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Protection of Environment

40

PARTS 425 TO 699

Revised as of July 1, 1997

CONTAINING
A CODIFICATION OF DOCUMENTS
OF GENERAL APPLICABILITY
AND FUTURE EFFECT

AS OF JULY 1, 1997

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Cite this Code: CFR

To cite the regulations in this volume use title, part and section number. Thus, 40 CFR 425.01 *refers to title 40, part 425, section 01.*

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Title 1 through Title 16.....as of January 1
Title 17 through Title 27.....as of April 1
Title 28 through Title 41.....as of July 1
Title 42 through Title 50.....as of October 1

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RAYMOND A. MOSLEY,
Director,
Office of the Federal Register.

July 1, 1997.

THIS TITLE

Title 40—PROTECTION OF ENVIRONMENT is composed of twenty–two volumes. The parts in these volumes are arranged in the following order: parts 1–49, parts 50–51, parts 52.01–52.1018, part 52.1019–end, parts 53–59, part 60, parts 61–62, parts 63–71, parts 72–80, parts 81–85, part 86, parts 87–135, parts 136–149, parts 150–189, parts 190–259, parts 260–265, parts 266–299, parts 300–399, parts 400–424, parts 425–699, parts 700–789, and part 790 to end. The contents of these volumes represent all current regulations codified under this title of the CFR as of July 1, 1997.

Chapter I—Environmental Protection Agency appears in all twenty–two volumes. A Pesticide Tolerance Commodity/Chemical Index appears in parts 150–189. A Toxic Substances Chemical—CAS Number Index appears in parts 700–789 and part 790 to end. Redesignation Tables appear in the volumes containing parts 50–51, parts 150–189, and parts 700–789. Regulations issued by the Council on Environmental Quality appear in the volume containing part 790 to end.

The OMB control numbers for title 40 appear in §9.1 of this chapter. For the convenience of the user, §9.1 appears in the Finding Aids section of the volumes containing parts 50 to the end.

For this volume, Gregory R. Walton was Chief Editor. The Code of Federal Regulations publication program is under the direction of Frances D. McDonald, assisted by Alomha S. Morris.

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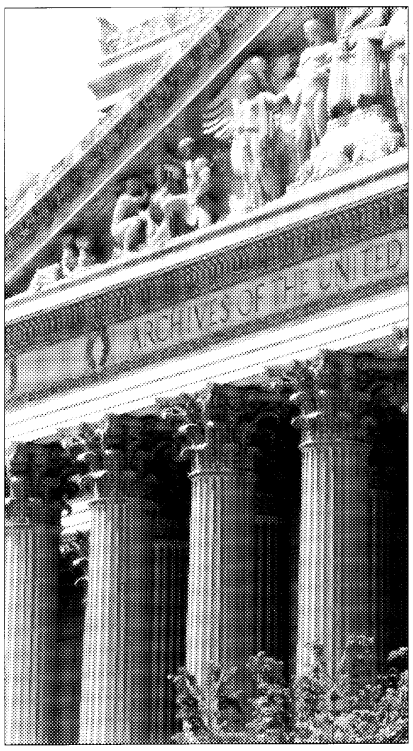

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Title 40—Protection of Environment

(This book contains parts 425 to 699)

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APPENDIX C TO PART 425—DEFINITION AND PROCEDURE FOR THE DETERMINATION OF THE METHOD DETECTION LIMIT

AUTHORITY: 33 U.S.C. 1311, 1314 (b), (c), (e) and (g), 1316 (b) and (c), 1317 (b) and (c), 1318 and 1361.

SOURCE: 47 FR 52870, Nov. 23, 1982, unless otherwise noted.

GENERAL PROVISIONS

§425.01 Applicability.

This part applies to any leather tanning and finishing facility which discharges or may discharge process wastewater pollutants to the waters of the United States, or which introduces or may introduce process wastewater pollutants into a publicly owned treatment works.

§425.02 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) ''Sulfide'' shall mean total sulfide as measured by the potassium ferricyanide titration method described in Appendix A or the modified Monier-Williams method described in Appendix B.

(b) ''Hide'' means any animal pelt or skin as received by a tannery as raw material to be processed.

(c) ''Retan-wet finish'' means the final processing steps performed on a tanned hide including, but not limited to, the following wet processes: retan, bleach, color, and fatliquor.

(d) ''Hair pulp'' means the removal of hair by chemical dissolution.

(e) ''Hair save'' means the physical or mechanical removal of hair which has not been chemically dissolved, and either selling the hair as a by-product or disposing of it as a solid waste.

(f) ''Chrome tan'' means the process of converting hide into leather using a form of chromium.

(g) ''Vegetable tan'' means the process of converting hides into leather using chemicals either derived from vegetable matter or synthesized to produce effects similar to those chemicals.

(h) ''Raw material'' means the hides received by the tannery except for facilities covered by subpart D and subpart I where ''raw material'' means the hide or split in the condition in which it is first placed into a wet process.

(i) ''Monthly average'' means the arithmetic average of eight (8) individual data points from effluent sampling and analysis during any calendar month.

(j) ''Interference'' means the discharge of sulfides in quantities which can result in human health hazards and/or risks to human life, and an inhibition or disruption of POTW as defined in 40 CFR 403.3(i).

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9181, Mar. 21, 1988]

§425.03 Sulfide analytical methods and applicability.

(a) The potassium ferricyanide titration method described in appendix A to part 425 shall be used whenever practicable for the determination of sulfide in wastewaters discharged by plants operating in all subcategories except the hair save or pulp, non-chrome tan, retan-wet finish subcategory (subpart C, *see* §425.30). In all other cases, the modified Monier-Williams method as described in appendix B to part 425 shall be used as an alternative to the potassium ferricyanide titration method for the determination of sulfide in wastewaters discharged by plants operating in all subcategories except subpart C.

(b) The modified Monier-Williams method as described in appendix B to part 425 shall be used for the determination of sulfide in wastewaters discharged by plants operating in the hair save or pulp, non-chrome tan, retan-wet finish subcategory (subpart C, *see* §425.30).

[53 FR 9181, Mar. 21, 1988]

§425.04 Applicability of sulfide pretreatment standards.

