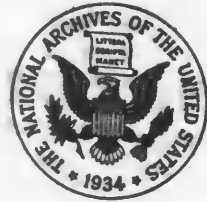


federal register

MONDAY, JANUARY 27, 1975

WASHINGTON, D.C.

Volume 40 ■ Number 18



PART II

ENVIRONMENTAL PROTECTION AGENCY

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PHOSPHATE MANUFACTURING POINT SOURCE CATEGORY

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Effluent Guidelines and Standards

Title 40—Protection of the Environment
CHAPTER I—ENVIRONMENTAL
PROTECTION AGENCY
SUBCHAPTER N—EFFLUENT GUIDELINES AND
STANDARDS

[FRL 326-2]

PART 422—PHOSPHATE MANUFACTURING POINT SOURCE CATEGORY

Interim Final Rule Making

Notice is hereby given that effluent limitations and guidelines for existing sources set forth in interim final form below are promulgated by the Environmental Protection Agency (EPA). On February 20, 1974, EPA promulgated a regulation adding Part 422 to Chapter 40 of the Code of Federal Regulations (39 FR 6580). 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 phosphate manufacturing point source category. The regulation set forth below will amend 40 CFR Part 422, Phosphate Manufacturing Point Source Category, by adding thereto effluent limitations and guidelines for existing sources for the defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F) 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.; Pub. L. 92-500) (the Act). Simultaneously, the Agency is publishing in proposed form standards of performance for new point sources and pretreatment standards for existing sources and for new sources.

(a) *Legal authority.* 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 defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F) of the phosphate manufacturing 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.

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 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. 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. In another section of the FEDERAL REGISTER regulations are proposed in fulfillment of these requirements.

(b) *Summary and basis of proposed effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new 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 water. The con-

stituents 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 impact, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise and radiation were identified. The energy requirements of each control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available." In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, nonwater 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 defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F) of the phosphate manufacturing point source category.

(i) *Categorization.* Although the phosphate compounds of highest purity are made from phosphorus derived acid, a substantial demand developed for products of adequate quality for many uses, but cheaper than the furnace acid derived materials. Major products in this area are calcium phosphates for animal feed, defluorinated phosphoric acid, and sodium phosphates. The industry supplies this demand through defluorination of phosphate rock, and defluorination of phosphoric acid. The sodium phosphates demand is supplied by products derived from the purification of wet process phosphoric acid derived from calcined rock.

Within this group of chemicals, the defluorination of phosphate rock is carried out by heating phosphate rock (with phosphoric acid, silica, and/or various

other reagents), which distinguishes the category sharply from the remaining products derived through the defluorination of liquid phosphoric acid. The most favorable water balance within the segment is held by this defluorinated rock process. Substantial evaporation occurs as a result of stack washing to control fluoride emission. The water used for stack washing picks up substantial fluorine pollution, much the same as the scrubber water in fertilizer phosphate manufacture or in the manufacture of elemental phosphorus.

Water is collected from the defluorination of phosphoric acid. This is water driven from the acid, aided by air streams and/or vacuum. This water contains the fluoride contaminant common to phosphoric acid production. This water also contains some of the wet phosphoric acid raw material and some of the defluorinated product. Spray carry-over contaminates the condensate, particularly where some types of barometric condensers are used.

Sodium phosphates are produced from conventional wet process phosphoric acid derived from calcined rock. The calcining temperature is high enough to destroy organic components that impart objectionable color, but not high enough to defluorinate the rock. The production of sodium phosphates is associated with waste water problems similar to the fertilizer phosphate problems. The conversion of rock to acid is by the usual process. The purification steps conducted in phosphate salt manufacture require blowdown of process water with fluorine, sulphate, and phosphate waste water components, as well as other salts and solids.

Most of the fluoride in the raw product acid is crystallized out as sodium silicofluoride byproduct, whereas the fluorides removed in the defluorination of phosphate rock, and in the defluorination of phosphoric acid appear in the waste water.

As a result of these considerations, and of other factors considered in the study, three subcategories have been established for the other non-fertilizer phosphate chemicals segment of the Phosphate Manufacturing Point Source Category: Subpart D—The Defluorinated Phosphate Rock Subcategory. Subpart E—The Defluorinated Phosphoric Acid Subcategory. Subpart F—The Sodium Phosphate Subcategory.

(ii) *Waste characteristics.* Conventional fertilizer plant wet phosphoric acid is used as a treatment reagent in the defluorination of phosphate rock, and as the principal raw material for the production of defluorinated phosphoric acid, and of sodium phosphates. All three subcategories of this segment, accordingly, must deal with the same waste water problems dealt with in wet phosphoric acid production. These include large amounts of sulfuric acid derived from stack or tail gas scrubbing, filtration, solids washing and acid manufacturing operations. These also include huge quantities of solid wastes originating as suspended solids during

manufacturing operations. These wastes include sizeable quantities of gypsum and debris from acid treatment of rock.

Stack washing is required in the manufacture of defluorinated rock to control air contamination by sulfur dioxide and fluorides. This results in a large quantity of waste water, made acidic by sulfurous acid. The purification processes imposed on both phosphate rock and phosphoric acid to reduce product fluoride inexorably results in increased waste water fluoride. Waste product phosphoric acid, likewise, appears in waste water as a major pollutant.

Stack washing operations lead to pick-up of much heat by the process waste water. In addition, large quantities of noncontract cooling water are used. These streams must be constantly monitored for leaks, and dealt with as contaminated process waste water when leaks occur, or when spray problems carry raw material, reagent or product into the cooling water.

