waste load generated from the processing of the fruit and vegetable commodities found in these subcategories.

3. One commenter suggested that if the logarithmic distribution was used to characterize raw waste loads, then local enforcement groups should require compliance on the basis of logarithmic averages of treated effluent data.

On the basis of this comment, the Agency reexamined the effluent treatment data used in the development of the limitations. Over twenty biological treatment systems were evaluated using both arithmetic and logarithmic averages. These averages were then used to develop limitations. It was determined that the treatment plant performance will be the same whether compliance is on the basis of logarithmic averages or arithmetic averages. The limitations based on arithmetic averages are greater than limitations based on logarithmic averages because the arithmetic averages of the treated effluent data are greater than the logarithmic averages. The treatment plant performance, however, remains the same. Thus, effluent limitations can be established which require compliance on the basis of arithmetic or logarithmic averages. In order to simplify enforcement activities, limitations have been developed from arithmetic averages of existing treatment system effluent data and compliance is based on the simpler arithmetic average.

4. The comment was made that in most biological systems it cost as much to remove from 85 percent to 95 percent BOD5 removal as it does to remove the entire first 85 percent of BOD5.

The cost data in the development document shows that this statement is not accurate for most industry wastewater. For low-strength wastes, about 200 mg/l BOD5, the commenter's statement has some justification and EPA limitations and costs are based on only 85 percent BOD5 removal. For higher strength wastes, such as 2,000 mg/l BOD5, EPA limitations and costs are based on approximately 95 percent BOD5 removal. Various degrees of BOD5 removal efficiency are obtained with biological treatment systems by controlling the aeration contact period and/or the concentration of active microorganisms. While better removal efficiencies cannot be achieved in the same system when the BOD5 loading is increased, it is possible to achieve higher percent reductions of stronger BOD5 wastes by providing longer detention time, more air and more microorganisms. In an activated sludge system, there is a decreasing percentage increase in costs to go from 85 percent to 95 percent as the waste strength increases. Thus, the increased cost to treat from 85 to 95 percent for low strength wastes could be almost the same as the cost to remove the first 85 percent BOD5, but for high strength wastes, the additional cost is only a small fraction of the cost to remove the first 85 percent BOD5.

5. The objection was raised that factors such as size and age of plant, processes employed, engineering aspects, process changes, raw material quality, costs and non-water quality impacts have been inadequately considered because these factors are not reflected in the recommended limitations.

Each of these factors has been considered in the establishment of the effluent limitations as summarized in the Development Document. Factors such as age, size and location of processing plants were studied in the subcategorization section and no significant relationship could be found between waste loads and any of the factors. Factors such as the processes employed and engineering aspects were also investigated in the subcategorization section and resulted in the segmentation of over fifty commodities and commodity products within the three industry subcategories. This segmentation resulted in different limitations for each of these commodities in the subcategories. The quality of raw material was studied but no correlation could be established between different raw material qualities and raw waste loads. The quality of the raw material does influence the selection of certain end products and this is reflected by different limitations for different product styles. The study of these factors has also resulted in the inclusion of data from as many years as possible in the establishment of raw waste loads and the effluent limitations. Other factors such as cost, economic impact and non-water quality impacts had substantial influence on the selection of BPCTCA and BATEA. As a result of these impacts, aerated lagoons, not activated sludge, were utilized for BPCTCA, and filtration was not utilized for all plants for BATEA. These impacts also prevented establishment of limitations for pollutants such as color and total dissolved solids. Thus, these factors have been considered; they have impacted the development of the recommended limitations; and they are, therefore, reflected in the limitations.

6. The criticism was made that limitations for BOD5 and TSS were established in a simplistic manner without adequately evaluating the demonstrated removals achieved with current technology.

The contractor's recommended limitations for BOD5 and TSS were established based on performance data from several aerated lagoons and activated sludge treatment systems. Nevertheless, this comment was reviewed by the Agency with the result that more treatment data was collected and the data was intensely analyzed with available statistical methods. As explained earlier, the effluent data was summarized using the normal distribution model. Regression and correlation analyses were completed along with "enveloping techniques" to determine the most reasonable methodology to establish BOD5 and TSS limitations. The resulting methodology utilizes the performance data and variability from over twenty biological treatment systems to determine the treatment performance data necessary for the establishment of the effluent limitations. Thus, the limitations have been established in a sophisticated manner utilizing results from numerous industry treatment systems.

7. A number of commenters termed the differences between daily and thirty day maximum limitations unrealistic due to day-to-day variability in raw waste loads, treatment plant variability and weather variability factors.

The analysis of the available treatment performance data showed that daily maximums were higher than those predicted in the contractor's report. While it is reasonable to expect some of the variability to be reduced before 1977 as a result of improved management control and familiarity with in-plant and treatment operations, the performance data currently available suggests higher daily maximums and thus the proposed limitations are less stringent than the recommendations in the contractor's report. However, this increased variability is not necessarily associated with weather effects, but may be due to inadequate control of sludge wasting, lack of necessary supplemental nutrients, or inadequate aeration and mixing. Treatment plants in all climates were included and many of the best are located in extremely cold locations. Thus, this impact has been considered and included in this industry segment.

The monthly and daily variability were studied in detail for treatment plants at single and multi-commodity plants. It was determined that the seasonal influence of the industry, the length of the processing season, its multi-commodity make-up, the variability in waste loads between commodities and within the same commodity, its treatment tendencies, and water quality restrictions emphasized the need for an annual BOD5 and TSS limitation in addition to the maximum thirty day and daily limits. Thus, an annual limitation has been included which is based on the annual performance of over twenty biological treatment systems.