(a) A POTW receiving wastewater from a facility subject to this part may require more stringent pretreatment

standards for sulfide than those established by this part without EPA approval.

(b) The pretreatment standards for sulfide established by this part will not apply if the POTW receiving wastewater from a facility subject to this part certifies in writing with explanation of relevant factors considered, in accordance with the provisions of paragraph (c) of this section, that the discharge of sulfide from the facility does not interfere with the operation of the POTW. In making this determination, the POTW shall consider all relevant factors including but not limited to the following:

(1) The presence and characteristics, of other industrial wastewaters which can increase or decrease sulfide concentrations, pH, or both.

(2) The characteristics of the sewer/interceptor collection system which either minimize or enhance opportunities for release of hydrogen sulfide gas.

(3) The characteristics of the receiving POTWs headworks, preliminary and primary treatment systems, and sludge holding and dewatering facilities which either minimize or enhance opportunities for release of hydrogen sulfide gas.

(4) The occurrence of any prior sulfide related interference as defined in § 425.02(j).

(c)(1) On October 13, 1983, a POTW which intends to certify that the sulfide pretreatment standard should not apply must publish, in a local newspaper with the largest circulation, a notice that presents the findings supporting this determination consistent with paragraph (a) of this section. Allowance for public hearing of these findings also must be provided. The POTW shall identify all existing facilities to which the sulfide pretreatment standard otherwise established by this part would not apply.

(2) On January 11, 1984, a POTW which intends to certify that the sulfide pretreatment standard should not apply must file a written certification with the Regional Water Management Division Director, Environmental Protection Agency, in the appropriate Regional Office. This certification shall include the findings supporting this determination and the results of public comments, and public hearing(s) if held.

(3) On February 10, 1984, EPA shall acknowledge to the POTW receipt of any certification submitted under paragraphs (c) (1) and (2) of this section, and shall indicate to the POTW the adequacy of the submission based upon a review of the factors set forth in paragraph (b) of this section.

(4) Within 30 days of the date of receipt of adequate submissions under paragraphs (c) (1), (2), and (3) of this section, EPA shall publish a notice in the FEDERAL REGISTER identifying those facilities to which the sulfide pretreatment standards of this part shall not apply.

(5) A POTW may certify that the sulfide pretreatment standards of this part should not apply to a new source planning to discharge into the POTW. This certification must be submitted prior to the commencement of discharge, and must conform at a minimum with criteria in paragraph (b) of this section and the general procedures and intervals of time contained in paragraphs (c) (1), (2), (3), and (4) of this section.

(d)(1) If, after EPA and the POTW have determined in accordance with this section that the sulfide pretreatment standards of this part are not applicable to specified facilities, a POTW then determines that there have been changed circumstances (including but not limited to changes in the factors specified in paragraph (b) of this section) which justify application of the sulfide pretreatment standards, the POTW shall revoke the certification submitted under paragraph (c) of this section. The POTW and EPA shall then adhere to the general procedures and time intervals contained in paragraph (c) of this section in order to determine whether the sulfide pretreatment standards contained in this part are applicable.

(2) If pursuant to paragraph (d)(1) of this section, the sulfide pretreatment standards of this part are applicable to a specified facility, the indirect discharger shall comply with the sulfide pretreatment standards no later than 18 months from the date of publication of the FEDERAL REGISTER notice identifying the facility.

(e) At any time after October 13, 1983, if a POTW determines that there have been changed circumstances (including but not limited to changes in the factors specified in paragraph (b) of this section), it may initiate proceedings contained in paragraph (c) of this section to determine that the sulfide pretreatment standards of this part shall not be applicable. The POTW and EPA shall follow the procedures and time intervals contained in paragraph (c) of this section to make this determination. A final determination that the sulfide pretreatment standards are not applicable must be made prior to the discharge of sulfide not in accordance with the standards set forth in this part.

(The information collection and reporting requirements contained in paragraphs (b) and (c) were approved by the Office of Management and Budget under control number 2040–0032)

[47 FR 52870, Nov. 23, 1982; 48 FR 30117, June 30, 1983, as amended at 48 FR 31404, July 8, 1983; 48 FR 32346, July 15, 1983; 48 FR 35649, Aug. 5, 1983; 53 FR 9181, Mar. 21, 1988]

§ 425.05 Compliance dates.

The compliance date for new source performance standards (NSPS) and pretreatment standards for new sources (PSES) is the date the new source commences discharge. The compliance date for BPT effluent limitations and guidelines and pretreatment standards for existing sources to no later than March 31, 1989.

[53 FR 9182, Mar. 21, 1988]

§ 425.06 Monitoring requirements.

Compliance with monthly average discharge limitations is required regardless of the number of samples analyzed and averaged.

Subpart A—Hair Pulp, Chrome Tan, Retan-Wet Finish Subcategory

§ 425.10 Applicability; description of the hair pulp, chrome tan, retan-wet finishing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which, either exclusively or in addition to other unhairing and tanning operation, processes raw or cured cattle or cattle-like hides into finished leather by chemically dissolving the hide hair, chrome tanning, and retan-wet finishing.

§ 425.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds of raw material	
BOD5	9.3	4.2
TSS	13.4	6.1
Oil & Grease	3.9	1.7
Total Chromium	0.24	0.09
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0

[53 FR 9182, Mar. 21, 1988]

§ 425.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.11.

§ 425.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.11.

§ 425.14 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or 1b/1,000 lb) of raw material	
BOD5	6.0	2.7
TSS	8.7	4.0
Oil and grease	2.5	1.1
Total chromium	0.16	0.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982; 48 FR 30116, June 30, 1983]

§ 425.15 Pretreatment standards for existing sources (PSES).

(a) Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	.....
Total chromium	12	8
pH	(1)	(1)

[1] Not less than 7.0.

(b) Any existing source subject to this subpart which processes less than 275 hides/day shall comply with § 425.15(a), except that the total chromium limitations contained in § 425.15(a) do not apply.

[47 FR 52870, Nov. 23, 1982; 48 FR 30116, June 30, 1983, as amended at 53 FR 9182, Mar. 21, 1988; 61 FR 35685, July 8, 1996]

§ 425.16 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in § 425.15.

