

Title 40—Protection of the Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER N—EFFLUENT GUIDELINES AND STANDARDS

PART 426—GLASS MANUFACTURING POINT SOURCE CATEGORY

Insulation Fiberglass Subcategory

On August 22, 1973 notice was published in the FEDERAL REGISTER (38 FR 22606), that the Environmental Protection Agency (EPA or Agency) was proposing effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources within the insulation fiberglass subcategory of the glass manufacturing category of point sources. The purpose of this notice is to establish final effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources in the insulation fiberglass subcategory of the glass manufacturing category of point sources, by amending 40 CFR Chapter I, Subchapter N, to add a new part 426. This final rulemaking is promulgated pursuant to sections 301, 304(b) and (c), 306(b) and (c), 307(c) and 316(b) of the Federal Water Pollution Control Act, as amended (the Act) 33 U.S.C. 1251, 1311, 1314 and 1317(b); 86 Stat. 816 et seq.; Pub. L. 92-500.

In addition, the EPA is simultaneously proposing a separate provision which appears in the proposed rules section of the FEDERAL REGISTER, stating the application of the limitations and standards set forth below to users of publicly owned treatment works which are subject to pretreatment standards under section 307(b) of the Act. The basis of that proposed regulation is set forth in the associated notice of proposed rulemaking.

The legal basis, methodology and factual conclusions which support promulgation of this regulation were set forth in substantial detail in the notice of public review procedures published August 6, 1973 (38 FR 21202) and in the notice of proposed rulemaking for the insulation fiberglass subcategory. In addition, the regulations as proposed were supported by two other documents: (1) The document entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Insulation Fiberglass Manufacturing Segment of the Glass Manufacturing Point Source Category" (August 1973), and (2) the document entitled "Economic Analysis of Proposed Effluent Guidelines, Insulation Fiberglass Industry" (August 1973). Both of these documents were made available to the public and circulated to interested persons at approximately the time of publication of the notice of proposed rulemaking.

Interested persons were invited to participate in the rulemaking by submitting written comments within 30 days from the date of publication. Prior public participation in the form of solicited comments and responses from the States,

Federal agencies, and other interested parties was described in the preamble to the proposed regulation. The EPA has considered carefully all of the comments received, and a discussion of these comments with the Agency's response thereto follows in this document.

The regulation as promulgated contains minor but significant departures from the proposed regulation. The following discussion outlines the reasons why these changes were made and why other suggested changes were not made.

(a) *Summary of comments.* The following responded to the request for written comments contained in the preamble to the proposed regulation: The State of Illinois Environmental Protection Agency; Certain-Teed Products Corporation; The U.S. Department of Commerce; and Owens-Corning Fiberglass Corporation.

Each of the comments received was carefully reviewed and analyzed. The following is a summary of the significant comments and the Agency's response to those comments.

(1) It was suggested that noncontact cooling water should be addressed by a guideline covering noncontact cooling water from all industrial categories. It was further pointed out that under certain conditions noncontact cooling water cannot be recycled. For this reason it was urged that a discharge of noncontact cooling water be allowed, since only a relatively small volume of water can be evaporated on the fiberglass as overspray or as binder dilution water.

The case for allowing the discharge of noncontact cooling water, particularly under irregular and emergency operating conditions, is sufficiently valid, that the final regulation allows discharges of noncontact cooling water. It should be noted, however, that the Agency proposes to develop guidelines regulating the discharge of noncontact cooling water at a future date and that that regulation, when promulgated, will apply to discharges of noncontact cooling water from point sources in the insulation fiberglass subcategory.

(2) It was requested that provision be made in the regulation for discharge during emergency situations or manufacturing shutdowns of selected process waste water. In particular, where cullet retention ponds are impractical the need to discharge cullet water was emphasized.

Cullet water is needed to solidify molten glass drawn from a furnace when the glass spinning portion of the operation is interrupted or discontinued. Cullet water by itself contains only suspended solids in the form of finely divided glass particles and heat. There is reason to believe that the discharge of these particles to navigable waters could cause substantial harm to aquatic life. However, the discharge of cullet water to a publicly owned sewage treatment works would be expected to cause no problems. Section 426.16 has been revised to allow the discharge of cullet water to publicly owned treatment works without pretreatment.

(3) The point was made that as a result of the installation of advanced air emission control devices to meet Federally approved State standards, the raw waste load of the process and the quantity of waste water has increased substantially. According to the commenter, this excess volume cannot be disposed of during the normal production cycle as binder dilution and overspray water. The commenter, therefore, has requested a variance from the no discharge of process waste water pollutants to navigable waters guideline.