8. The comment was made that the wet sampling for many commodities was inadequate or unrepresentative of typical performance. The criticism was also made that some historical data was unscientifically evaluated for inclusion or exclusion from the data base.

As a result of this criticism, the Agency has contacted each processor that submitted data, has reviewed the data for reliability and accuracy, and has detailed whether the data was included or excluded, and why. Wet sampling data was included in this review and most were found to be accurate and representative. Only a few percent of the collected data, both wet sample and historical data, was determined to be unreliable and thus excluded. With regard to the criticism that more wet sampling should have been conducted for some commodities, it was determined that about thirty of the fifty commodities needed to be sampled because of available data and the secondary processing nature of some commodities. Some of the commodities could not be sampled because of the short processing time available. The wet sampling program, however, was effective and further substantiated industry supplied data for thirty commodities in the subcategories.

9. The criticism was made that the development of BATEA limits assuming a 45 percent reduction in water usage and BOD5 generation was unfair and undemonstrated. Also, no economic assessment was made and no recognition was made of food safety and sanitation requirements.

The Agency has reviewed the contractor's recommendation of a 45 percent reduction for water usage and BOD5 for BATEA and has determined that such a reduction is appropriate for some commodities within each subcategory, but not appropriate for other commodities. Accordingly, the BATEA water usage and BOD5 raw waste values are different and are based on the mean minus one standard deviation value of the log normal distribution model for plant means. These raw waste characteristics are presently achieved by about 70 plants or over 25 percent of the surveyed plants in the industry. In the development of the BATEA values each plant mean was given equal weight to insure that at least one plant in each subcategory would achieve the water usage and BOD5 loads. For a few commodities, no plants achieved the predicted loads and in these cases the best plant was selected to establish the BATEA water usage and BOD5 values.

While a detailed economic assessment has not been made, available information indicates that this cost does not represent a significant capital expenditure and would not present a severe impact. In many cases, energy savings and materials recovery might pay for the program. Additional cost data on in-plant water and waste reduction program is requested to aid in future impact assessments.

With regard to food safety and sanitation requirements, the broad distribution of demonstrated water usage and waste loads within each commodity indicate that the expected BATEA reduction would not be affected. Review of present and future food safety and sanitation standards indicates that the BATEA raw waste values are not expected to change.

10. The comment was made that some plant data contains a mixture of process waste water and cooling water which results in inaccurate water usage data.

The problem of mixed process and cooling water data has been reviewed by the Agency and an attempt has been made to obtain from plant sources estimates of the cooling water contribution to the total water usage data reported. Any inclusion of mixed data would result in conservative estimates of raw waste loads and thus less stringent limitations. Furthermore, the effluent limitations guidelines apply to process waste water only. It is expected that cooling water can be handled separately and in many cases discharged directly. Many plants are presently handling cooling water in this manner. Thus, the utilization of data containing a mixture of process waste water and cooling water is not a significant concern.

11. One commenter specifically requested that frozen commodity styles be further investigated for additional subcategorization.

The Agency reviewed all the data for each subcategory commodity and per-

formed statistical analyses to determine whether differences could be determined and correlated with any of a number of factors including product style. For example, wastes from collard, turnip, mustard, spinach and kale greens could not be statistically differentiated while wastes from caneberries were shown to be statistically different from wastes from strawberries and cranberries. Eleven commodities in all subcategories were further segmented due to differences in product style and production processes, including five fruit and vegetable commodities which were separated into canned and frozen product styles.

12. The comment was made that effluent limitations were established for some commodities even though no BPCTCA biological treatment was demonstrated for these commodities.

The Agency recognized that BPCTCA would not be demonstrated for every commodity in every subcategory. Biological treatment was, however, demonstrated for commodities in every subcategory. In addition to these biological treatment systems, the Agency examined a wide range of biological treatment information from other segments of the food industry, from joint industrial and municipal biological treatment systems, and from pilot plant, laboratory, demonstration projects and other experimental data from various biological treatment processes. It was determined that all industry commodities in all three subcategories produced a biodegradable waste water that was essentially a mixture of organic and suspended materials. Even operations such as brining or products such as dressings or mayonnaise had been demonstrated to be successfully treated in a biological treatment system. Because of the similarity in waste character of commodities within the fruit and vegetable industry and because of the similar treatability demonstrated in biological treatment systems within the industry, it is appropriate to establish limitations for all commodities based on the performance data of biological treatment systems in the fruits and vegetables industry.

13. The comment was made that a proposed spray irrigation system to be built by a municipality would cost more than the contractor's report predicted.

As explained in the Development Document, costs do vary in relation to many variables and thus cost estimates are made for model plants which should be typical for the industry. It is possible that an example system could cost more than would be estimated by EPA. Spray irrigation costs assume a fixed application rate, fixed distance to spray field, a fixed spray field distribution system, and fixed construction costs. A specific example, especially a municipal system, could deviate from EPA assumptions and report a different cost. Therefore, the EPA estimates are reasonable and accurate for typical industry plants.

14. A number of commenters expressed concern that the best practicable control technology would result in a treated effluent with a pH over 9.0.

Several industry members have submitted aerated lagoon effluent data that indicates that the natural biological activities in the lagoons result in occasional discharges with the pH in excess of 9.0. The Agency has reviewed this information and other lagoon effluent data and has observed that some lagoons exceed a pH of 9.0 and others do not. Nevertheless, it is apparent from the data that the natural biological activity of a lagoon may result in wastewater discharges with pH in excess of 9.0. Accordingly, the Agency has recommended a maximum pH limit of 9.5.

