Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER N—EFFLUENT LIMITATIONS, GUIDELINES AND STANDARDS

[FRL 500-1]

PART 457—EXPLOSIVES MANUFACTURING POINT SOURCE CATEGORY

Notice of Interim Final Rule Making

Notice is hereby given that effluent limitations and guidelines for existing sources to be achieved by the application of best practicable control technology currently available as set forth in interim final form below are promulgated by the Environmental Protection Agency (EPA). The explosives manufacturing point source category covers both the military and commercial manufacturing operations. The regulation set forth below establishes Part 457—explosives manufacturing point source category and will be applicable to existing sources for the manufacture of explosives subcategory (Subpart A) and the explosives load, assemble and pack plants subcategory (Subpart C) of the explosives manufacturing 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.; Pub. L. 92-500) (the Act). Simultaneously, the Agency is publishing in proposed form effluent limitations and guidelines for existing sources to be achieved by the application of best available technology economically achievable, standards of performance for new point sources and pretreatment standards for existing sources and for new sources for the manufacture of explosives subcategory (Subpart A) and the explosives load, assemble and pack plants subcategory (Subpart C).

(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 regluations 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 manufacture of explosives subcategory (Subpart A) and the explosives load, assemble and pack plants subcategory (Subpart C) of the explosives 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.

(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 manufacture of explosives subcategory (Subpart A) and the explosives load, assemble and pack plants subcategory (Subpart C) of the explosives 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.

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 water. The constituents of the waste waters which should be subject to effluent limitations were identified.

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

plosives load, assemble and pack plants subcategory (Subpart C) of the explosives manufacturing point source category.

(i) Categorization.

For the purpose of establishing effluent limitations, guidelines and standards, the manufacture of explosives was divided into four subcategories which facilitated the study of explosives manufacturing. Only two subcategories, the manufacture of explosives (Subpart A) and the explosive load, assemble and pack plants (Subpart C), are being promulgated at this time.

Factors such as type of product, raw waste loads, water requirements, type of manufacturing processing, treatability of wastewaters and other means were used to establish effluent limitations guidelines and standards of performance for each of the specific subcategories. In general, the largest contributing factors are processing and treatability based on production volume and specific water requirements.

Hence, this broad base subcategorization scheme simplifies the application of effluent limitations and guidelines for a complex mix of production activity and a large number of selected explosives groupings. This scheme reflects differences in the character, the volume and the treatability of wastewater streams due to manufacturing process variables unique to each grouping of explosive products.

(ii) Waste characteristics.

The known significant wastewater pollutants and pollutant properties resulting from the explosives manufacture include pH, TSS, BOD5, COD, TOC, O&G and metals. BOD5, COD, and TOC, which are primary measurements for organic pollution, are evident in wastewaters from explosives manufacturing.

(iii) Origin of waste water pollutants.

Sources of wastewater pollutants in aqueous wastes from reactors, filtration systems, decanting systems, distillation vacuum exhaust scrubbers, caustic scrubbers, process equipment cleanouts, production area washdowns, refining area washdowns, formulation equipment cleanup and spill washdowns.

Pollutant parameters for explosives manufacturing pertain to waste waters from process operations. Process waste water pollutants are proportional to the level of production and it was therefore possible to establish limitations and standards on the basis of production. Other pollutant sources within explosives manufacturing plants from nonprocess sources such as utilities, labs, terminals and others are generally not related to production unless otherwise noted.

(iv) Treatment and control technology.

Wastewater treatment and control technologies have been studied for each subcategory to determine what is the best practicable control technology currently available.

The following discussion of treatment technology provides the basis for the effluent limitations guidelines. This discussion does not preclude the selection of other wastewater treatment alternatives which provide equivalent or better levels of treatment.

Wasterwater impoundments, if not properly designed, maintained and operated, may be subject to runoff from their drainage area. New sources can be properly located and designed to avoid this problem. Furthermore, existing impoundments can be modified by construction of diversion ditches or by increasing the amount of surge capacity of the impoundment with either a higher dam or a lower operating water level. Through use of these techniques, a rainfall up to the 25 year-24 hour event can be prevented from causing the discharge of process waste water pollutants.