Subpart B—Hair Save, Chrome Tan, Retan-Wet Finish Subcategory

§ 425.20 Applicability; description of the hair save, chrome tan, retan-wet finish subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured cattle or cattle-like hides into finished leather by hair save unhairing, chrome tanning, and retan-wet finishing.

§ 425.21 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	8.2	3.7
TSS	11.8	5.4
Oil and grease	3.4	1.5
Total chromium	0.21	0.08
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§425.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD*5*, TSS, Oil and Grease, and pH contained in §425.21.

§425.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in §425.21.

§425.24 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD*5*	6.9	3.1
TSS	9.9	4.5
Oil and grease	2.9	1.3
Total chromium	0.18	0.06
pH	(1)	(1)

1 Within the range 6.0 to 9.0

§425.25 Pretreatment standards for existing sources (PSES).

Except as provided in §425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	.....
Total Chromium	12	8
pH	(1)	(1)

1 Not less than 7.0.

[47 FR 52870, Nov. 23, 1982, as amended at 61 FR 35685, July 8, 1996]

§425.26 Pretreatment standards for new sources (PSNS)

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in §425.25.

Subpart C—Hair Save or Pulp, Non-Chrome Tan, Retan-Wet Finish Subcategory

§425.30 Applicability; description of the hair save or pulp, non-chrome tan, retan-wet finish subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured cattle or cattle-like hides into finished leather by hair save or pulp unhairing, vegetable tanning or alum, syntans, oils and other agents for tanning, and retan-wet finishing.

§425.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	6.7	3.0
TSS	9.7	4.4
Oil & Grease	2.8	1.3
Total Chromium	0.17	0.06
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9182, Mar. 21, 1988]

§ 425.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.31.

§ 425.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.31.

§ 425.34 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	5.9	2.7
TSS	8.5	3.9
Oil and grease	2.4	1.1
Total chromium	0.15	0.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.35 Pretreatment standards for existing sources (PSES).

(a) Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing sources subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES limitations	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	--
Total Chromium	12	8
pH	(1)	(1)

[1] Not less than 7.0.

(b) Any existing source subject to this subpart which processes less than 350 hides/day shall comply with § 425.35(a), except that the Total Chromium limitations contained in § 425.35(a) do not apply.

[47 FR 52870, Nov. 23, 1982; 48 FR 36116, June 30, 1983, as amended at 53 FR 9182, Mar. 21, 1988]

§ 425.36 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403, and achieve the pretreatment standards contained in § 425.35.

Subpart D—Retan-Wet Finish-Sides Subcategory

§425.40 Applicability; description of the retan-wet finish-sides subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes previously tanned hides and skins (grain side only) into finished leather by retan-wet finishing.

§425.41 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	8.9	4.0
TSS	12.8	5.8
Oil & Grease	3.7	1.7
Total Chromium	0.23	0.08
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9182, Mar. 21, 1988]

§425.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in §425.41.

§425.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in §425.41.

§425.44 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	6.5	2.9
TSS	9.3	4.3
Oil & Grease	2.7	1.2
Total Chromium	0.17	0.06
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9182, Mar. 21, 1988]

§425.45 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total Chromium	19	12
pH	(1)	(1)

[1] Within the range 6.0 to 10.0.

§ 425.46 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the pretreatment standards contained in § 425.45.

Subpart E—No Beamhouse Subcategory

§ 425.50 Applicability; description of the no beamhouse subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes cattle hides, sheepskins, or splits (hair previously removed and pickled) into finished leather by chrome or non-chrome tanning, and retan-wet finishing.

§ 425.51 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	8.0	3.6
TSS	11.6	5.3
Oil & Grease	3.4	1.5
Total Chromium	0.21	0.08
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9182, Mar. 21, 1988]

§ 425.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.51.

§ 425.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.51

§ 425.54 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	5.3	2.4
TSS	7.7	3.5
Oil & Grease	2.2	1.0
Total Chromium	0.14	0.05
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.55 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total chromium	19	12
pH	(1)	(1)

[1] Within the range 6.0 to 10.0.

§425.56 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the pretreatment standards contained in §425.55.

Subpart F—Through-the-Blue Subcategory

§425.60 Applicability; description of the through-the-blue subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured cattle or cattle-like hides through the blue tanned state by hair pulp unhairing and chrome tanning; no retan-wet finishing is performed.

§425.61 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	3.2	1.5
TSS	4.7	2.1
Oil & Grease	1.4	0.61
Total Chromium	0.08	0.03
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9183, Mar. 21, 1988]

§425.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in §425.61.

§425.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in §425.61.

§425.64 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	3.2	1.5
TSS	4.7	2.1
Oil & Grease	1.4	0.61
Total Chromium	0.08	0.03
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9183, Mar. 21, 1988]

§ 425.65 Pretreatment standards for existing sources (PSES).

Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	.....
Total chromium	12	8
pH	(1)	(1)

[1] Not less than 7.0.

[47 FR 52870, Nov. 23, 1982, as amended at 61 FR 35685, July 8, 1996]

§ 425.66 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment must comply with 40 CFR part 403, and must achieve the pretreatment standards contained in § 425.65.

Subpart G—Shearling Subcategory

§ 425.70 Applicability; description of the shearling subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured sheep or sheep-like skins with the wool or hair retained into finished leather by chrome tanning, and retan-wet finishing.

§ 425.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	3.0	1.3
TSS	4.3	1.9
Oil & Grease	1.2	0.55
Total Chromium	0.08	0.03
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9183, Mar. 21, 1988]

§ 425.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease, and pH contained in § 425.71.

§ 425.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.71.

§ 425.74 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD5	13.2	5.9
TSS	19.1	8.7
Oil and grease	5.6	2.5
Total chromium	0.34	0.12
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.75 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total chromium	19	12
pH	(1)	(1)

[1] Within the range 6.0 to 10.0.

§ 425.76 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and must achieve the pretreatment standards contained in § 425.75.