The sodium phosphates manufacturing processes develop a number of salt wastes, which accumulate from salting out and evaporating processes. Process water accumulating in the system acquires a build-up concentration of miscellaneous impurities; these must be discharged from the system constantly to protect product purity. This provides a stream bearing some fluoride and a considerable amount of phosphate and suspended solids contaminants. Solid wastes are separated by precipitation steps utilized in the manufacturing processes. Some arsenic is present in the raw product acid. Sulfide precipitation is applied as a manufacturing step to make certain that an objectionable level of arsenic does not appear in the phosphate products. The sediment from this operation is accumulated in a landfill. Officials responsible for non-point source pollution in the area of a facility must be apprised of the potential ground water pollution hazard and/or a potential hazard from the solid deposit. Large quantities of cooling water are utilized, resulting in much heat accumulation in the waste water.

Polyphosphates are formed by the severe heat and dehydration processes applied in the defluorination of both rock and acid, and are among the sodium phosphates products. These compounds, not encountered in wet phosphoric acid production, do appear among the waste water components of this industrial segment.

Radium 226 is present in most raw rocks at highly objectionable levels. This contaminant is soluble in the acidic waste water recirculating in the cooling water ponds of most manufacturing facilities; however, radium-226 is mainly associated with the suspended solids and solid debris of phosphate manufacture. It is not discharged in treated effluent at a significant level. Officials responsible for non-point source pollution in the area of a facility must be apprised of the potential ground water pollution hazard, and/or potential hazards in the solids deposits.

(iii) *Origin of waste water pollutants.* The dominant source of contaminated waste water in the defluorination of rock originates from stack washing. This waste water stream is rich in fluoride, sulfate, phosphates, acidic substances, suspended solids and heat. Other sources of waste water contamination are leaks and spills and suspended solids from purifying raw water in the water supply plant.

Condensate from the concentration process is the major source of waste water from acid defluorination. This stream picks up raw material and product spray, the fluoride removed from the raw acid, and much heat. Minor sources of contamination are spills, pump seal leaks, and suspended solids from the water supply facilities.

Salts accumulating from salting out processes, solids separating from precipitation processes, and blowdown of contaminated water from the purification system are representative of waste water contaminants that are an integral part of the manufacturing process for sodium phosphates production. The other major sources of waste water contamination in the industry are pump and seal leaks, and spills. Leaks and spills can be controlled by diligent management and should not contribute significantly to the raw waste water load.

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

The factors and contaminants in non-fertilizer phosphate chemical process effluent streams have for the most part been well identified and well known for many years. As a consequence, considerable effort has been expended to correct for and minimize the majority of those which are particularly detrimental to natural water receiving bodies. Much of this work has been directed at correcting the source of the contamination by an in-process improvement rather than an end-of-pipe type of treatment. A large part of the motivation for such improvement has been economics, that is, improved operating efficiency and costs. Such improvements are just plain good business and justify capital expenditure required to achieve them.

The major contaminants that must be dealt with are mainly the same as those encountered in the Phosphate Subcategory of the Basic Fertilizers Segment of the Fertilizer Manufacturing Point Source Category. These major contaminants are fluorides, phosphates, and sulfuric acid. The recirculation, sedimentation and cooling pond has been established as a vital point of the waste water treatment system. The major waste water anions, fluoride, phosphate and sulfate, are precipitated by the calcium, iron and aluminum accumulating

in the lagoon. Much calcium, iron and aluminum are derived from the acid treatment of rock. The calcium, iron and aluminum components concentrate as a result of stack scrubbing and evaporation processes. The major anionic pollutants are precipitated from the pond water when conditions are favorable.

Plants in the arid regions, with a favorable rainfall-evaporation ratio, have no waste water discharge to navigable waters. Much water is lost as steam in stack washing operations. Most plants, faced with the need to treat effluent, develop water conservation and reuse programs that drastically reduce the amount that must be discharged. When discharge becomes essential, lime is effective for removing the major pollutants, acid, radium-226, fluoride and phosphate. Calcium sulfate, calcium fluoride, calcium phosphate, iron phosphate and aluminum phosphate are the major end products of treatment and remain as solid wastes.

Special precautions are essential to assure pond reliability so that dam failure does not lead to massive contamination of surface waters, and that pond leakage does not contaminate valuable ground water. These factors are covered in the Development Document.

Radium-226 is present in high amounts in the sediment of the pond, and in solution in the acidic water of the pond. This pollutant is regarded as highly objectionable. Fortunately, radium-226 can be regulated by control of seepage and by effective lime clarification.

Some plants producing defluorinated rock and some producing defluorinated acid are able to manage the waste water recycle pond so that no discharge occurs to navigable waters. It is recognized that discharges are required in times of excessive rainfall; overflow is permitted, for best practicable treatment, of rainfall in excess of the heaviest expected 24 hour rain in a 10 year period. Overflow is permitted for the best available technology economically achievable and for new sources when rainfall exceeds the heaviest 24 hour rainfall expected in 25 years. Lime treatment must be carried out in periods when rainfall exceeds evaporation.

The discharges allowed from the sodium phosphates subcategory are based on the technology developments of lime treatment and technical knowledge of the treatment process. A lagoon for wet phosphoric acid waste is available at the sodium phosphate plant. This does not have a discharge to navigable waters and can be called upon to handle difficult waste water streams which would cause violations if discharged through the effluent clarifier system.

The proper management of solid wastes resulting from pollution control systems must be practiced. Pollution control technologies generate many different amounts and types of solid wastes and liquid concentrates through the removal of pollutants. These substances vary greatly in their chemical and phys-

cal composition and may be either hazardous or non-hazardous. A variety of techniques may be employed to dispose of these substances depending on the degree of hazard.