15. Some correspondents endorsed the proposal made to the Administrator by the Effluent Standards and Water Quality Information Advisory Committee that a significantly different approach be taken in the development of effluent limitations generally.

The committee's proposal is under evaluation as a contribution toward future refinements of limitations for some industries. The committee has indicated that their proposed methodology could not be developed in sufficient time to be available for the current phase of promulgation, which is proceeding according to a court-ordered schedule. Its present state of development does not provide sufficient evidence to warrant the Agency's delaying issuance of any standard in hopes that an alternative approach might be preferable.

The Agency is subject to an order of the United States District Court for the District of Columbia entered in *Natural Resources Defense Council* v. *Train* et al. (Cv. No. 1609–73) which requires the promulgation of regulations for this industry category no later than October 5, 1975. This order also requires that such regulations become effective immediately upon publication. In addition, it is necessary to promulgate regulations establishing limitations on the discharge of pollutants from point sources in this category so that the process of issuing permits to individual dischargers under section 402 of the Act is not delayed.

It has not been practicable to develop and publish regulations for this category in proposed form, to provide a 30 day comment period, and to make any necessary revisions in light of the comments received within the time constraints imposed by the court order referred to above. Accordingly, the Agency has determined pursuant to 5 USC § 553(b) that notice and comment on the interim final regulations would be impracticable and contrary to the public interest. Good cause is also found for these regulations to become effective immediately upon publication.

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

A copy of all public comments will be available for inspection and copying at the EPA Public Information Reference Unit, Room 2404, 401 M Street, SW., Washington, D.C. 20460. 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 within thirty days of publication of this interim final regulation in the FEDERAL REGISTER 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, 1975 (38 FR 21202). In the event that the final regulation differs substantially from the interim final regulation set forth herein the Agency will consider petitions for reconsideration of any permits issued in accordance with these interim final regulations.

In consideration of the foregoing, 40 CFR Part 407 is hereby revised as set forth below.

Dated: October 3, 1975.

JOHN QUARLES,
Acting Administrator.

Subpart F—Canned and Preserved Fruits Subcategory

Sec.

Subpart G—Canned and Preserved Vegetables Subcategory

Subpart H—Canned and Miscellaneous Specialties Subcategory

AUTHORITY: Secs. 301, 304 (b) and (c), 306 (b) and (c), 307(c), Federal Water Pollution Control Act, as amended; 33 U.S.C. 1251, 1311, 1314 (b) and (c); 86 Stat. 816 et seq.; Pub. L. 92-500.

Subpart F—Canned and Preserved Fruits Subcategory

§ 407.60 Applicability; description of the canned and preserved fruits subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of the following fruit products; apricots; caneberries; sweet, sour and brined cherries; cranberries; dried fruit; grape juice canning and pressing; olives; canned and frozen peaches; pears; fresh and processed pickles, and pickle salting stations; pineapples; plums; raisins; strawberries; and peeled tomatoes and tomato products. When a plant is subject to effluent limitations covering more than one commodity or subcategory, the plant discharge limitation shall be set by proration of limitations for each subcategory or commodity based on the total production covered by each commodity or subcategory.

§ 407.61 Specialized definitions.

For the purpose of this subpart:

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

(b) The term "apricots" shall include the processing of apricots into the following product styles: canned and frozen, pitted and unpitted, peeled and unpeeled, whole, halves, slices, nectar, and concentrate.

(c) The term "caneberries" shall include the processing of the following berries: canned and frozen blackberries, blueberries, boysenberries, currants, gooseberries, loganberries, ollalieberries, raspberries, and any other similar cane or bushberry but not strawberries or cranberries.

(d) The term "cherries, sweet" shall include the processing of sweet cherries into the following products: sweet frozen and canned, pitted and unpitted, whole, halves, juice and concentrate.

(e) The term "cherries, brined" shall include the processing of brined cherries into the following products: canned, bottled and bulk, sweet and sour, pitted and unpitted, bleached, sweetened, colored and flavored, whole, halved and chopped.

(f) The term "cranberries" shall mean the processing of cranberries into the following products: canned, bottled, and frozen, whole, sauce, jelly, juice and concentrate.

(g) The term "dried fruits" shall mean the processing of dried fruits into the following products: air, vacuum, and freeze dried, pitted and unpitted, blanched and unblanched, whole, halves, slices and other similar styles of apples, apricots, figs, peaches, pears, prunes, canned extracted prune juice and pulp from rehydrated and cooked dehydrated prunes; but not including dates or raisins.

(h) The term "grape juice canning" shall mean the processing of grape juice into the following products; canned and frozen, fresh and stored, natural grape juice for the manufacture of juices, drinks, concentrates, jams, jellies, and other related finished products but not wine or other spirits. In terms of raw material processed 1000 kg (1000 lb) of grapes are equivalent to 834 liters (100 gallons) of grape juice.

(i) The term "grape pressing" shall mean the washing and subsequent handling including pressing, heating, and filtration of natural juice from all varieties of grapes for the purpose of manufacturing juice, drink, concentrate, and jelly but not wine or other spirits. In terms of raw material processed 1000 kg (1000 lb) of grapes are equivalent to 834 liters (100 gallons) of grape juice.

(j) The term "olives" shall mean the processing of olives into the following products: canned, all varieties, fresh and stored, green ripe, black ripe, spanish, sicilian, and any other styles to which spices, acids, and flavorings may have been added.

(k) The term "peaches, canned" shall mean the processing of peaches into the following products: canned, all varieties, peeled, pitted and unpitted, whole, halves, sliced, diced, and any other cuts, nectar, and concentrate but not dehydrated.