Subpart H—Pigskin Subcategory

§ 425.80 Applicability; description of the pigskin subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured pigskins into finished leather by chemically dissolving or pulping the hair and tanning with chrome, then retan-wet finishing.

§ 425.81 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	7.0	3.2
TSS	10.1	4.6
Oil and grease	3.0	1.3
Total chromium	0.18	0.07
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982; 48 FR 30117, June 30, 1983]

§ 425.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD5, TSS, Oil and Grease and pH contained in § 425.81.

§ 425.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.81.

§ 425.84 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 lb) of raw material	
BOD5	5.8	2.6
TSS	8.3	3.8
Oil and grease	2.4	1.1
Total chromium	0.15	0.05
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 425.85 Pretreatment standards for existing sources (PSES).

Except as provided in § 425.04 and 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	.....
Total chromium	12	8
pH	(1)	(1)

[1] Not less than 7.0.

[47 FR 52870, Nov. 23, 1982, as amended at 61 FR 35685, July 8, 1996]

§ 425.86 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the pretreatment standards contained in § 425.85.

Subpart I—Retan-Wet Finish-Splits Subcategory

§ 425.90 Applicability; description of the retan-wet finish-splits subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes previously unhaired and tanned splits into finished leather by retan-wet finishing.

§ 425.91 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD5	5.8	2.6
TSS	8.3	3.8
Oil & Grease	2.4	1.1
Total Chromium	0.15	0.05
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9183, Mar. 21, 1988]

§ 425.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD*5*, TSS, Oil and Grease, and pH contained in § 425.91.

§ 425.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in § 425.91.

§ 425.94 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	kg/kkg (or pounds per 1,000 lb) of raw material	
BOD*5*	3.5	1.6
TSS	5.1	2.3
Oil & Grease	1.5	0.66
Total Chromium	0.09	0.03
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

§ 425.95 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and must achieve the following pretreatment standards:

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Total Chromium	19	12
pH	(1)	(1)

1 Within the range 6.0 to 10.0.

(b) Any existing source subject to this subpart which processes less than 3,600 splits/day shall comply with § 425.95(a), except that the total chromium limitations contained in § 425.95(a) do not apply.

[47 FR 52870, Nov. 23, 1982; 48 FR 30117, June 30, 1983, as amended at 53 FR 9183, Mar. 21, 1988]

§ 425.96 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the pretreatment standards contained in § 425.95.

APPENDIX A TO PART 425—POTASSIUM FERRICYANIDE TITRATION METHOD

Source

The potassium ferricyanide titration method is based on method SLM 4/2 described in ''Official Method of Analysis,'' Society of Leather Trades' Chemists, Fourth Revised Edition, Redbourn, Herts., England, 1965.

Outline of Method

The buffered sulfide solution is titrated with standard potassium ferricyanide solution in the presence of a ferrous dimethylglyoxime ammonia complex. The sulfide is oxidized to sulfur. Sulfite interferes and must be precipitated with barium chloride. Thiosulfate is not titrated under the conditions of the determination (Charlot, ''Ann. chim, anal,'', 1945, 27, 153; Booth; ''J. Soc. Leather Trades' Chemists,'' 1956, 40, 238).

Apparatus

Burrette, 10 ml.

Reagents

1. Preparation of 0.02N potassium ferricyanide; Weigh to the nearest tenth of a gram 6.6 g. of analytical reagent grade potassium ferricyanide and dissolve in 1 liter distilled water. Store in an amber bottle in the dark. Prepare fresh each week.

2. Standardization of ferricyanide solution: Transfer 50 ml. of solution to a 250 ml. Erlenmeyer flask. Add several crystals of potassium iodide (about 1 g.), mix gently to dissolve, add 1 ml. of 6N hydrochloric acid, stopper the flask, and swirl gently. Let stand for two minutes, add 10 ml. of a 30 percent zinc sulfate solution, and titrate the mixture containing the gelatinous precipitate with standardized sodium thiosulfate or phenylarsine oxide titrant in the range of 0.025–0.050N Add 1 ml. of starch indicator solution after the color has faded to a pale yellow, and continue the titration to the disappearance of the blue color. Calculate the normality of the ferricyanide solution using the equation:

$$\text{Normality of Potassium Ferricyanide } [K_3Fe(CN)_6] = \frac{(\text{ml of thiosulfate added})\,(\text{normality of thiosulfate})}{\text{Ml of } K_3Fe(CN)_6}$$

3. Preparation of 6M ammonium chloride buffer, pH 9.3: Dissolve 200 g. ammonium chloride in approximately 500 ml. distilled water, add 200 ml. 14M reagent grade ammonium hydroxide and make up to 1 liter with distilled water. The buffer should be prepared in a hood. Store in a tightly stoppered container.

4. Preparation of 0.05M barium chloride solution: Dissolve 12–13 g. barium chloride dihydrate in 1 liter of distilled water.

5. Preparation of ferrous dimethylglyoxime indicator solution: Mix 10 ml. 0.6 percent ferrous sulfate, 50 ml. 1 percent dimethylglyoxime in ethanol, and 0.5 ml. concentrated sulfuric acid.

6. Preparation of stock sulfide standard, 1000 ppm: Dissolve 2.4 g. reagent grade sodium sulfide in 1 liter of distilled water. Store in a tightly stoppered container. Diluted working standards must be prepared fresh daily and their concentrations determined by EPA test procedure 376.1 (see 40 CFR 136.3, Table IB, parameter 66 (49 FR 43234, October 26, 1984, with correction notice at 50 FR 690, January 4, 1985)) immediately prior to use.

7. Preparation of 10N NaOH: Dissolve 400 g. of analytical reagent grade NaOH in 1 liter distilled water.

Sample Preservation and Storage

Samples are to be field filtered (gravity or pressure) with coarse filter paper (Whatman 4 or equivalent) immediately after collection. Filtered samples must be preserved by adjustment to pH> 12 with 10N NaOH. Sample containers must be covered tightly and stored at 4 °C until analysis. Samples must be analyzed within 48 hours of collection. If these procedures cannot be achieved, it is the laboratory's responsibility to institute quality control procedures that will provide documentation of sample integrity.