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

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

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

(v) *Cost estimates for control of waste water pollutants.* Detailed costs for construction and operation of the contaminated water lagoons and for treatment of pond water were obtained from facilities of the fertilizer phosphates industry. The same systems are utilized to treat fertilizer phosphate waste water and waste water from the non-fertilizer segment of the phosphate industry. Land cost is a vital factor and varies tremendously (by a factor of 10) from area to area. The contractor determined a pond capital cost of \$13,983 per acre for a single acre with a 10 ft. high dike. A contaminated pond water treatment system for a 1000 ton/d plant was determined to have an investment of \$349,000, with \$26,222 interest, \$34,960 depreciation, and \$13,990 operation and maintenance cost. Energy cost was \$0.05 per 1,000 gallons treated. Raw materials costs are \$2.10 per 1,000 gallons treated, and total overall cost is \$2.60 per 1,000 gallons treated. The above costs are on a 1971 basis.

Production practices in the industry recycle waste water streams in a manner that has made impractical the determination of raw waste loads for the fertilizer phosphate and the non-fertilizer phosphate segments. The fertilizer phosphate segment has the largest raw load, by a factor of 5 to 10, and therefore must be assigned a major portion of waste treatment costs.

Several plants producing defluorinated products are operating with no discharge of process waste water. Phosphate plants faced with the requirement to treat waste water have utilized water reuse and conservation measures to drastically reduce the discharge volume. High lime cost forces this action.

An economic study, conducted after making some well founded estimates and assumptions, provides a detailed breakdown of capital investment and treatment costs. These details are assembled in the Part II Draft Report on Economic Analyses of Proposed Effluent Guidelines for the Non-Fertilizer Phosphate Manufacturing Industry, September, 1974.

(vi) *Energy requirements and non-water quality environmental impacts.* Air pollution by fluorine, sulfur dioxide and radon-222 must be regarded as chronic air pollution problems of phosphate manufacture. Stack scrubbing has become standard practice for control of air pollution. The contaminated water pond supplies the large volume of water and high cooling capacity. The pond is an indispensable part of both air and water pollution control. Defluorination is essential for all subcategories of the non-fertilizer phosphates; the typical air pollution problems of phosphate manufacture prevail if not controlled by stack and tail gas scrubbing procedures.

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

For those waste materials considered to be hazardous, disposal may require special precautions. In order to ensure long-term protection of public health and the environment, special preparations and pretreatment may be required prior to disposal. If land disposal is to be practiced, these sites must not allow movement of pollutants such as fluoride and radium-226 to either ground or surface water. Sites should be selected that have natural soil and geological conditions to prevent such contamination or, if such conditions do not exist, artificial means (e.g., liners) must be provided to ensure long-term protection of the environment from hazardous materials. Where appropriate, the location of solid hazardous materials disposal sites should be permanently recorded in the appropriate office of the legal jurisdiction in which the site is located.

Comprehensive studies of air pollution and radiological chemical problems have not been carried out for phosphate manufacturing. EPA groups are currently initiating studies.

Energy requirements for waste water treatment are relatively small in this segment of the industry. No significant energy use will be required for application of best available technology economically achievable.

(vii) *Economic impact analysis.* While all of the defluorinated rock plants

(DFP) and eight of the eleven defluorinated phosphoric acid plants have been treatment in place, some adverse impacts are anticipated in both the defluorinated acid and sodium phosphates subcategories under best practicable control technology currently available (BPCTCA) guidelines. Large capital expenditures will be required for the three acid plants without basic treatment facilities. Consequently, there is high probability that one of these plants will close due to BPCTCA regulations. In addition, two other small producers are thought to have negative cash flows under existing conditions (1973). Although one of these plants has no treatment in place, it is expected that both plants will close for economic reasons unrelated to pollution control. The sodium phosphates wet process plant may also be impacted as it may not be able to increase its prices enough to cover incremental annual pollution control costs.

Prices of DFP and defluorinated acid may rise by 3.5 to 4.0 percent because of pollution control costs and rising demand for dicalcium phosphate. Sodium tripolyphosphate (STPP) could rise by 1.5 to 2.0 percent. However, this price boost will not be the result of pollution abatement costs for the wet process plant, but rather because of raw material price increases to furnace acid process STPP producers.

The three expected closures in the acid subcategory account for approximately seven percent of segment capacity. Planned construction of merchant-grade phosphoric acid plants should prevent shortage of most phosphate materials. But tight supplies of defluorinated acid could exist if no new defluorination facilities are brought on line.

The threatened STPP plant represents 12 percent of STPP production. Existing capacity should be sufficient to offset any reduction in output of STPP.

The four potential closures in the DFP and STPP subcategories could result in a loss of up to 60 jobs. Some of these workers should find employment within the associated fertilizer plants.

Best available technology economical-ly achievable (BATEA) annual and investment costs are small and should not result in any additional impacts.

Industry growth should not be affected by BPCTCA, BATEA or New Source Performance Standards (NSPS) guidelines. NSPS would not appear to be a critical factor in decisions to construct new plants. Most plants constructed in recent years have already incorporated treatment facilities.

No significant community effects or balance of payment effects are anticipated as a result of the 1977 or 1983 guidelines.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Other Non-Fertilizer Phosphate Chemicals Segment of the Phosphate Manufacturing Point Source Category" details the analysis undertaken in support of the interim final regulation set forth herein and is avail-

able for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C., at all EPA regional offices, and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulation or who have placed themselves on a mailing list for this purpose. (See EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports is available. Persons wishing to obtain a copy may write the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman.