(l) The term "peaches, frozen" shall mean the processing of peaches into the following products: frozen, all varieties, peeled, pitted and unpitted, whole, halves, sliced, diced, and any other cuts but not dehydrated.

(m) The term "pears" shall mean the processing of pears into the following products: canned, peeled, halved, sliced, diced, and any other cuts, nectar and concentrate but not dehydrated.

(n) The term "pickles, fresh" shall mean the processing of fresh cucumbers and other vegetables, all varieties, all sizes from whole to relish, all styles, cured after packing.

(o) The term "processed" shall mean the processing of pickles, cucumbers and other vegetables, all varieties, sizes and types, made after fermentation and storage.

(p) The term "pickles, salt stations" shall mean the handling and subsequent preserving of cucumbers and other vegetables by salt and other chemical additions necessary to achieve proper fermentation for the packing of processed pickle products, and subsequent tank soaking.

(q) The term "pineapples" shall mean the processing of pineapple into the following products: canned, peeled, sliced, chunk, tidbit, diced, crushed, and any other related piece size, juice and concentrate. It also specifically includes the on-site production of by-products such as alcohol, sugar or animal feed.

(r) The term "plums" shall mean the processing of plums into the following products: canned and frozen, pitted and unpitted, peeled and unpeeled, blanched and unblanched, whole, halved, and other piece size.

(s) The term "raisins" shall mean the processing of raisins into the following products: dried grapes, all varieties, bleached and unbleached, which have been cleaned and washed prior to packaging.

(t) The term "strawberries" shall mean the processing of strawberries into the following products: canned and frozen, whole, sliced, and pureed.

(u) The term "tomatoes peeled" shall mean the processing of tomatoes into canned, peeled, whole, stewed, and related piece sizes.

(v) The term "tomatoes, products" shall mean the processing of tomatoes into the following products: canned, peeled and unpeeled paste, concentrate, puree, sauce, juice, catsup and other similar formulated items requiring various other pre-processed food ingredients.

(w) The term "medium" shall mean a point source that processes a total annual raw material production of fruits, vegetables, specialties and other products that is between 1,816 kkg (2,000 tons) per year and 9,080 kkg (10,000 tons) per year.

(x) The term "large" shall mean a point source that processes a total annual raw material production of fruits, vegetables, specialties and other products that exceeds 9,080 kkg (10,000 tons) per year.

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

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

more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity of BOD5 controlled by this section, which may be discharged by a "large" existing-point source subject to the provisions of this subpart after application of the best practicable control technology currently available. Any fruit processing plant which continuously or intermittently discharges process waste water during the processing season shall meet the annual average, maximum thirty day average, and maximum day BOD5 limitations. Fruit processing plants employing long term waste stabilization, where all or a portion of the process waste water discharge is stored for the entire processing season and released at a controlled rate with state approval shall meet only the annual average BOD5 limitations.

BOD5 EFFLUENT LIMITATIONS

Commodity (fruits)	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
Metric units (kg/kkg of raw material)			
Apricots	2.93	1.94	1.20
Caneberries	0.78	0.51	0.33
Cherries:			
Sweet	1.09	0.71	0.47
Sour	1.70	1.09	0.74
Brined	2.77	1.81	1.19
Cranberries	1.68	1.09	0.71
Dried fruit	1.83	1.19	0.78
Grape juice:			
Canning	1.02	0.67	0.45
Pressing	0.22	0.14	0.09
Olives	5.31	3.47	2.29
Peaches:			
Canned	1.81	1.18	0.78
Frozen	0.80	0.52	0.36
Pears	1.71	1.12	0.75
Pickles:			
Fresh pack	1.19	0.78	0.51
Process pack	1.39	0.91	0.62
Salt stations	0.20	0.14	0.10
Pineapples	1.78	1.16	0.75
Plums	0.68	0.44	0.29
Raisins	0.41	0.27	0.18
Strawberries	1.75	1.13	0.73
Tomatoes:			
Peeled	1.20	0.78	0.50
Products	0.48	0.31	.19
English units (lb/1,000 lb of raw material)			
Apricots	2.93	1.94	1.20
Caneberries	0.78	0.51	0.33
Cherries:			
Sweet	1.09	0.71	0.47
Sour	1.70	1.09	0.74
Brined	2.77	1.81	1.19
Cranberries	1.68	1.09	0.71
Dried fruit	1.83	1.19	0.78
Grape juice:			
Canning	1.02	0.67	0.45
Pressing	0.22	0.14	0.09
Olives	5.31	3.47	2.29
Peaches:			
Canned	1.81	1.18	0.78
Frozen	0.80	0.52	0.36
Pears	1.71	1.12	0.75
Pickles:			
Fresh pack	1.19	0.78	0.51
Process pack	1.39	0.91	0.62
Salt stations	0.20	0.14	0.10
Pineapples	1.78	1.16	0.75
Plums	0.68	0.44	0.29
Raisins	0.41	0.27	0.18
Strawberries	1.75	1.13	0.73
Tomatoes:			
Peeled	1.20	0.78	0.50
Products	0.48	0.31	0.19

(b) The following limitations establish the quantity of TSS controlled by this section, which may be discharged by a "large" existing-point source subject to the provisions of this subpart after application of the best practicable control technology currently available. Any fruit processing plant which continuously or intermittently discharges process waste water during the processing season shall meet the annual average, maximum thirty day average, and maximum day TSS limitations. Fruit processing plants employing long term waste stabilization, where all or a portion of the process waste water discharge is stored for the entire processing season and released at a controlled rate with state approval, shall meet only the annual average TSS limitations.