It should be pointed out that the other two major producers of insulation fiberglass have indicated that they are or will be in compliance with the air emission standards for particulates and odor while maintaining a closed cycle process water recirculation system which results in no discharge of process waste water pollutants to navigable waters. However, they also pointed out that process changes were required to accomplish this. Although best practicable control technology may include in-process control changes, it principally involves end-of-pipe treatment systems. Both best available technology and best available demonstrated control technology, applicable to 1983 and new source performance requirements respectively, clearly include internal process revisions. On this basis, the Agency has determined that a discharge of process waste water pollutants resulting from the mandatory application of advanced air pollution control systems will be allowed in the 1977 limitation for that amount of air pollution control water which cannot be absorbed in the process water recirculation system after such excess water has been adequately treated.

(4) One commenter indicated that one plant had been unable to achieve total recycle after a few months of system operation and shakedown. On this basis, the company concluded that total recycle of process waste waters could not be achieved by 1977.

Another plant of the same company is achieving, with some difficulty, total recycle of process waste water with a less elaborate treatment scheme than the inoperable one referred to above. No valid reasons have been presented to indicate why the no discharge requirement is not properly applicable to the subject plant, and the Agency believes that the company in question can adjust the treatment system to function properly in advance of the July 1, 1977 deadline.

(5) One commenter stated that a no discharge guideline legally could not be applied until 1985.

This issue was previously cited and answered in the preamble to the proposed regulation (38 FR 22606).

(6) It was mentioned that the EPA cost estimates for waste treatment and recycle systems were less than the industry cost estimates, especially for small plants. The Development Document contains cost estimates prepared by EPA and the insulation fiberglass industry. These

two estimates are generally in close agreement.

(7) It was commented that textile fiberglass has not been explicitly excluded from these effluent limitations guidelines and standards.

As indicated in section 426.10, this regulation applies only to insulation fiberglass, and no exclusionary language relative to textile fiberglass is necessary.

(b) Revision of the proposed regulation prior to promulgation.

As a result of public comments and continuing review and evaluation of the proposed regulation by the EPA, the following changes have been made in the regulation.

(1) Minor adjustments have been made to reflect the fact that an increased number of definitions and analytical methods have been included in 40 CFR 401 and are incorporated by reference in this subpart.

(2) A discharge of waste water has been allowed which cannot be reused in the waste water recycle circuit because of the installation of advanced air pollution control devices. The technology for achieving this level of pollutant control was set forth in the Development Document to support the proposed regulation and is also contained in the Development Document supporting this final rule-making. Basically the technology is that of biological treatment, using a biota which has been acclimated to the particular waste stream. The technology on which this allowance is based was originally applied to the entire waste stream of an insulation fiberglass plant. Although technically successful, additional treatment to meet anticipated water quality standards proved too costly, and the entire system was replaced by the total recirculation system. Because it is being applied only to the effluent from air pollution control devices, the waste loading should be substantially lower and the treatment technology should be at least as effective as when it was applied to the total waste stream.

This allowance for discharge from air pollution control devices is neither contained in the 1983 standard nor in the new source performance standard. The amount of time available for compliance with the July 1, 1983, guideline is adequate to allow for such process revisions as are necessary to ensure meeting the 1983 requirement which is no discharge of process waste water pollutants to navigable waters. Similarly, no allowance is made for new source performance standards since the options available to new plants include process modifications and plant siting.

(3) The discharge of cullet water to a publicly owned treatment works is specifically allowed for new sources even though other process waste water pollutants from new sources are proscribed from discharge to navigable waters or to publicly owned treatment works. This discharge is allowed because cullet water contains only finely divided silica particles in suspension and heat. Suspended solids are readily treated in a publicly owned treatment works, and the thermal

component, which is relatively minor, will be adequately diffused in a treatment plant of suitable capacity. A similar allowance for cullet water is contained in the regulation establishing pretreatment standards for existing sources which is being proposed in conjunction with promulgation of the regulation below.

(4) Noncontact cooling water has been excluded from this regulation as discussed previously.

(c) Economic impact.

The above listed changes will not significantly affect the conclusions of the economic study of the proposed regulation. The allowances described in subparagraphs (3) and (4) above will decrease the initial cost estimates less than ten percent. Because of these variances, a noncontact cooling water recirculation system and a cullet water recirculation system may not have to be installed.

The effect of allowing a discharge of water used for advanced air emission control devices is more difficult to predict. It is estimated that only that company which requested the variance will be affected. The cost of the process water recirculation system on a unit product basis is lower for this company than for the others, as a smaller quantity of pollutants is to be treated. The capital cost of biologically treating the additional raw waste load after the addition of an electrostatic precipitator is estimated to be forty-eight percent more than if that volume were to be included in the process water recirculation system, as is done by the rest of the industry. The capital costs of biological treatment will be reduced if these wastes are pretreated and discharged to a publicly owned treatment works. However, if these wastes are to be discharged directly to navigable waters, the incentive exists to use that technology which is employed by the rest of the industry and to make the necessary process changes to operate a total waste water recirculation system.