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 phosphate manufacturing 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) The Fertilizer Institute; (4) Manufacturing Chemists Association; (5) Puerto Rico Land Association; (6) Soap and Detergent Association; (7) The American Society of Mechanical Engineers; (8) Hudson River Sloop Restoration, Inc.; (9) The Conservation Foundation; (10) Environmental Defense Fund, Inc.; (11) Natural Resources Defense Council; (12) The American Society of Civil Engineers; (13) Water Pollution Control Federation; (14) National Wildlife Federation, and (15) Izaak Walton League of America.

The following responded with comments: United States Water Resources Council, Delaware River Basin Commission, New York State Department of Environmental Conservation, Division of Pure Waters, The Fertilizer Institute, Olin, Manufacturing Chemists Association, and Minnesota Pollution Control Agency. Each of the comments received was carefully reviewed and evaluated.

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

(1) A common criticism was that the excess of rainfall over evaporation in some locations would preclude the establishment of a limitation at "no discharge of process waste water." The proposed regulations have been modified to permit discharge of lime neutralized and clarified effluent during unfavorable rainfall-evaporation periods.

(2) The criticism was made that the definition "within the impoundment" should include not only the pond surface but be extended to include the outer slopes of the dams and the drainage ditch area around the dams. After discussion with representatives of industry, a definition was formulated to treat run-off collected from the outer slopes of the dike and from the seepage collection ditch of existent ponds as being "within the impoundment." For all impoundments or new source impoundments constructed on or after the date of this regulation, the term "within the impoundment" for purposes of calculating the volume of process water which may be discharged shall mean the water surface area within the impoundment at maximum capacity. Section VII of the Development Document explains how underdrain systems and relief wells eliminate the need to include the outer slope.

(3) A number of commenters pointed out that some State effluent standards and some water quality standards would be violated by the proposed limitations for fluoride and phosphate. When this happens, the more stringent standard will be enforced.

(4) The comment was made that some arsenic and cadmium stream standards could not be met by the proposed guidelines. When this circumstance arises, the stream standard will be enforced.

(5) Concern was expressed that adequate attention be directed to bottom lining that will prevent contamination of ground water. Considerably more technical information has been added to the Development Document on the control of seepage.

(6) One commenter pointed out that more calcium may be required to get optimum reduction of fluoride and phosphate. This possibility has been recognized and explained in the section of the Development Document dealing with the technology of treatment.

(7) One commenter pointed out that the contractor's proposed pH treatment levels would not give adequate precipitation of phosphate.

Phosphate can be adequately removed by lime addition to pH 6.0 to 9.0, with efficient sedimentation, under the conditions prevalent in recirculating and reuse ponds at most phosphate manufacturing facilities. The Development Document supplies information on pond conditions that create precipitation problems and how to deal with these problems.

(8) The suggestion was made that one day standards, as well as 30 consecutive day standards, be added. This change has been made.

(9) The comment was made that certain sites lack the ground area required for lagoons. It is the judgment of the EPA staff and its advisors that the recirculation and reuse lagoon is an indispensable part of a wet phosphoric acid production facility. The waste water from this segment of phosphate manufacture, likewise, requires the recirculation lagoon for practicable disposal of some waste water streams. Some type of recirculation system is possible for most locations.

(10) The comment was made that the term "spills and leaks" suggested poor housekeeping on the part of the manufacturer. It is clearly noted in the Development Document that most of these to a certain extent are avoidable occurrences in the manufacturing process. Most of the waste water pollution resultant from these occurrences can be minimized by diligent maintenance of equipment, isolation and reuse, and other good manufacturing and waste water management procedures. This source is commonly the cause of serious pollution and must be controlled. Many of the leaks and spills in this industry can be directed to the gyp pond for recycle or treatment.

(11) The comment was made that phosphate should be regulated on the basis of phosphate available as a plant nutrient instead of total phosphorus. The distinction of available from unavailable phosphorus has some unresolved analytical factors that would make an extremely difficult control problem. The distinction is not essential. The only effluent discharge permitted is clarified effluent. The phosphate present in clarified effluent is mostly soluble, and therefore available as a plant nutrient.

(12) One comment was to the point that test wells for ground water pollution monitoring would be prohibitively expensive. Test wells are in use and are not reported to be excessively costly. This is discussed in Section VII of the Development Document.

(13) A comment has been made to the need for neutralization of gypsum pond water for the purpose of limiting Radium-226. Uranium occurs naturally in phosphate rock, especially that from Florida, and Radium-226 is a particularly dangerous decay product of Uranium.

Sufficient data are not available to form an adequate basis for the specific limitation of Radium-226 in this regulation.

Additional information is currently being developed by the Agency. Appropriate steps may be taken at a future date to reflect such new information in these effluent standards.

(14) A comment has been raised concerning need for a cadmium limitation. Additional information is solicited concerning the need, the technology for removal and the achievable limits.

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

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

The Agency is subject to an order of the United States District Court for the District of Columbia entered in *Natural Resources Defense Council v Train et al.* (Cv. No. 1609-73) which requires the promulgation of regulations for this industry category no later than January 8, 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 EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman. 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 Information Center, Room 227, West Tower, Waterside Mall, 401 M Street SW., Washington, D.C. A copy of preliminary draft contractor reports, the Development Document and economic study referred to above, and certain supplementary materials supporting the study of the industry concerned will also be maintained at this location for public review and copying. The EPA information regulation, 40 CFR Part 2, provides

that a reasonable fee may be charged for copying.