The application and performance of various control and treatment technologies to reduce the quantities of pollutants discharged to navigable waters as a result of the production or processing operations in the explosives manufacturing are specific to the product manufactured or processed. However, many in-process control measures, as well as end-of-pipe treatment systems, may be generally applied to several product subcategories.

Good in-process control is a significant pollution abatement technique for all products produced in the manufacture of explosives. Practices such as minimization and containment of spills and leaks, segregation of waste streams, monitoring process waste water, water conservation and reuse, waste water equalization and good housekeeping, process operation and equipment maintenance are necessary to eliminate or reduce the volume of process waste water requiring treatment.

All subcategories generate process waste water streams which must be controlled and treated. The constituents contained in the process waste water vary with the chemical or explosive product produced. Suspended solids are present as a result of most production processes. These may generally be removed by sedimentation basins, clarifiers, filters, centrifuges and evaporation. These treatment technologies can be used when combined with disposal of residue.

Numerous metal ions and metal compounds are generated by the processes used to manufacture many explosives. Treatment of these wastes generally consists of various precipitation processes and subsequent solids removal.

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

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

For those waste materials considered to be nonhazardous 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 Part 241 may be used as guidance for acceptable land disposal techniques.

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

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

Capital and annual costs were computed for each product type/process within a subcategory on the basis of the cost per 1,000 pounds. Due to the complexity and degree of integration in this point source category, it was necessary to make some simplifying assumptions in order to determine costs on a product by product basis. These assumptions are:

(1) that each product type process is a discrete plant whose process wastewater is treated in a single end-of-process waste treatment system.

(2) that all wastewaters are treated by the model end-of-process system regardless of alternate disposal techniques and in-process changes.

Removal of dissolved solids is expensive at this time. The disposal of soluble solids once they have been removed from the waste water is another difficult problem. New plants have more options in solving these problems economically than do existing plants. New source facilities with heavy dissolved solids effluents and/or heavy solid waste loads may avoid costly waste water treatments by geographical location. A favorable balance of climatic evaporation to rainfall eases these problems. Land storage or landfill space should be available for solids disposal.

Methods which may be employed to avoid major pollution problems include

use of: (1) dikes, emergency holding ponds, catch basins and other containment facilities, for leaks, spills and wash downs, in those cases where it is not possible to minimize these by modifications to in-plant operations, (2) piping, trenches, sewers, sumps, and other isolation facilities to keep leaks, spills and process water separate from cooling and (3) non-contact condensers for cooling water, (4) efficient reuse, recycling and recovery of all possible raw materials and by-products and (5) closed cycle water utilization whenever possible. Closed cycle operation eliminates all waterborne wastes to surface water.

Alternate disposal methods such as incineration or like processes are also commonly used for disposal of highly concentrated and difficult wastes. In any specific case, the manufacturer can best determine the most attractive economic alternatives for in-process controls and end-of-process treatment which will meet the limitations required.

Cost information was obtained directly from manufacturers, from engineering firms, equipment suppliers, government sources and available literature whenever possible. Costs are based on actual industrial installations or engineering estimates for projected facilities as supplied by contributing companies. In the absence of such information, costs estimates have been developed from either plant-supplied costs for similar waste treatment installation at plants making similar chemicals or general cost estimates for treatment technology.

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

The major nonwater quality consideration which may be associated with in-process control measures is the use of alternative means of ultimate disposal. As the process raw waste load (RWL) is reduced in volume, alternate disposal techniques may become feasible. Recent regulations are tending to limit the use of ocean discharge and deep-well injection because of the potential long-term detrimental effects associated with these disposal procedures. Incineration is a viable alternative for concentrated waste streams. Associated air pollution and the need for auxiliary fuel, depending on the heating value of the waste, are considerations which must be evaluated on an individual basis for each use.