Commodity (fruits)	TSS effluent limitations: Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
Metric units (kg/kkg of raw material)			
Apricots	4.68	3.35	2.60
Caneberries	1.21	0.85	0.63
Cherries:			
Sweet	1.78	1.33	0.96
Sour	2.82	2.11	1.50
Brined	4.48	3.29	2.43
Cranberries	2.07	1.93	1.47
Dried fruit	2.92	2.12	1.60
Grape juice:			
Canning	1.70	1.28	0.91
Pressing	0.35	0.26	0.19
Olives	8.04	0.36	4.67
Peaches:			
Canned	2.03	2.15	1.59
Frozen	1.38	1.07	0.71
Pears	2.90	2.21	1.53
Pickles:			
Fresh pack	1.93	1.41	1.04
Process pack	2.38	1.83	1.24
Salt stations	0.43	0.33	0.19
Pineapples	2.82	2.03	1.56
Plums	1.07	0.78	0.59
Raisins	0.72	0.55	0.37
Strawberries	2.69	1.88	1.53
Tomatoes:			
Peeled	1.85	1.30	1.04
Products	0.71	0.48	0.41
English units (lb/1000 lb of raw material)			
Apricots	4.68	3.35	2.60
Caneberries	1.21	0.85	0.63
Cherries:			
Sweet	1.78	1.33	0.96
Sour	2.82	2.11	1.50
Brined	4.48	3.29	2.43
Cranberries	2.07	1.93	1.47
Dried fruit	2.92	2.12	1.60
Grape juice:			
Canning	1.70	1.28	0.91
Pressing	0.36	0.26	0.19
Olives	8.04	0.36	4.67
Peaches:			
Canned	2.03	2.15	1.59
Frozen	1.38	1.07	0.71
Pears	2.90	2.21	1.53
Pickles:			
Fresh pack	1.93	1.41	1.04
Process pack	2.38	1.82	1.24
Salt stations	0.43	0.33	0.19
Pineapples	2.82	2.03	1.56
Plums	1.07	0.78	0.59
Raisins	0.72	0.55	0.37
Strawberries	2.69	1.83	1.53
Tomatoes:			
Peeled	1.85	1.30	1.04
Products	0.71	0.43	0.41

(c) The following limitations establish the quality of pH controlled by this section, which may be discharged by a "large" existing point source subject to the provisions of this subpart after application of the best practicable control technology currently available.

Effluent characteristic	*Effluent limitations*
pH	At all times within the range 6.0 to 9.5

Subpart G—Canned and Preserved Vegetables Subcategory

§ 407.70 Applicability; description of the canned and preserved vegetables subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of the following vegetable products: asparagus; beets; broccoli; brussels sprouts; carrots; cauliflower; canned and frozen corn; dehydrated onions and garlic; dehydrated vegetables; dry beans; lima beans; mushrooms; canned onions; canned and frozen peas; pimentos; sauerkraut canning and cutting; canned and frozen snap beans; canned and frozen spinach; squash; sweet potatoes; and canned white potatoes. When a plant is subject to effluent limitations covering more than one commodity or subcategory, the plant discharge limitations shall be set by proration of limitations for each subcategory or commodity based on the total production covered by each commodity or subcategory.

§ 407.71 Specialized definitions.

For the purpose of this subpart:

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

(b) The term "asparagus" shall include the processing of asparagus into the following product styles: canned and frozen, green and white, spears, tips, "center", and other related cuts but not dehydrated asparagus.

(c) The term "beets" shall include the processing of beets into the following product styles: canned and peeled, whole sliced, diced, French style, sections, irregular, and other cuts but not dehydrated beets.

(d) The term "broccoli" shall include the processing of broccoli into the following product styles: frozen, chopped, spears, and miscellaneous cuts.

(e) The term "brussels sprouts" shall include the processing of brussels sprouts into the following product styles: frozen whole.

(f) The term "carrots" shall include the processing of carrots into the following products: canned and frozen, peeled, whole, sliced, diced, nuggets, crinkle cut, julienne, shoestrings, chunks, chips and other irregular cuts, and juices but not dehydrated carrots.

(g) The term "cauliflower" shall include the processing of cauliflower into the following styles: frozen whole branches and pieces.

(h) The term "corn, canned" shall mean the processing of corn into the following product styles: canned, yellow and white, whole kernel, cream style, and on-the-cob.

(i) The term "corn, frozen" shall mean the processing of corn into the following product styles: frozen, yellow and white, whole kernel and whole cob.

(j) The term "dehydrated onions and garlic" shall mean the processing of dehydrated onions and garlic into the following product styles: air, vacuum, and freeze dried, all varieties, diced, strips, and other piece sizes ranging from large sliced to powder but not including green onions, chives, or leeks.

(k) The term "dehydrated vegetables" shall mean the processing of dehydrated vegetables in the following product styles: air, vacuum and freeze dried, blanched and unblanched, peeled and unpeeled, beets, bell peppers, cabbage, carrots, celery, chili pepper, horseradish, turnips, parsnips, parsley, asparagus, tomatoes, green beans, corn, spinich, green onion tops, chives, leeks, whole, diced, and any other piece size ranging from sliced to powder.

(l) The term "dry beans" shall mean the production of canned pinto, kidney, navy, great northern, red, pink or related type, with and without formulated sauces, meats and gravies.

(m) The term "lima beans" shall mean the processing of lima beans into the following product styles: canned and frozen, green and white, all varieties and sizes.

(n) The term "mushrooms" shall mean the processing of mushrooms into the following product styles: canned, frozen, dehydrated, all varieties, shapes and sizes.

(o) The term "canned onions" shall mean the processing of onions into the following product styles: canned, frozen, and fried (canned), peeled, whole, sliced, and any other piece size but not including frozen, battered onion rings or dehydrated onions.