All comments on or before February 26, 1975, will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202). In the event that the final regulation differs substantially from the interim final regulation set forth herein the Agency will consider petitions for reconsideration of any permits issued in accordance with these interim final regulation.

In consideration of the foregoing, 40 CFR Part 422 is hereby amended by adding Subparts D, E, and F, as set forth below.

Dated January 16, 1975.

RUSSELL E. TRAIN,
Administrator.

Subpart D—Defluorinated Phosphate Rock Subcategory

- Sec.
422.40 Applicability; description of the defluorinated phosphate rock subcategory.
422.41 Specialized definitions.
422.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
422.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Subpart E—Defluorinated Phosphoric Acid Subcategory

- 422.50 Applicability; description of the defluorinated phosphoric acid subcategory.
422.51 Specialized definitions.
422.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
422.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Subpart F—Sodium Phosphates Subcategory

- 422.60 Applicability; description of the sodium phosphates subcategory.
422.61 Specialized definitions.
422.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
422.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Subpart D—Defluorinated Phosphate Rock Subcategory

- § 422.40 Applicability; description of the defluorinated phosphate rock subcategory.

The provisions of this subpart are applicable to discharges resulting from the

defluorination of phosphate rock by application of high temperature treatment along with wet process phosphoric acid, silica and other reagents.

§ 422.41 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 Part 401 shall apply to this subpart.

(b) For all impoundments constructed prior to the date of this regulation, the term "within the impoundment" when used for purposes of calculating the volume of process waste water which may be discharged shall mean the water surface area within the impoundment at maximum capacity plus the area of the inside and outside slopes of the impoundment dam and the surface area between the outside edge of the impoundment dam and any seepage ditch immediately adjacent to the dam upon which rain falls and is returned to the impoundment. For the purpose of such calculations, the surface area allowances set forth above shall not be more than 30 percent of the water surface area within the impoundment dam at maximum capacity.

(c) For all impoundments or new source impoundments constructed on or after the date of this regulation, the term "within the impoundment" for purposes of calculating the volume of process water which may be discharged shall mean the water surface area within the impoundment at maximum capacity.

(d) The term "pond water surface area" when used for the purpose of calculating the volume of waste water which may be discharged shall mean the water surface area at normal operating level of the pond created by the impoundment for storage of process waste water. This surface shall in no case be less than one-third of the surface area of the maximum amount of water which could be contained by the impoundment. Normal operating level shall be the average level of the pond during the preceding calendar month.

§ 422.42 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 Re-

gional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(a) Subject to the provisions of paragraphs (b), (c), and (d) of this section, there shall be no discharge of process waste water pollutants into navigable waters.

(b) A process waste water impoundment which is designed, constructed and operated so as to contain the precipitation from the 10 year, 24 hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located may discharge that volume of process waste water which is equivalent to the volume of precipitation that falls within the impoundment in excess of that attributable to the 10 year, 24 hour rainfall event, when such event occurs.

(c) During any calendar month there may be discharged from a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and either the evaporation from the pond water surface area for that month, or a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation from the pond water surface area for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center), whichever is greater.

(d) Any process waste water discharged pursuant to paragraph (c) of this section shall comply with each of the following requirements:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, mg/l)		
Total phosphorus (as P)	70	35
Fluoride	30	15
TSS	50	25
pH	Within the range 6.0 to 9.0.	

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

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

(a) Subject to the provisions of paragraphs (b), (c), and (d) of this section, there shall be no discharge of process waste water pollutants into navigable waters.

(b) A process waste water impoundment which is designed, constructed and operated so as to contain the precipitation from the 25 year, 24 hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located may discharge that volume of process waste water which is equivalent to the volume of precipitation that falls within the impoundment in excess of that attributable to the 25 year, 24 hour rainfall event, when such event occurs.

(c) During any calendar month there may be discharged from a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and either the evaporation from the pond water surface area for that month, or a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation from the pond water surface area for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center), whichever is greater.

(d) Any process waste water discharged pursuant to paragraph (c) of this section shall comply with each of the following requirements:

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Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, mg/l)		
Total phosphorus (as P)	70	35
Fluoride	30	15
TSS	50	25
pH	Within the range 6.0 to 9.0	

Subpart E—Defluorinated Phosphoric Acid Subcategory

§ 422.50 Applicability; description of the defluorinated phosphoric acid subcategory.

The provisions of this subpart are applicable to discharges resulting from the defluorination of phosphoric acid. Wet process phosphoric acid is dehydrated by application of heat and other processing aids such as vacuum and air stripping. The acid is concentrated up to 70–73 percent P₂O₅ in the defluorination process.

§ 422.51 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 Part 401 shall apply to this subpart.

(b) For all impoundments constructed prior to the date of this regulation, the term "within the impoundment" when used for purposes of calculating the volume of process waste water which may be discharged shall mean the water surface area within the impoundment at maximum capacity plus the area of the inside and outside slopes of the impoundment dam and the surface area between the outside edge of the impoundment dam and any seepage ditch immediately adjacent to the dam upon which rain falls and is returned to the impoundment. For the purpose of such calculations, the surface area allowances set forth above shall not be more than 30 percent of the water surface area within the impoundment dam at maximum capacity.

(c) For all impoundments or new source impoundments constructed on or after the date of this regulation, the term "within the impoundment" for purposes of calculating the volume of process water which may be discharged shall mean the water surface area within the impoundment at maximum capacity.

(d) The term "pond water surface area" when used for the purpose of calculating the volume of waste water which may be discharged shall mean the water surface area at normal operating level of the pond created by the impoundment for storage of process waste water. This surface shall in no case be less than one-third of the surface area of the maximum amount of water which could be contained by the impoundment. Normal

operating level shall be the average level of the pond during the preceding calendar month.