Other nonwater quality aspects, such as noise levels, will not be perceptibly affected. Most chemical plants generate fairly high noise levels [(85–95) dB] within the battery limits because of equipment such as pumps, compressors, steam jets, flare stacks, etc. Equipment associated with in-process or end-of-pipe control systems would not add significantly to these levels.

Energy requirements associated with treatment and control technologies are estimated to be less than 2% of total plant energy requirements and are not significant when compared to the total energy requirements for this industry.

(vii) Economic impact analysis.

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, and OMB Circular A–107 (January 28, 1975) prescribes guidelines for the identification and evaluation of major proposals requiring preparation of inflationary impact certifications. The approved EPA criteria provide that all regulatory actions which are, likely to result in capital investment exceeding $100 million or annualized costs in exess of $50 million will require certification. The Agency's analysis indicates a $3.9 million annual cost and a $13.0 million investment for the manufacture of explosives and load, assemble and pack subcategories to meet both the 1977 and 1983 effluent limitations and guidelines, which do not exceed the specified amounts. However, the following economic and inflationary impact statement has been performed and meets all the necessary requirements.

The Agency has considered the economic impact of the internal and external costs of the effluent limitations guidelines. Internal costs given in 1975 dollars are defined as investment and annual cost, where annual cost is composed of operating costs, maintenance cost, the cost of capital and depreciation. External cost deals with the assessment of the economic impact of the internal costs in terms of price increases, production curtailments, plant closures, resultant unemployment, community and regional impacts, international trade, and industry growth.

The total investment required by both subcategories to comply with these regulations is $6.3 million for 1977 effluent limitations and an additional $6.7 million for 1983 effluent limitations. The annual costs are $2.1 million for 1977 effluent limitations and an additional $1.8 million for 1983 effluent limitations. The manufacture of explosives subcategory and the load, assemble, and pack subcategory both have relatively small internal cost, causing the external cost to be minimal.

The manufacture of explosives subcategory needs an investment of $3.5 million to meet the 1977 effluent limitations and an additional $2 million investment is necessary to meet the 1983 effluent limitations. The annual costs for this subcategory are $0.8 million for meeting the 1977 effluent limitations and an additional $0.7 million for meeting the 1983 effluent limitations. The unit treatment cost is only 0.9 to 1.9 percent of selling price for the 1977 effluent limitations and 1.7 to 3.4 percent of selling price for the 1983 effluent limitations. Most of the treatment cost for 1983 would not be required, since there is currently a strong trend towards producing ammonium nitrate based explosives rather than the more polluting nitroglycerin based explosives. Due to this industry trend and the fairly small magnitude of the costs due to 1977 standards, it is estimated that the economic impact on this subcategory is minimal.

The load, assemble and pack plant subcategory requires an investment of $2.8 million to meet the 1977 effluent limitations and an additional $4.7 million investment is necessary to meet the 1983 effluent limitations. The annual costs for this subcategory are $1.3 million for meeting the 1977 effluent limitations and an additional $1.1 million for meeting the 1983 effluent limitations. The unit treatment cost is 0.9 percent of selling price for the 1977 effluent limitations and 1.7 percent of selling price for 1983 effluent limitations. These percentages are based on the least expensive product, and would be even lower for the higher priced products. Additionally, recent historical data indicates that the demand elasticity for these products is fairly high. Therefore, it is expected that most of these costs will be passed on to the consumers of the products. For these reasons, combined with the relatively low treatment costs, the potential economic impact is expected to be insignificant.

The report entitled "Development Document for Interim Final Effluent Limitations, Guidelines and Proposed New Source Performance Standards for the Explosives Manufacturing Point Source Category" details the analysis undertaken in support of the interim final regulation set forth herein and is available for inspection in the EPA Public Information Reference Unit, Room 2922 (EPA Library), Waterside Mall, 401 M St., SW., Washington, D.C. 20460, 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 are available. Persons wishing to obtain a copy may write the Environmental Protection Agency, Effluent Guidelines Division, Washington, D.C. 20460, Attention: Distribution Officer, WH–552.

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

(c) Summary of public participation.

Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of effluent limitations, guidelines and standards proposed for the explosives manufacturing category. An initial draft of the Development Document was sent to most participants and comments were solicited on that report. The following are the principal agencies and groups consulted: Effluent Standards and Water Quality Information Advisory

Committee (established under section 515 of the Act); all State and U.S. Territory Pollution Control Agencies; Naval Facilities Engineering Command; Olin Corporation; Hercules, Inc.; E. I. DuPont de Nemours and Company; Tennessee Eastman Company; Environmental Defense Fund, Inc.; Natural Resources Defense Council; American Society of Civil Engineers; Water Pollution Control Federation; U.S. Army Corps of Engineers; Institute of Makers of Explosives; Bureau of Explosives, Association of American Railroads; U.S. Army Environmental Hygiene Agency; American Defense Preparedness Association; The Fertilizer Institute; Manufacturing Chemists Association; U.S. Department of Defense; U.S. Department of Interior; Atlas Powder Company; and U.S. Department of the Army.

The following responded with comments; Manufacturing Chemists Association; U.S. Water Resources Council; U.S. Department of Defense; U.S. Department of Interior; State of Delaware Department of Natural Resources and Environmental Control; North Carolina Department of Natural and Economic Resources; Michigan Department of Natural Resources; Effluent Standards and Water Quality Information Advisory Committee; National Ecological Research Center; Atlas Powder Company; Bureau of Explosives, Association of American Railroads; E. I. DuPont de Nemours and Company; Department of the Army; and Picatinny Arsenal.

The primary issues raised in the development of the interim final effluent limitations and guidelines and the treatment of these issues herein are as follows:

(1) A commenter stated that water gel manufacturing did not belong in the load, assemble and pack plant subcategory.

Water gels are manufactured from similar raw materials, generate only clean-up wastewater, and have similar raw waste loads as ANFO and other load, assemble and pack plant products, and therefore have been included in Subcategory C.

(2) It was commented that the nitroglycerin (NG) preparation described in the draft document is not currently used by the military. The Army currently uses the Biazzi process for continuous manufacture of NG.

The intent of the draft document is to cover both commercial and military explosives manufacturing operations. Commercial NG production is by the batch method and is therefore considered appropriate. The Agency is continuing to collect data on the military sector where continuous processes have been installed for nitrocellulose, nitroglycerin, and trinitrotoluene and may in the future issue different regulations for these processes.

(3) Several commenters questioned the BATEA treatment technology which is defined as filtration and activated carbon added on to the BPCTCA treatment system. Concern was expressed over the safety of the carbon regeneration step.

A number of full size activated carbon columns are currently in operation at several military manufacturing sites. To our knowledge, these operations have been executed safely. The Agency is continuing to develop a reliable data base and is charged with the responsibility to review regulations as new data becomes available.

(4) Various commenters expressed concern with the heavy reliance on biological treatment of wastes from explosives and propellants.

Treatment systems studied in the field survey were biological. The exemplary plant utilized an activated sludge system. As noted in the Development Document, the reliance on biological systems in establishing the effluent limitations does not mean that this is the only method of achieving the effluent limitations. The waste treatment models are used to facilitate economic analysis.

(5) Two commenters noted that the contractors list of significant waste water pollutant parameters is incomplete. It was suggested that pH, oil and grease, phenols, ammonia nitrogen, heavy metals, color, sulfate, nitrates and total Kjeldahl nitrogen be added.

The Agency has revised the original list of pollutant parameters printed in the draft development document. Those which are to be controlled are shown in this regulation for the subcategories being promulgated today. Some waste water pollutant parameters which were found to be present in small quantities are not proposed to be controlled at this time; however, additional studies are continuing and these may be controlled in the future.

(6) One commenter pointed out that pH variations in industry wastewater effluents are a result of the manufacture of acids and their recovery in addition to the explosives manufacturing operations. Because there is such a wide variation of pH levels and because treatment technology is available, effluent limitations should be established for this parameter.

The use of a biological treatment technology requires a pH range of 6 to 9 with the appropriate neutralization and equalization facilities to avoid shock loads to the microorganisms. The pH limitation for these explosives subcategories will be set for that range.