(p) The term "peas, canned" shall mean the processing of peas into the

following product styles: canned, all varieties and sizes, whole.

(q) The term "peas, frozen" shall mean the processing of peas into the following product styles: frozen, all varieties and sizes, whole.

(r) The term "pimentos" shall mean the processing of pimentos into the following product styles: canned, peeled, whole, halves, sliced, diced, chopped and any other piece size.

(s) The term "squash" shall include the processing of pumpkin and squash into canned and frozen styles.

(t) The term "sauerkraut cutting" shall mean the trimming, cutting, and subsequent preparatory handling of cabbage necessary for and including brining and fermentation, and subsequent tank soaking.

(u) The term "sauerkraut canning" shall mean the draining and subsequent filling and canning of fermented cabbage and juice.

(v) The term "snap beans, canned" shall mean the processing of snap beans into the following product styles: canned green, Italian, wax, string, bush, and other related varieties, whole, French, fancy, Extra Standard, Standard, and other cuts.

(w) The term "snap beans, frozen" shall mean the processing of snap beans into the following product styles: frozen green, Italian, wax, string, bush, and other related varieties, whole, French, fancy, Extra Standard, Standard, and other cuts.

(x) The term "spinach, canned" shall mean the processing of spinach and leafy greens into the following product styles: canned, whole leaf, chopped, and other related cuts.

(y) The term "spinach, frozen" shall mean the processing of spinach and leafy greens into the following product styles: frozen, whole leaf, chopped, and other related cuts.

(z) The term "sweet potatoes, canned" shall mean the processing of sweet potatoes into the following product styles: canned, peeled, solid, syrup, and vacuum packed.

(aa) The term "white potatoes, canned" shall mean the processing of white potatoes into the following product styles: canned, peeled, white, all varieties, whole and sliced.

(ab) The term "medium" shall mean a point source that processes a total annual raw material production of fruits, vegetables, specialties and other products that is between 1,816 kkg (2,000 tons) per year and 9,080 kkg (10,000 tons) per year.

(ac) The term "large" shall mean a point source that processes a total annual raw material production of fruits, vegetables, specialties and other products that exceed 9,080 kkg (10,000 tons) per year.

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

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

(a) The following limitations establish the quantity of BOD5, controlled by this section, which may be discharged by a "large" existing point source subject to the provisions of this subpart after application of the best practicable control technology currently available. Any vegetable processing plant which continuously or intermittently discharges process waste water during the processing season shall meet the annual average, maximum thirty day average, and maximum day BOD5 limitations. Vegetable processing plants employing long term waste stabilization, where all or a portion of the process waste water discharge is stored for the entire processing season and released at a controlled rate with state approval, shall meet only the annual average BOD5 limitations. Effluent limitations for the cauliflower subcategory are based upon pounds (lb) or kilograms (kg) of pollutant per 1000 pounds (lb) or kilograms (kkg) of final product.

Commodity (vegetables)	BOD5 effluent limitations		
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
	Metric units (kg/kkg of raw material)		
Asparagus	0.85	0.55	0.34
Beets	0.81	0.54	0.39
Broccoli	3.61	2.34	1.47
Brussels sprouts	1.25	0.81	0.51
Carrots	1.73	1.14	0.70
Cauliflower	1.93	1.28	0.81
Corn:			
Canned	0.70	0.46	0.32
Frozen	1.89	1.24	0.83
Dehydrated onion/garlic	2.40	1.55	0.98
Dehydrated vegetables	2.91	1.88	1.19
Dry beans	2.46	1.60	1.05
Lima beans	3.64	2.30	1.52
Mushrooms	2.99	1.94	1.24
Onions (canned)	3.17	2.07	1.35
Peas:			
Canned	2.74	1.79	1.18
Frozen	2.03	1.33	0.89
Pimentos	3.07	2.68	1.69
Sauerkraut:			
Canning	0.49	0.32	0.21
Cutting	0.07	0.04	0.03
Snap beans:			
Canned	1.16	0.75	0.47
Frozen	2.12	1.37	0.88
Spinach:			
Canned	3.02	1.96	1.23
Frozen	1.77	1.14	0.72
Squash	0.86	0.57	0.40
Sweet potato	0.78	0.53	0.40
White potato (canned)	1.30	0.86	0.60

Commodity (vegetables)	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
English units (lb/1,000 lb of raw material)			
Asparagus	0.85	0.55	0.34
Beets	0.81	0.54	0.33
Broccoli	3.61	2.34	1.47
Brussels sprouts	1.25	0.81	0.51
Carrots	1.73	1.14	0.76
Cauliflower	1.23	1.23	0.81
Corn:			
Canned	0.70	0.45	0.32
Frozen	1.89	1.24	0.83
Dehydrated onion/garlic	2.49	1.55	0.93
Dehydrated vegetables	2.91	1.83	1.19
Dry beans	2.46	1.60	1.05
Lima beans	3.64	2.33	1.52
Mushrooms	2.00	1.04	1.21
Onions (canned)	3.17	2.07	1.35
Peas:			
Canned	2.74	1.79	1.18
Frozen	2.03	1.33	0.88
Pimentos	3.97	2.53	1.69
Sauerkraut:			
Canning	0.49	0.32	0.21
Cutting	0.07	0.04	0.03
Snap beans:			
Canned	1.10	0.73	0.47
Frozen	2.12	1.37	0.83
Spinach:			
Canned	3.02	1.95	1.23
Frozen	1.77	1.14	0.72
Squash	0.85	0.57	0.40
Sweet potato	0.78	0.53	0.40
White potato (canned)	1.30	0.83	0.60

(b) The following limitations establish the quantity of TSS controlled by the section, which may be discharged by a "large" existing point source subject to the provisions of this subpart after application of the best practicable control technology currently available. Any vegetable processing plant which continuously or intermittently discharges process waste water during the processing season shall meet the annual average, maximum thirty day average, and maximum day TSS limitations. Vegetable processing plants employing long term waste stabilization, where all or a portion of the process waste water discharge is stored for the entire processing season and released at a controlled rate with state approval, shall meet only the annual average TSS limitations. Effluent limitations for the cauliflower subcategory are based upon pounds (lb) of kilograms (kg) of pollutant per 1000 pounds (lb) or kilograms (kkg) of final product.