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

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

(a) Subject to the provisions of paragraphs (b), (c), and (d) of this section, there shall be no discharge of process waste water pollutants into navigable waters.

(b) A process waste water impoundment which is designed, constructed and operated so as to contain the precipitation from the 10 year, 24 hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located

may discharge that volume of process waste water which is equivalent to the volume of precipitation that falls within the impoundment in excess of that attributable to the 10 year, 24 hour rainfall event, when such event occurs.

(c) During any calendar month there may be discharged from a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and either the evaporation from the pond water surface area for that month, or a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation from the pond water surface area for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center), whichever is greater.

(d) Any process waste water discharged pursuant to paragraph (c) of this section shall comply with each of the following requirements:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, mg/l)		
Total phosphorus (as P)	70	35
Fluoride	30	15
TSS	50	25
pH	Within the range 6.0 to 9.0	

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

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source after application of the best available technology economically achievable:

(a) Subject to the provisions of paragraphs (b), (c), and (d) of this section, there shall be no discharge of process waste water pollutants into navigable waters.

(b) A process waste water impoundment which is designed, constructed and operated so as to contain the precipitation from the 25 year, 24 hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located may discharge that volume of process waste water which is equivalent to the volume of precipitation that falls

within the impoundment in excess of that attributable to the 25 year, 24 hour rainfall event, when such event occurs.

(c) During any calendar month there may be discharged from a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and either the evaporation from the pond water surface area for that month, or a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation from the pond water surface area for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center), whichever is greater.

(d) Any process waste water discharged pursuant to paragraph (c) of this section shall comply with each of the following requirements:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units mg/l)		
Total phosphorus (as P)	70	35
Fluoride	30	15
TSS	50	25
pH	Within the range 6.0 to 9.0.	

Subpart F—Sodium Phosphates Subcategory

§ 422.60 Applicability; description of the sodium phosphates subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of purified sodium phosphates from wet process phosphoric acid.

§ 422.61 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 Part 401 shall apply to this subpart.

§ 422.62 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 sub-categorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

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

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, kg/kg of product)		
TSS	0.50	0.25
Total phosphorus (as P)	0.80	0.40
Fluoride	0.30	0.15
pH	Within the range 6.0 to 9.0.	
(English units, lb/1000 lb of product)		
TSS	0.50	0.25
Total phosphorus (as P)	0.80	0.40
Fluoride	0.30	0.15
pH	Within the range 6.0 to 9.0.	

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

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

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, kg/kg of product)		
TSS	0.35	0.18
Total phosphorus (as P)	0.56	0.28
Fluoride	0.21	0.11
pH	Within the range 6.0 to 9.0.	
(English units, lb/1000 lb of product)		
TSS	0.35	0.18
Total phosphorus (as P)	0.56	0.28
Fluoride	0.21	0.11
pH	Within the range 6.0 to 9.0.	

[FR Doc.75-2263 Filed 1-24-75; 8:45 am]

**ENVIRONMENTAL PROTECTION
AGENCY**

[40 CFR Part 422]

[FRL 326-3]

**PHOSPHATE MANUFACTURING POINT
SOURCE CATEGORY**

**Proposed Performance and Pretreatment
Standards**

Notice is hereby given that standards of performance and pretreatment standards for new sources and pretreatment standards for existing sources set forth in tentative form below are proposed by the Environmental Protection Agency (EPA). On February 20, 1974, EPA promulgated a regulation adding Part 422 to Chapter 40 of the Code of Federal Regulations (39 FR 6580). 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 phosphate manufacturing point source category. The regulation proposed below will amend 40 CFR Part 422, Phosphate Manufacturing Point Source Category, by adding §§ 422.44, 422.45 and 422.46 to the defluorinated phosphate rock subcategory (Subpart D), §§ 422.54, 422.55 and 422.56 to the defluorinated phosphoric acid subcategory (Subpart E) and §§ 422.64, 422.65 and 422.66 to the sodium phosphates subcategory (Subpart F) pursuant to sections 306(b) and 307 (b) and (c) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1316(b) and 1317 (b) and (c), 86 Stat. 816 et seq.; Pub. L. 92-500) (the Act). Simultaneously with this proposed rulemaking EPA is promulgating interim final regulations which establish the above listed subparts.

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

Section 306(b) (1)(B) of the Act requires the Administrator to propose regulations establishing Federal standards of performance for categories of new sources included in a list published pursuant to section 306(b) (1)(A) of the Act. The Administrator published in the FEDERAL REGISTER of January 16, 1973 (38 FR 1624), a list of 27 point source categories, including the phosphate manufacturing category. The regulations proposed herein set forth the standards of performance applicable to new sources for the defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F) of the phosphate manufacturing point source category.

Section 307(c) of the Act requires the Administrator to promulgate pretreatment standards for new sources at the same time that standards of performance for new sources are promulgated pursuant to section 306. Sections 422.46, 422.56, and 422.66, proposed below, provide pretreatment standards for new sources within the defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F) of the phosphate manufacturing 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. Sections 422.44, 422.54 and 422.64 proposed below provide pretreatment standards for existing sources within the defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F) of the phosphate manufacturing point source category.