Procedure

1. Transfer 100 ml. of sample to be analyzed, or a suitable portion containing not more than 15 mg. sulfide supplemented to 100 ml. with distilled water, to a 250 ml. Erlenmeyer flask.

2. Adjust the sample to pH 8.5–9.5 with 6N HC1.

3. Add 20 ml. of 6M ammonium chloride buffer (pH 9.3), 1 ml. of ferrous dimethylglyoxime indicator, and 25 ml. of 0.05M barium chloride. Mix gently, stopper, and let stand for 10 minutes.

4. After 10 minutes titrate with standardized potassium ferricyanide to disappearance of pink color. The endpoint is reached when there is no reappearance of the pink color after 30 seconds.

Calculation and Reporting of Results.

$$\text{1. mg./l. sulfide} = \frac{A \times B \times 16{,}000}{\text{vol. in ml. of sample titrated}}$$

where A=volume in ml. of potassium ferricyanide solution used,

and B=normality of potassium ferricyanide solution.

2. Report results to two significant figures.

Quality Control

1. Each laboratory that uses this method is required to operate a formal quality control program. The minimum requirements of this program consist of an initial demonstration of laboratory capability and the analysis of replicate and spiked samples as a continuing check on performance. The laboratory is required to maintain performance records to define the quality of data that is generated. Ongoing performance checks must be compared with established performance criteria

to determine if the results of analyses are within precision and accuracy limits expected of the method.

2. Before performing any analyses, the analyst must demonstrate the ability to generate acceptable precision and accuracy with this method by performing the following operations.

(a) Perform four replicate analyses of a 20 mg./l. sulfide standard prepared in distilled water (see paragraph 6 under ''Reagents'' above).

(b)(1) Calculate clean water precision and accuracy in accordance with standard statistical procedures. Clean water acceptance limits are presented in paragraph 2(b)(2) below. These criteria must be met or exceeded before sample analyses can be initiated. A clean water standard must be analyzed with each sample set and the established criteria met for the analysis to be considered under control.

(2) Clean water precision and accuracy acceptance limits: For distilled water samples containing from 5 mg./l. to 50 mg./l. sulfide, the mean concentration from four replicate analyses must be within the range of 50 to 110 percent of the true value.

3. The Method Detection Limits (MDL) should be determined periodically by each participating laboratory in accordance with the procedures specified in ''Methods for Chemical Analysis of Municipal and Industrial Wastewater,'' EPA–660/4–82–057, July 1982, EMSL, Cincinnati, OH 45268. For the convenience of the user, these procedures are contained in appendix C to part 425.

4. A minimum of one spiked and one duplicate sample must be performed for each analytical event, or five percent spikes and five percent duplicates when the number of samples per event exceeds twenty. Spike levels are to be at the MDL (see paragraph 3 above for MDL samples) and at x where x is the concentration found if in excess of the MDL. Spike recovery must be 40 to 120 percent for the analysis of a particular matrix type to be considered valid. If a sample or matrix type provides performance outside these acceptance limits, the analyses must be repeated using the modified Monier-Williams procedures described in appendix B to this part.

5. Report results in mg./liter. When duplicate and spiked samples are analyzed, report all data with the sample results.

[53 FR 9183, Mar. 21, 1988]

APPENDIX B TO PART 425—MODIFIED MONIER-WILLIAMS METHOD

Outline of Method

Hydrogen sulfide is liberated from an acidified sample by distillation and purging with nitrogen gas (N_2). Sulfur dioxide interference is removed by scrubbing the nitrogen gas stream in a pH 7 buffer solution. The sulfide gas is collected by passage through an alkaline hydrogen peroxide scrubbing solution in which it is oxidized to sulfate. Sulfate concentration in the scrubbing solution is determined by either EPA gravimetric test procedure 375.3 or EPA turbidimetric test procedure 375.4 (see 40 CFR 136.3, Table IB, parameter 65 (49 FR 43234, October 26, 1984, and correction notice at 50 FR 690, January 4, 1985)).

*Apparatus**

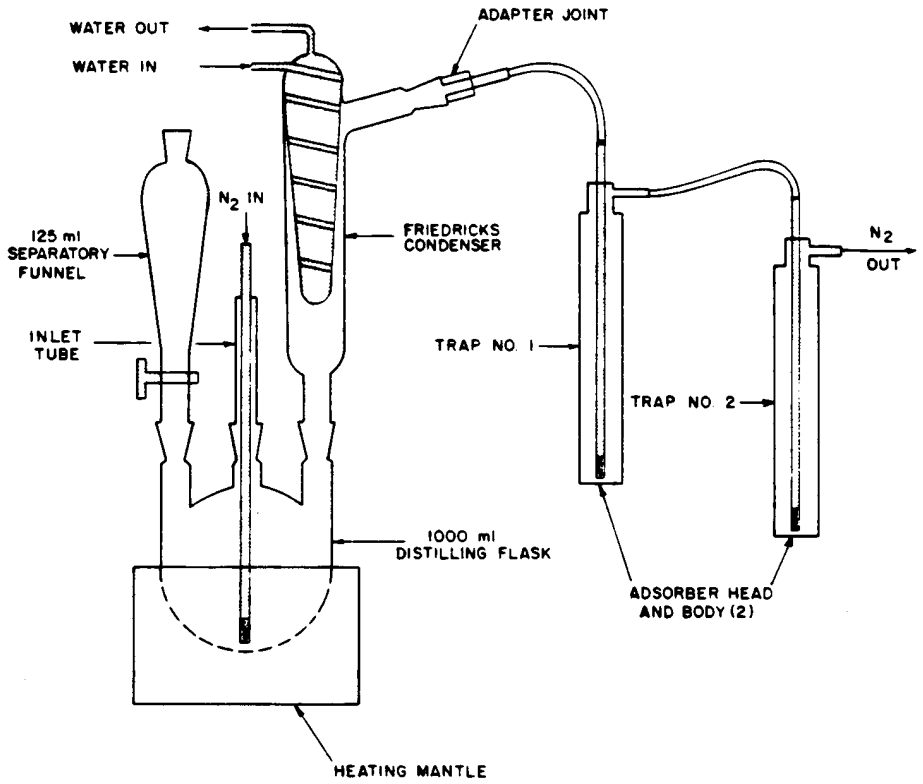
(See Figure 1.) * Catalogue numbers are given only to provide a more complete description of the equipment necessary, and do not constitute a manufacturer or vendor endorsement.