(7) It was suggested that additional emphasis be placed on alternative physical-chemical treatment methods which would convert the nitroglycerin, in situ, to less hazardous components rather than depend wholly on biological treatment.

The Agency agrees that the above method is a viable procedure and is an appropriate technique. The Agency has repeatedly advised that the proposed treatment model technology is only one method of meeting the limitation and that other technology can be used wherever appropriate to meet the limitations.

(8) A commenter stated that ultimate disposal methods, such as spray irrigation and deep wells, have apparently not been considered, but should be considered if only to document their relevance in terms of treatment.

Deep well disposal of explosive waste is a potential hazard to the aquifier. Therefore, this technology is not practiced by the industry and is not recommended. Spray irrigation appears to be an acceptable system where adequate land is available.

(9) Two commenters stated that they challenged the selection of biological treatment for BPCTCA based on one commercial plant.

Pollution treatment in this industry is almost uniformly inadequate. Therefore, the best information available from the industry and transfer technology between subcategories within the same industry was used in developing the limitations based on the use of a biological waste treatment system or its equivalent.

(10) One commenter pointed out that the draft document does not illustrate a prilling process.

Prill towers for ammonium nitrate are covered under existing limitations for fertilizers. The regulation for the load, assemble and pack plants subcategory applies to the production of ammonium nitrate fuel oil (ANFO) for blasting purposes.

(11) It was claimed that downflow fixed-bed carbon columns are not the recommended current treatment for TNT. One commenter stated that the Army concluded that the up flow series of fixed beds was most effective, operable and economic.

The Agency has available to it a number of sources of information on application of activated carbon including trade literature from companies who both sell activated carbon and who will be impacted by this regulation. In addition, texts on carbon adsorption are available to the public, including Agency publications. These publications do not constitute endorsement or recommendation by the U.S. Environmental Protection Agency. It is expected that plant management and its engineers will use the best available information from all sources in designing and operating the needed carbon columns.

(12) In regards to the limitations presented in Section II for BPCTCA, BATEA and BADCT in the draft document, a commenter questioned the fact that the daily maximum is increased over the daily average (maximum thirty day limitation) by a factor less than two. His experience showed that a twofold increase is insufficient to cover the statistically significant variations encountered in the biological treatment facilities operated by his company.

Because treatment is almost non-existent for this point source category and only one plant has been considered exemplary a very limited data base exists. The daily maximum and daily average for BOD and COD have been developed from this data. Our numbers show approximately a two-fold ratio of maximum values to average values; the Agency has used a factor of three to establish the maximum day limitation on the basis of information gained by the use of technology transfer. When a more reliable data base is developed the Agency is

charged with the responsibility to review the regulations. At that time the variability factors will be reevaluated.

(13) It was stated by one commenter that the contractor draft document should have indicated restrictions on the allowable discharge of specific pollutants (such as TNT, RDX, etc.).

The time constraints imposed upon the Agency precluded an exhaustive testing and sampling program for trace quantities of explosives by specific compound(s) at this time. The data base available on trace quantities of specific explosives is very limited and judged to be insufficient to develop regulations at this time. Therefore, gross parameters such as BOD5, COD, TOC and TSS have been relied upon for these effluent limitations.

(14) Various commenters made statements that performance factors from the pharmaceutical industry should not have been used to establish TSS (total suspended solids) effluent limitations guidelines in explosives manufacturing.

Due to the similarity of the wastes generated and treatment systems available for use in both the pharmaceutical and explosives point source categories, the technology has been transferred. Both are generally batch type operations using non-dedicated equipment and generating a wide pH range of effluents. In addition, the treatment technology from the inorganic chemicals manufacturing point source category, the fertilizer manufacturing point source category and the petroleum refining point source category have been transferred to applicable subcategories in this point source category. The wastes from the fertilizer and petroleum manufacturing processes and their treatability are quite similar to treatment in this point source category and the model technologies are therefore used.

(15) Current economic impact data indicates that the original treatment model (filtration and activated carbon added on to BPCTCA) used for BAT in subcategory C may be excessive.