(b) *Summary and Basis of Proposed Standards of Performance and Pretreatment Standards for New Sources and Pretreatment Standards for Existing Sources.* The general methodology and summary of conclusions are discussed in considerable detail in the preamble of the interim final regulations for the defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F), which are being promulgated by EPA simultaneously with publication of this proposed regulation. The information contained in the preamble to the interim final regulation is incorporated herein by reference. The proposed regulation set forth below proposes pretreatment standards for pollutants introduced into publicly owned treatment works. The proposal will establish for each subpart the extent of application of effluent limitations to existing sources and to new sources which discharge to publicly owned treatment works. The regulation is intended to be complementary to the general regulation for pretreatment standards for existing sources set forth at 40 CFR Part 128. The general regulation was proposed July 19, 1973 (38 FR 19236), and published in final form on November 8, 1973 (38 FR 30982). The regulation proposed below applies to users of publicly owned treatment works which fall within the description of the point source category to which the limitations and standards apply. However, the proposed pretreatment regulation applies to the introduction of pollutants which are directed into a publicly owned treatment works, rather than to discharges of pollutants to navigable waters.

The general pretreatment standard divides pollutants discharged by users of publicly owned treatment works into two broad categories; "compatible" and "in-

compatible." Compatible pollutants are generally not subject to pretreatment standards. However, 40 CFR 128.131 (prohibited wastes) may be applicable to compatible pollutants. Additionally, local pretreatment requirements may apply (See 40 CFR 128.110). Incompatible pollutants are subject generally to pretreatment standards as provided in 40 CFR 128.133.

Sections 422.44, .54 and .64 of the regulation proposed below are intended to implement that portion of section 128.133, above, requiring that a separate provision be made stating the application to pretreatment standards of effluent limitations based upon best practicable control technology currently available.

Questions were raised during the public comment period on the proposed general pretreatment standard (40 CFR Part 128) about the propriety of applying a standard based upon best practicable control technology currently available to all plants subject to pretreatment standards. In general, EPA believes the analysis supporting the effluent limitations and guidelines is adequate to make a determination regarding the application of those standards to users of publicly owned treatment works. However, to ensure that those standards are appropriate in all cases, EPA now seeks additional comments focusing upon the application of effluent limitations guidelines to users of publicly owned treatment works.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the other Non-Fertilizer Phosphate Chemicals Segment of the Phosphate Manufacturing Point Source Category" details the analysis undertaken in support of the regulation being proposed herein and is available for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C., at all EPA regional offices, and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the proposed regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulation or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Phillip B. Wisman.

When this regulation is promulgated, revised copies of the Development Document will be available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Copies of the Economic Analysis will be available through the National Technical Information Service, Springfield, Virginia 22151.

(c) *Summary of public participation.* A full listing of participants and discus-

sion of comments and responses is included in the preamble of the interim final regulation for the defluorinated phosphate rock subcategory (Subpart D), the defluorinated phosphoric acid subcategory (Subpart E) and the sodium phosphates subcategory (Subpart F) being simultaneously promulgated by EPA and are incorporated herein by reference.

Interested persons may participate in this rulemaking by submitting written comments in triplicate to the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Phillip B. Wisman. Comments on all aspects of the proposed regulation are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which are available, or which may be relied upon by the Agency, comments should identify and, if possible, provide any additional data which may be available and should indicate why such data are essential to the development of the regulations. In the event comments address the approach taken by the Agency in establishing a standard of performance or pretreatment standard, EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of sections 306 and 307 (b) and (c) of the Act.

A copy of all public comments will be available for inspection and copying at the EPA Information Center, Room 227, West Tower, Waterside Mall, 401 M Street, SW., Washington, D.C. A copy of preliminary draft contractor reports, the Development Document and economic study referred to above, and certain supplementary materials supporting the study of the industry concerned will also be maintained at this location for public review and copying. The EPA information regulation, 40 CFR Part 2, provides that a reasonable fee may be charged for copying.

All comments received on or before February 26, 1975 will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202).

Dated: January 16, 1975.

RUSSELL E. TRAIN,
Administrator.

PART 422—PHOSPHATE MANUFACTURING POINT SOURCE CATEGORY

Subpart D—Defluorinated Phosphate Rock Subcategory

- Sec. 422.44 Pretreatment standard for existing sources.
- 422.45 Standards of performance for new sources.
- 422.46 Pretreatment standard for new sources.

Subpart E—Defluorinated Phosphoric Acid Subcategory

- Sec. 422.54 Pretreatment standard for existing sources.
- 422.55 Standards of performance for new sources.
- 422.56 Pretreatment standard for new sources.

Subpart F—Sodium Phosphates Subcategory

- 422.64 Pretreatment standard for existing sources.
- 422.65 Standards of performance for new sources.
- 422.66 Pretreatment standard for new sources.

Part 422 is amended as follows:
Subpart D is amended by adding §§ 422.44, 422.45 and 422.46 as follows:

§ 422.44 Pretreatment standard for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the defluorinated phosphate rock subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in 40 CFR Part 128 (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that, for the purpose of this section, 40 CFR 128.121, 128.122, 128.132 and 128.133 shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart:

(a) The volume of waste water that may be discharged is established by § 422.42.

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units) mg/l of effluent discharged		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus....	70.....	35.
Fluoride.....	30.....	15.

§ 422.45 Standards of performance for new sources.

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

(a) Subject to the provisions of paragraphs (b), (c), and (d) of this section, there shall be no discharge of process waste water pollutants into navigable waters.

(b) A process waste water impoundment which is designed, constructed and operated so as to contain the precipitation from the 25 year, 24 hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located may discharge that volume of process waste water which is equivalent to the volume of precipitation that falls within the impoundment in excess of that attributable to the 25 year, 24 hour rainfall event, when such event occurs.

(c) During any calendar month there may be discharged from a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and either the evaporation from the pond water surface area for that month, or a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation from the pond water surface area for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center), whichever is greater.