Heating mantel and control (VWR Cat. No. 33752–464)

1000 ml. distilling flask with three 24/40 joints (VWR Cat. No. 29280–215)

Friedricks condenser with two 24/40 joints (VWR Cat. No. 23161–009)

FIGURE 1
EQUIPMENT ASSEMBLY



125 ml. separatory funnel with 24/40 joint (VWR Cat. No. 30357–102)
Inlet tube with 24/40 joint (VWR Cat. No. 33057–105)
Adapter joint 24/40 to 19/38 (VWR Cat. No. 62905–26)
Adsorber head (2 required) (Thomas Cat. No. 9849–R29)
Adsorber body (2 required) (Thomas Cat. No. 9849–R32)
Laboratory vacuum pump or water aspirator

Reagents

1. Potassium hydroxide, 6N: Dissolve 340 g. of analytical reagent grade KOH in 1 liter distilled water.

2. Sodium hydroxide, 6N: Dissolve 240 g. of analytical reagent grade NaOH in 1 liter distilled water.

3. Sodium hydroxide, 0.03N: Dilute 5.0 ml. of 6N NaOH to 1 liter with distilled water.

4. Hydrochloric acid, 6N: Dilute 500 ml. of concentrated HCl to 1 liter with distilled water.

5. Potassium phosphate stock buffer, 0.5M: Dissolve 70 g. of monobasic potassium phosphate in approximately 800 ml. distilled water. Adjust pH to 7.0 ± 0.1 with 6N potassium hydroxide and dilute to 1 liter with distilled water. Stock solution in stable for several months at 4 °C.

6. Potassium phosphate buffer, 0.05M: Dilute 1 volume of 0.5M potassium phosphate stock buffer with 9 volumes of distilled water. Solution is stable for one month at 4 °C.

7. Alkaline 3% hydrogen peroxide: Dilute 1 volume of 30 percent hydrogen peroxide with 9 volumes of 0.03N NaOH. Prepare this solution fresh each day of use.

8. Preparation of stock sulfide standard, 1000 ppm.: Dissolve 2.4 g. reagent grade sodium sulfide in 1 liter of distilled water. Store in a tightly stoppered container. Diluted working standards must be prepared fresh daily and their concentrations determined by EPA test procedure 376.1 immediately prior to use (see 40 CFR 136.3, Table IB, parameter 66 (49 FR 43234, October 26, 1984, and correction notice at 50 FR 690, January 4, 1985)).

Sample Preservation and Storage

Preserve unfiltered wastewater samples immediately after collection by adjustment to pH>9 with 6N NaOH and addition of 2 ml. of 2N zinc acetate per liter. This amount of zinc acetate is adequate to preserve 64 mg./l. sulfide under ideal conditions. Sample containers must be covered tightly and stored at 4 °C until analysis. Samples must be analyzed within seven days of collection. If these procedures cannot be achieved, it is the laboratory's responsibility to institute quality control procedures that will provide documentation of sample integrity.

Procedure (See Figure 1 for apparatus layout.)

1. Place 50 ml. of 0.05M pH 7.0 potassium phosphate buffer in Trap No. 1.

2. Place 50 ml. of alkaline 3 percent hydrogen peroxide in Trap No. 2.

3. Sample introduction and N_2 prepurge: Gently mix sample to be analyzed to resuspend settled material, taking care not to aerate the sample. Transfer 400 ml. of sample, or a suitable portion containing not more than 20 mg. sulfide diluted to 400 ml. with distilled water, to the distillation flask. Adjust the N_2 flow so that the impingers are frothing vigorously, but not overflowing. Vaccum may be applied at the outlet of Trap No. 2 to assist in smooth purging. The N_2 inlet tube of the distillation flask must be submerged deeply in the sample to ensure efficient agitation. Purge the sample for 30 minutes without applying heat. Test the apparatus for leaks during the prepurge cycle (Snoop or soap water solution).

4. Volatilization of H_2S: Interrupt the N_2 flow (and vacuum) and introduce 100 ml. of 6N HCl to the sample using the separatory funnel. Immediately resume the gas flow (and vacuum). Apply maximum heat with the heating mantle until the sample begins to boil, then reduce heat and maintain gentle boiling and N_2 flow for 30 minutes. Terminate the distillation cycle by turning off the heating mantle and maintaining N_2 flow through the system for 5 to 10 minutes. Then turn off the N_2 flow (and release vacuum) and *cautiously* vent the system by placing 50 to 100 ml. of distilled water in the separatory funnel and opening the stopcock carefully. When the bubbling stops and the system is equalized to atmospheric pressure, remove the separatory funnel. Extreme care must be exercised in terminating the distillation cycle to avoid flash-over, drawback, or violent steam release.

5. Analysis: Analyze the contents of Trap No. 2 for sulfate according to either EPA gravimetric test procedure 375.3 or EPA turbidimetric test procedure 375.4 (see 40 CFR 136.3, Table IB, parameter 65 (49 FR 43234, October 26, 1984, and correction notice at 50 FR 690, January 4, 1985)). Use the result to calculate mg./l. of sulfide in wastewater sample.

Calculations and Reporting of Results

1. Gravimetric procedure:

$$\text{mg sulfide/l.} = \frac{(\text{mg. } BaSO_4 \text{ collected in Trap No. 2})\times(137)}{\text{volume in ml. of waste sample distilled}}$$

2. Turbidimetric procedure:

$$\text{mg. sulfide/l.} = \frac{A \times B \times 333}{C}$$

where A=mg./l. of sulfate in Trap No. 2
B=liquid volume in liters in Trap No. 2
and C=volume in ml. of waste sample distilled

3. Report results to two significant figures.

Quality Control

1. Each laboratory that uses this method is required to operate a formal quality control program. The minimum requirements of this program consist of an initial demonstration of laboratory capability and the analysis of replicate and spiked samples as a continuing check on performance. The laboratory is required to maintain performance records to define the quality of data that is generated. Ongoing performance checks must be compared with established performance criteria to determine if the results of analyses are within precision and accuracy limits expected of the method.