In order to compensate for this potential problem, more appropriate limitations and technology have been set forth in Section XI (New Source Performance Standards) of the development document and § 457.35 of the regulations shall be applied as BATEA for subcategory C. The Agency is developing additional data in this respect and it is possible that at a future date the activated carbon step may again be considered in the waste treatment system.

A number of other comments were received and were considered not to be applicable to the subcategories being promulgated today and have been omitted from the preceding discussion. Appropriate consideration and responses will be made at the time of publication of the regulations applicable to those subcategories.

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) motion for modification which requires the promulgation of regulations for this point source category no later than March 1, 1976. 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, 401 M St. SW., Washington, D.C. 20460, Attention: Distribution Officer, WH–552. Comments on all aspects of the regulation are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which are available, or which may be relied upon by the Agency, comments should identify and, if possible, provide any additional data which may be available and should indicate why such data are essential to the amendment or modification of the regulation. In the event comments address the approach taken by the Agency in establishing an effluent limitation or guideline EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of sections 301 and 304(b) of the Act.

A copy of all public comments will be available for inspection and copying at the EPA Public Information Reference Unit, Room 2922 (EPA Library), Waterside Mall, 401 M St. 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 on or before April 8, 1976 will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202). In the event that the final regulation differs substantially from the interim final regulation set forth herein the Agency will consider petitions for reconsideration of any permits issued in accordance with these interim final regulations.

In consideration of the foregoing, 40 CFR Part 457 is hereby established as set forth below.

Dated: February 27, 1976.

RUSSELL E. TRAIN,
Administrator.

Subpart A—Manufacture of Explosives Subcategory

Sec.
457.10 Applicability; description of the commercial manufacturer of explosives subcategory.
457.11 Specialized definitions.
457.12 Effluent limitations and guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart B—[Reserved]

Subpart C—Explosives Load, Assemble, and Pack Plants Subcategory

Sec.
457.30 Applicability; description of the commercial explosives load, assemble and pack plants subcategory.
457.31 Specialized definitions.
457.32 Effluent limitations and guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

AUTHORITY: Secs. 301, 304(b) and (c), 306 (b), 307(b) and (c), Federal Water Pollution Control Acts, as amended (33 U.S.C. 1251, 1311, 1314(b) and (c), 1316(b) and 1317(b) and (c), 86 Stat. 816 et seq.; Pub. L. 92-500) (the Act).

Subpart A—Manufacture of Explosives Subcategory

§ 457.10 Applicability; description of the commercial manufacture of explosives subcategory.

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

§ 457.11 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 "product" shall mean dynamite, nitroglycerin, cyclotrimethylene trinitramine (RDX), cyclotetramethylene tetranitramine (HMX), and trinitrotoluene (TNT).

§ 457.12 Effluent limitations and 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, FPA 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.

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

[Metric units, kg/kkg of product; English units, lb/1,000 lb of product]

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for 30 consecutive days shall not exceed—
COD	7.77	2.59
BOD_5	0.72	0.24
TSS	0.25	0.084
pH	Within the range 6.0 to 9.0.	

Subpart B—[Reserved]

Subpart C—Explosives Load, Assemblo, and Pack Plants Subcategory

§ 457.30 Applicability; description of the commercial explosives load, assemble and pack plants subcategory.

The provisions of this subpart are applicable to discharges resulting from explosives load, assemble and pack plants.

§ 457.31 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 "product" shall mean products from plants which blend explosives and market a final product, and plants that fill shells and blasting caps. Examples of such installations would be plants manufacturing ammonium nitrate and fuel oil (ANFO), nitrocarbonitrate (NCN), slurries, water gels, and shells.

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

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

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged from the explosives load, assemble and pack plants by a point source subject to the provisions of this paragraph after application of the best practical control technology currently available:

[Metric units, kg/kkg of product; English units, lb/1,000 lb of product]

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
O&G	0.11	0.035
TSS	0.25	0.083
pH	Within the range 6.0 to 9.0.	

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