Commodity (vegetables)	TSS effluent limitations		
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
Metric units (kg/kkg of raw material)			
Asparagus	1.26	0.85	0.73
Beets	1.55	1.27	0.74
Broccoli	8.37	2.65	3.12
Brussels sprouts	1.85	1.26	1.08
Carrots	2.91	2.19	1.53
Cauliflower	2.98	1.98	1.70
Corn:			
Canned	1.29	1.03	0.63
Frozen	3.10	2.37	1.67
Dehydrated onion/garlic	3.50	2.42	2.07
Dehydrated vegetables	4.32	2.63	2.51
Dry beans	3.92	2.53	2.15
Lima beans	5.64	3.93	3.17
Mushrooms	4.53	3.21	2.53
Onions (canned)	5.69	3.71	2.73
Peas:			
Canned	4.44	3.23	2.40
Frozen	3.33	2.47	1.79
Pimentos	6.35	4.62	3.47
Sauerkraut:			
Canning	0.78	0.57	0.43
Cutting	0.13	0.10	0.06
Snap beans:			
Canned	1.73	1.17	1.00
Frozen	3.25	2.27	1.84
Spinach:			
Canned	4.43	3.05	2.60
Frozen	2.62	1.78	1.53
Squash	1.57	1.25	0.75
Sweet potato	1.67	1.45	0.74
White Potato (canned)	2.33	1.63	1.15

Commodity (vegetables)	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
English units (lb/1,000 lb of raw material)			
Asparagus	1.26	0.85	0.73
Beets	1.55	1.27	0.74
Broccoli	5.37	3.65	3.12
Brussels sprouts	1.85	1.26	1.08
Carrots	2.91	2.19	1.53
Cauliflower	2.93	1.99	1.70
Corn:			
Canned	1.28	1.03	0.63
Frozen	3.16	2.37	1.07
Dehydrated onion/garlic	3.56	2.42	2.07
Dehydrated vegetables	4.32	2.93	2.61
Dry beans	3.92	2.83	2.15
Lima beans	5.64	3.99	3.17
Mushrooms	4.59	3.21	2.59
Onions (canned)	5.99	3.71	2.78
Peas:			
Canned	4.44	3.20	2.40
Frozen	3.33	2.47	1.79
Pimentos	6.35	4.62	3.47
Sauerkraut:			
Canning	0.78	0.57	0.43
Cutting	0.12	0.10	0.06
Snap beans:			
Canned	1.73	1.17	1.00
Frozen	3.25	2.27	1.84
Spinach:			
Canned	4.49	3.05	2.60
Frozen	2.62	1.78	1.52
Squash	1.57	1.25	0.78
Sweet potato	1.67	1.48	0.74
White potato (canned)	2.39	1.93	1.18

(c) The following limitations establish the quality of pH controlled by this section, which may be discharged by a "large" existing point source subject to the provisions of this subpart after application of the best practicable control technology currently available.

Effluent characteristic	*Effluent limitations*
pH	At all times within the range 6.0 to 9.5.

Subpart H—Canned and Miscellaneous Specialties Subcategory

§ 407.80 Applicability; description of the canned and miscellaneous specialties subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of the following specialty products: added ingredients; baby food; corn, potato, and tortilla chips; ethnic foods; jams and jellies; mayonnaise and dressings; soups; and tomato-starch-cheese canned specialties. When a plant is subject to effluent limitations covering more than one commodity or subcategory, the plant discharge limitations shall be set by proration of limitations for each subcategory or commodity based on the total production covered by each commodity or subcategory.

§ 407.81 Specialized definitions.

For the purpose of this subpart:

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

(b) The term "added ingredients" small mean the prepared sauces (prepared from items such as dairy products, starches, sugar, tomato sauce and concentrate, spices, and other related preprocessed ingredients) which are added during the canning and freezing of fruits and vegetables.

(c) The term "baby foods" shall mean the processing of canned fresh fruits and vegetables, meats, eggs, fruit juices, cereal, formulated entrees, desserts and snacks using fresh, pre-processed, or any combination of these and other food ingredients necessary for the production of infant foods.

(d) The term "chips, potato" shall mean the processing of fried chips, made from fresh or stored white potatoes, all varieties. In terms of finished potato chips, 1 kg (lb) of finished product is equivalent to 4 kg (lb) of raw material.

(e) The term "chips, corn" shall mean the processing of fried corn, made by soaking, rinsing, milling and extruding into a fryer without toasting. In terms of finished corn chips, 1 kg (lb) of finished product is equivalent to 0.9 kg (lb) of raw material.

(f) The term "chips, tortilla" shall mean the processing of fried corn, made by soaking, rinsing, milling, rolling into sheets, toasting and frying. In terms of finished tortilla chips, 1 kg (lb) of finished product is equivalent to 0.9 kg (lb) of raw material.