2. Before performing any analyses, the analyst must demonstrate the ability to generate acceptable accuracy and precision by performing the following operations.

(a) Perform four replicate analyses of a 20 mg./l. sulfide standard prepared in distilled water (see paragraph 8 under ''Reagents'' above).

(b)(1) Calculate clean water precision and accuracy in accordance with standard statistical procedures. Clean water acceptance limits are presented in paragraph 2(b)(2) below. These criteria must be met or exceeded before sample analyses can be initiated. A clean water standard must be analyzed with each sample set and the established criteria met for the analyses to be considered under control.

(2) Clean water precision and accuracy acceptance limits: For distilled water samples containing from 5 mg./l. to 50 mg./l. sulfide, the mean concentration from four replicate analyses must be within the range of 72 to 114 percent of the true value.

3. The Method Detection Limit (MDL) should be determined periodically by each participating laboratory in accordance with the procedures specified in ''Methods for Chemical Analysis of Municipal and Industrial Wastewater,'' EPA–600/4–82–057, July 1982, EMSL, Cincinnati, OH 45268. For the convenience of the user, these procedures are contained in appendix C to part 425.

4. A minimum of one spiked and one duplicate sample must be run for each analytical event, or five percent spikes and five percent duplicates when the number of samples per event exceeds twenty. Spike levels are to be at the MDL (see paragraph 3 above for MDL samples) and at x when x is the concentration found if in excess of the MDL. Spike recovery must be 60 to 120 percent for the analysis of a particular matrix type to be considered valid.

5. Report all results in mg./liter. When duplicate and spiked samples are analyzed, report all data with the sample results.

[53 FR 9184, Mar. 21, 1988]

APPENDIX C TO PART 425—DEFINITION AND PROCEDURE FOR THE DETERMINATION OF THE METHOD DETECTION LIMIT [1]

The method detection limit (MDL) is defined at the minimum concentration of a substance that can be identified, measured and reported with 99 percent confidence that the analyte concentration is greater than zero and determined from analysis of a sample in a given matrix containing analyte.

Scope and Application

This procedure is designed for applicability to a wide variety of sample types ranging from reagent (blank) water containing analyte to wastewater containing analyte. The MDL for an analytical procedure may vary as a function of sample type. The procedure requires a complete, specific and well defined analytical method. It is essential that all sample processing steps of the analytical method be included in the determination of the method detection limit.

The MDL obtained by this procedure is used to judge the significance of a single measurement of a future sample.

The MDL procedure was designed for applicability to a broad variety of physical and chemical methods. To accomplish this, the procedure was made device- or instrument-independent.

Procedure

1. Make an estimate of the detection limit using one of the following:

(a) The concentration value that corresponds to an instrument signal/noise ratio in the range of 2.5 to 5. If the criteria for qualitative identification of the analyte is based upon pattern recognition techniques, the least abundant signal necessary to achieve identification must be considered in making the estimate.

(b) The concentration value that corresponds to three times the standard deviation of replicate instrumental measurements for the analyte in reagent water.

(c) The concentration value that corresponds to the region of the standard curve

[1] Source: ''Methods for Chemical Analysis of Municipal and Industrial Wastewater,'' EPA–600/4–82–057, July 1982, EMSL, Cincinnati, OH 45268

where there is a significant change in sensitivity at low analyte concentrations, i.e., a break in the slope of the standard curve.

(d) The concentration value that corresponds to known instrumental limitations.

It is recognized that the experience of the analyst is important to this process. However, the analyst must include the above considerations in the estimate of the detection limit.

2. Prepare reagent (blank) water that is as free of analyte as possible. Reagent or interference free water is defined as a water sample in which analyte and interferent concentrations are not detected at the method detection limit of each analyte of interest. Interferences are defined as systematic errors in the measured analytical signal of an established procedure caused by the presence of interfering species (interferent). The interferent concentration is presupposed to be normally distributed in representative samples of a given matrix.

3. (a) If the MDL is to be determined in reagent water (blank), prepare a laboratory standard (analyte in reagent water) at a concentration which is at least equal to or in the same concentration range as the estimated MDL. (Recommended between 1 and 5 times the estimated MDL.) Proceed to Step 4.

(b) If the MDL is to be determined in another sample matrix, analyze the sample. If the measured level of the analyte is in the recommended range of one to five times the estimated MDL, proceed to Step 4.

If the measured concentration of analyte is less than the estimated MDL, add a known amount of analyte to bring the concentration of analyte to between one and five times the MDL. In the case where an interference is coanalyzed with the analyte:

If the measured level of analyte is greater than five times the estimated MDL, there are two options:

(1) Obtain another sample of lower level of analyte in same matrix if possible.

(2) The sample may be used as is for determining the MDL if the analyte level does not exceed 10 times the MDL of the analyte in reagent water. The variance of the analytical method changes as the analyte concentration increases from the MDL, hence the MDL determined under these circumstances may not truly reflect method variance at lower analyte concentrations.

4. (a) Take a minimum of seven aliquots of the sample to be used to calculate the MDL and process each through the entire anlaytical method. Make all computations according to the defined method with final results in the method reporting units. If blank measurements are required to calculate the measured level of analyte, obtain separate blank measurements for each sample aliquot anlayzed. The average blank measurement is subtracted from the respective sample measurements.

(b) It may be economically and technically desirable to evaluate the estimated MDL before proceeding with 4a. This will: (1) Prevent repeating this entire procedure when the costs of analyses are high and (2) insure that the procedure is being conducted at the correct concentration. It is quite possible that an incorrect MDL can be calculated from data obtained at many times the real MDL even though the background concentration of analyte is less than five times the calculated MDL. To insure that the estimate of the MDL is a good estimate, it is necessary to determine that a lower concentration of analyte will not result in a significantly lower MDL. Take two aliquots of the sample to be used to calculate the MDL and process each through the entire method, including blank measurements as described above in 4a. Evaluate these data:

(1) If these measurements indicate the sample is in the desirable range for determining the MDL, take five additional aliquots and proceed. Use all seven measurements to calculate the MDL.