(d) Any process waste water discharged pursuant to paragraph (c) of this section shall comply with each of the following requirements:

Pollutant or pollutant property	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, mg/l)		
Total phosphorus (as P).....	70.....	35
Fluoride.....	30.....	15
TSS.....	50.....	25
pH.....	Within the range 6.0 to 9.0.	

§ 422.46 Pretreatment standard for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the defluorinated phosphate rock subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in 40 CFR Part 128 (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in 40 CFR 128, for existing sources, except that, for the purpose of this section, 40 CFR 128.121, 128.122, 128.132 and 128.133 shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment

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works by a new source subject to the provisions of this subpart:

(a) The volume of waste water that may be discharged is established by § 422.42.

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units) mg/l of effluent discharged		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus..	70.....	35.
Fluoride.....	30.....	15.

Subpart E is amended by adding §§ 422.54, 422.55 and 422.56 as follows:

§ 422.54 Pretreatment standard for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the defluorinated phosphoric acid subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in 40 CFR Part 128 (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that, for the purpose of this section, 40 CFR 128.121, 128.122, 128.132 and 128.133 shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart:

(a) The volume of waste water that may be discharged is established by § 422.52.

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units) mg/l of effluent discharged		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus..	70.....	35.
Fluoride.....	30.....	15.

§ 422.55 Standards of performance for new sources.

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

(a) Subject to the provisions of paragraphs (b), (c), and (d) of this section, there shall be no discharge of process waste water pollutants into navigable waters.

(b) A process waste water impoundment which is designed, constructed and operated so as to contain the precipitation from the 25-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located may discharge that volume of process waste water which is equivalent to the volume of precipitation that falls within the impoundment in excess of that attributable to the 25-year, 24-hour rainfall event, when such event occurs.

(c) During any calendar month there may be discharged from a process waste water impoundment either a volume of process waste water equal to the difference between the precipitation for that month that falls within the impoundment and either the evaporation from the pond water surface area for that month, or a volume of process waste water equal to the difference between the mean precipitation for that month that falls within the impoundment and the mean evaporation from the pond water surface area for that month as established by the National Climatic Center, National Oceanic and Atmospheric Administration, for the area in which such impoundment is located (or as otherwise determined if no monthly data have been established by the National Climatic Center), whichever is greater.

(d) Any process waste water discharged pursuant to paragraph (c) of this section shall comply with each of the following requirements:

Pollutant or pollutant property	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, mg/l)		
Total phosphorus (as P).....	70.....	35
Fluoride.....	30.....	15
TSS.....	50.....	25
pH.....	Within the range 6.0 to 9.0.	

§ 422.56 Pretreatment standard for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the defluorinated phosphoric acid subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in 40 CFR Part 128 (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in 40 CFR Part 128, for existing sources, except that, for the purpose of this section, 40 CFR 128.121, 128.122, 128.132 and 128.133 shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties con-

trolled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

(a) The volume of waste water that may be discharged is established by § 422.42.

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units) mg/l of effluent discharged		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus..	70.....	35.
Fluoride.....	30.....	15.

Subpart F is amended by adding §§ 422.64, 422.65 and 422.66 as follows:

§ 422.64 Pretreatment standard for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the sodium phosphates subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in 40 CFR 128 (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR 128, except that, for the purpose of this section, 40 CFR 128.121, 128.122, 128.132 and 128.133 shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units) kg/kg of product		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus..	0.80.....	0.40.
Fluoride.....	0.30.....	0.15.
(English units) lb/1000 lb of product		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus..	0.80.....	0.40.
Fluoride.....	0.30.....	0.15.

§ 422.65 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be dis-

charged by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units, kg/kg of product)		
TSS.....	0.35.....	0.18
Total phosphorus (as P).....	0.56.....	0.28
Fluoride.....	0.21.....	0.11
pH.....	Within the range 6.0 to 9.0.	
(English units, lb/1000 lb of product)		
TSS.....	0.35.....	0.18
Total phosphorus (as P).....	0.56.....	0.28
Fluoride.....	0.21.....	0.11
pH.....	Within the range 6.0 to 9.0.	

§ 422.66 Pretreatment standard for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the sodium phosphates subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in 40 CFR 128 (and which would be a new source subject to section 306 of the Act, if it were to

discharge pollutants to the navigable waters), shall be the same standard as set forth in 40 CFR 128, for existing sources, except that, for the purpose of this section, 40 CFR 128.121, 128.122, 128.132 and 128.133 shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed—
(Metric units) kg/kg of product		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus.....	0.80.....	0.40.
Fluoride.....	0.30.....	0.15.
(English units) lb/1000 lb of product		
BOD ₅	No limitation...	No limitation.
TSS.....	No limitation...	No limitation.
pH.....	No limitation...	No limitation.
Total phosphorus.....	0.80.....	0.40.
Fluoride.....	0.30.....	0.15.

[FR Doc.75-2264 Filed 1-24-75;8:45 am]

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As part of its continuing program to improve the quality of the daily FEDERAL REGISTER and CODE OF FEDERAL REGULATIONS, the Office of the Federal Register is soliciting the views of interested persons on the effectiveness of individual Federal Register documents and on regulations contained in the CODE OF FEDERAL REGULATIONS.

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We believe this effort is consistent with the objectives stated by President Ford in his October 8th speech on the economy in which he announced "a joint effort by the Congress, the executive branch and the private sector to identify and eliminate existing Federal rules and regulations that increase costs to the consumer without any good reason in today's economic climate."

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