(g) The term "ethnic foods" shall mean the production of canned and frozen Chinese and Mexican specialties utilizing fresh and pre-processed bean sprouts, bamboo shoots, water chestnuts, celery, cactus, chilis, tomatoes, and other similar vegetables necessary for the production of the various characteristic product styles.

(h) The term "jams and jellies" shall include the production of jams, jellies and preserves defined as follows: the combination of fruit and fruit concentrate, sugar, pectin, and other additives in an acidic medium resulting in a gelatinized and thickened finished product.

(i) The term "mayonnaise and salad dressings" shall be defined as the emulsified and non-emulsified semi-solid food prepared from the combining of edible vegetable oil with acidifying, and egg yolk containing ingredients, or gum and starch combinations to which certain colorings, spices, and flavorings have been added.

(j) The term "soups" shall mean the combination of various fresh and preprocessed meats, fish, dairy products, eggs, flours, starches, vegetables, spices, and other similar raw ingredients into a variety of finished mixes and styles but not including dehydrated soups.

(k) The term "tomato-starch-cheese canned specialties" shall mean canned specialties resulting from a combination of fresh and pre-processed tomatoes, starches, cheeses, spices, and other flavorings necessary to produce a variety of products similar to but not exclusively raviolis, spaghetti, tamales, and enchiladas.

(l) The term "medium" shall mean a point source that processes a total annual raw material production of fruits, vegetables, specialties and other products that is between 1,816 kkg (2,000 tons) per year and 9,080 kkg (10,000 tons) per year.

(m) The term "large" shall mean a point source that processes a total annual raw material production of fruits, vegetables, specialties and other products that exceeds 9,080 kkg (10,000 tons) per year.

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

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

State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(a) The following limitations establish the quantity of BOD5 controlled by this section, which may be discharged by a "large" existing point source subject to the provisions of this subpart after application of the best practicable control technology currently available. Any food specialty plant which continuously or intermittently discharges process waste water during the processing season shall meet the annual average, maximum thirty day average, and maximum day BOD5 limitations. Food specialty plants employing long term waste stabilization, where all or a portion of the process waste water discharge is stored for the entire processing season and release at a controlled rate with state approval, shall meet only the annual average BOD5 limitations. Effluent limitations for the soups subcategory are based upon pounds (lb) or kilograms (kg) of pollutant per 1000 pounds (lb) or kilograms (kkg) of raw ingredients.

Commodity (specialties)	BOD5 effluent limitations		
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
Metric units (kg/kkg of final product)			
Added ingredients	1.20	0.80	0.33
Baby food	1.00	0.65	0.42
Chips:			
Potato	3.35	2.19	1.47
Corn	1.84	1.22	0.85
Tortilla	2.83	1.89	1.26
Ethnic foods	1.74	1.13	0.73
Jams/jellies	0.39	0.26	0.17
Mayonnaise and dressings	0.34	0.23	0.15
Soups	4.10	2.68	1.71
Tomato-starch-cheese canned specialties	1.77	1.14	0.72
English units (lb/1,000 of final product)			
Added ingredients	1.20	0.80	0.33
Baby food	1.00	0.65	0.42
Chips:			
Potato	3.35	2.19	1.47
Corn	1.84	1.22	0.85
Tortilla	2.83	1.89	1.26
Ethnic foods	1.74	1.13	0.73
Jams/jellies	0.39	0.26	0.17
Mayonnaise and dressings	0.34	0.23	0.15
Soups	4.10	2.68	1.71
Tomato-starch-cheese canned specialties	1.77	1.14	0.72

(b) The following limitations establish the quantity of TSS controlled by this section, which may be discharged by a "large" existing point source subject to the provisions of this subpart after application of the best practicable control technology currently available. Any food specialty plant which continuously or intermittently discharges process waste water during the processing season shall meet the annual average, maximum thirty day average, and maximum day TSS limitations. Food specialty plants employing long term waste stabilization, where all or a portion of the process waste water discharge is stored for the entire processing season and released at a controlled rate with state approval shall meet only the annual average TSS limitations. Effluent limitations for the soups subcategory are based upon pounds (lb) or kilograms (kg) of pollutant per 1000 pounds (lb) or kilograms (kkg) of raw ingredients.

Commodity (specialties)	TSS effluent limitations		
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—	Annual average of daily values for entire discharge period shall not exceed—
Metric units (kg/kkg of final product)			
Added ingredients	0.00	0.00	0.00
Baby food	1.56	1.11	0.87
Chips:			
Potato	5.60	4.22	2.96
Corn	3.34	2.67	1.66
Tortilla	4.79	3.59	2.54
Ethnic foods	2.70	1.91	1.51
Jams/jellies	0.68	0.53	0.35
Mayonnaise and dressings	0.60	0.47	0.31
Soups	0.34	4.47	3.56
Tomato-starch-cheese canned specialties	2.62	1.78	1.52
English units (lb/1,000 lb of final product)			
Added ingredients	0.00	0.00	0.00
Baby food	1.56	1.11	0.87
Chips:			
Potato	5.60	4.22	2.96
Corn	3.34	2.67	1.66
Tortilla	4.79	3.59	2.54
Ethnic foods	2.70	1.91	1.51
Jams/jellies	0.68	0.53	0.35
Mayonnaise and dressings	0.60	0.47	0.31
Soups	0.34	4.47	3.56
Tomato-starch-cheese canned specialties	2.62	1.78	1.52

(c) The following limitations establish the quantity of oil and grease and quality of pH controlled by this section, which may be discharged by a "large" existing point source subject to the provisions of this subpart after application of the best practicable control technology currently available.

Effluent characteristic	*Effluent limitations*
Oil and grease	Shall not exceed 20 mg/l
pH	At all times within the range 6.0 to 9.5

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