(d) Cost-benefit analysis. The detrimental effects of the constituents of waste waters now discharged by point sources within the insulation fiberglass segment of the glass manufacturing point source category are discussed in Section VI of the report entitled "Development Document for Effluent Limitations Guidelines for the INSULATION FIBERGLASS Manufacturing Segment of the Glass Manufacturing Point Source Category" (July 1974). It is not feasible to quantify in economic terms, particularly on a national basis, the costs resulting from the discharge of these pollutants to our Nation's waterways. Nevertheless, as indicated in Section VI, the pollutants discharged have substantial and damaging impacts on the quality of water and therefore on its capacity to support healthy populations of wildlife, fish and other aquatic wildlife and on its suitability for industrial, recreational and drinking water supply uses.

The total cost of implementing the effluent limitations guidelines includes the direct capital and operating costs of the pollution control technology em-

ployed to achieve compliance and the indirect economic and environmental costs identified in Section VIII and in the supplementary report entitled "Economic Analysis of Proposed Effluent Guidelines INSULATION FIBERGLASS INDUSTRY" (August 1973). Implementing the effluent limitations guidelines will substantially reduce the environmental harm which would otherwise be attributable to the continued discharge of polluted waste waters from existing and newly constructed plants in the insulation fiberglass industry. The Agency believes that the benefits of thus reducing the pollutants discharged justify the associated costs which, though substantial in absolute terms, represent a relatively small percentage of the total capital investment in the industry.

(e) Publication of information on processes, procedures, or operating methods which result in the elimination or reduction of the discharge of pollutants.

In conformance with the requirements of Section 304(c), a manual entitled, "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Insulation Fiberglass Manufacturing Segment of the Glass Manufacturing Point Source Category," has been published and is available for purchase from the Government Printing Office, Washington, D.C. 20401 for a nominal fee.

(f) Final rulemaking. In consideration of the foregoing, 40 CFR Chapter I, Subchapter N is hereby amended by adding a new Part 426, Glass Manufacturing Point Source Category, to read as set forth below. This final regulation is promulgated as set forth below and shall be effective on March 25, 1974.

Dated: January 14, 1974.

RUSSELL E. TRAIN,
Administrator.

Subpart A—Insulation Fiberglass Subcategory

- Sec. 426.10 Applicability; description of the insulation fiberglass subcategory.
- 426.11 Special definitions.
- 426.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 426.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 426.14 [Reserved]
- 426.15 Standards of performance for new sources.
- 426.16 Pretreatment standards for new sources.

AUTHORITY: Secs. 301, 304 (b) and (c); 306 (b) and (c), 307(c) and 316(b), Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1311, 1314 and 1317(b)) 88 Stat. 816 et seq., Pub. L. 92-500.

Subpart A—Insulation Fiberglass Subcategory

§ 426.10 Applicability; description of the insulation fiberglass subcategory.

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

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production of insulation fiberglass in which molten glass is either directly or indirectly made, continuously fiberized and chemically bonded into a wool-like material.

§ 426.11 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 Part 401 shall apply to this subpart.

(b) The term "cullet water" shall mean that water which is exclusively and directly applied to molten glass in order to solidify the glass.

(c) The term "advanced air emission control devices" shall mean air pollution control equipment, such as electrostatic precipitators and high energy scrubbers, that are used to treat an air discharge which has been treated initially by equipment including knock-out chambers and low energy scrubbers.

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

The following limitations 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) There shall be no discharge of process waste water pollutants to navigable waters, except as permitted in subparagraph (b) below.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged in process waste water from advanced air

emission control devices, when such water cannot be consumed in the process.

Effluent characteristic	Effluent Limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units)—Kilograms per thousands of kilograms of product		
Phenol.....	0.0006	0.0003
COD.....	.23	.165
BOD.....	.024	.012
TSS.....	.03	.015
pH.....	(1)	
(English units)—Pounds per thousands of pounds of product		
Phenol.....	0.0006	0.0003
COD.....	.23	.165
BOD.....	.024	.012
TSS.....	.03	.015
pH.....	(1)	

1 Within the range 6.0 to 9.0.

§ 426.13 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: There shall be no discharge of process waste water pollutants to navigable waters.

§ 426.14 [Reserved.]

§ 426.15 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: there shall be no discharge of process waste water pollutants to navigable waters.

§ 426.16 Pretreatment standards for new sources.

(a) Applicability: The provisions of this section shall apply to discharges of process waste water pollutants into publicly owned treatment works except for that portion of the waste stream which constitutes cullet water.

(b) Pretreatment standards for incompatible pollutants: The pretreatment standards under section 307(c) of the Act for any new source within the insulation fiberglass subcategory, which is a user of a publicly owned treatment works and which would be a new source subject to section 306 of the Act if it were to discharge pollutants to the navigable waters, shall be the standard set forth in 40 CFR 128, except that, for the purpose of this section, 40 CFR 128.133 shall be amended to read as follows: "In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 426.15; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permits, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

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