(2) If these measurements indicate the sample is not in the correct range, reestimate the MDL, obtain new sample as in 3 and repeat either 4a or 4b.

5. Calculate the variance (S^2) and standard deviation (S) of the replicate measurements, as follows:

$$S^2 = \frac{1}{n-1}\left[\sum_{i=1}^{n} X_i^2 - \left(\sum_{i=1}^{n} X_i\right)^2 \Big/ n\right]$$

$$S = \left(S^2\right)^{0.5}$$

where: the x_i, i = 1 to n are the analytical results in the final method reporting units obtained from the n sample aliquots and

$$\sum_{i=1}^{n} X_i^2$$

refers to the sum of the X values from i = 1 to n.

6. (a) Compute the MDL as follows:

$MDL = t_{(n-1,\ 1-a\ =\ .99)}\ (S)$

where:

MDL=the method detection

$t_{(n-1,\ 1-a=.99)}$=the students' t value appropriate for a 99 percent confidence level and a standard deviation estimate with n-1 degrees of freedom. See Table.

S=standard deviation of the replicate analyses.

(b) The 95 percent confidence limits for the MDL derived in 6a are computed according

to the following equations derived from percentiles of the chi square over degrees of freedom distribution (X2/df) and calculated as follows:

MDL_{LCL}=0.69 MDL

MDL_{UCL}=1.92 MDL where MDL_{LCL} and MDL_{UCL} are the lower and upper 95 percent confidence limits respectively based on seven aliquots.

7. Optional iterative procedure to verify the reasonableness of the estimated MDL and calculated MDL of subsequent MDL determinations.

(a) If this is the initial attempt to compute MDL based on the estimated MDL in Step 1, take the MDL as calculated in Step 6, spike in the matrix at the calculated MDL and proceed through the procedure starting with Step 4.

(b) If the current MDL determination is an iteration of the MDL procedure for which the spiking level does not permit qualitative identification, report the MDL as that concentration between the current spike level and the previous spike level which allows qualitative identification.

(c) If the current MDL determination is an iteration of the MDL procedure and the spiking level allows qualitative identification, use S^2 from the current MDL calculation and S^2 from the previous MDL calculation to compute the F ratio.

$$\text{if} \quad \frac{S_A^2}{S_B^2} < 3.05$$

then compute the pooled standard deviation by the following equation:

$$S_{pooled} = \left[\frac{6S_A^2 + 6S_B^2}{12}\right]^{0.5}$$

$$\text{if} \quad \frac{S_A^2}{S_B^2} > 3.05,$$

respike at the last calculated MDL and process the samples through the procedure starting with Step 4.

(d) Use the S_{pooled} as calculated in 7b to compute the final MDL according to the following equation:

MDL=2.681 (S_{pooled})

where 2.681 is equal to $t(12, 1-a=.99)$

(e) The 95 percent confidence limits for MDL derived in 7c are computed according to the following equations derived from percentiles of the chi squared over degrees of freedom distribution.

MDL_{LCL}=0.72 MDL

MDL_{UCL}=1.65 MDL

where LCL and UCL are the lower and upper 95 percent confidence limits respectively based on 14 aliquots.

Reporting

The analytical method used must be specifically identified by number or title and the MDL for each analyte expressed in the appropriate method reporting units. If the analytical method permits options which affect the method detection limit, these conditions must be specified with the MDL value. The sample matrix used to determine the MDL must also be identified with the MDL value. Report the mean analyte level with the MDL. If a laboratory standard or a sample that contained a known amount analyte was used for this determination, report the mean recovery, and indicate if the MDL determination was iterated.

If the level of the analyte in the sample matrix exceeds 10 times the MDL of the analyte in reagent water, do not report a value for the MDL.

REFERENCE

Glaser, J.A., Foerst, D.L., McKee, G.D., Quave, S.A., and Budde, W.L., ''Trace Analysis for Wastewaters,'' Environmental Science and Technology, 15, 1426 (1981).

TABLE OF STUDENTS' t VALUES AT THE 99 PERCENT CONFIDENCE LEVEL

Number of replicates	Degrees of freedom (n−1)	$t(n-1, 1-a=.99)$
7	6	3.143
8	7	2.998
9	8	2.896
10	9	2.821
11	10	2.764
16	15	2.602
21	20	2.528
26	25	2.485
31	30	2.457
61	60	2.390
		2.326

[53 FR 9186, Mar. 21, 1988]

PART 426—GLASS MANUFACTURING POINT SOURCE CATEGORY

Subpart A—Insulation Fiberglass Subcategory

Sec.

426.10 Applicability; description of the insulation fiberglass subcategory.
426.11 Specialized 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.
426.17 Effluent limitations guidelines representing the degreee of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart B—Sheet Glass Manufacturing Subcategory

426.20 Applicability; description of the sheet glass manufacturing subcategory.
426.21 Specialized definitions.
426.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
426.24 Pretreatment standards for existing sources.
426.25 Standards of performance for new sources.
426.26 Pretreatment standards for new sources.
426.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart C—Rolled Glass Manufacturing Subcategory

426.30 Applicability; description of the rolled glass manufacturing subcategory.
426.31 Specialized definitions.
426.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
426.34 Pretreatment standards for existing sources.
426.35 Standards of performance for new sources.
426.36 Pretreatment standards for new sources.
426.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart D—Plate Glass Manufacturing Subcategory

426.40 Applicability; description of the plate glass manufacturing subcategory.
426.41 Specialized definitions.
426.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.43 [Reserved]
426.44 Pretreatment standards for existing sources.
426.45 Standards of performance for new sources.
426.46 Pretreatment standards for new sources.
426.47 Effluent limitations guidelines representing the degreee of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Subpart E—Float Glass Manufacturing Subcategory

426.50 Applicability; description of the float glass manufacturing subcategory.
426.51 Specialized definitions.
426.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
426.54 [Reserved]
426.55 Standards of performance for new sources.
426.56 Pretreatment standards for new sources.
426.57 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart F—Automotive Glass Tempering Subcategory

426.60 Applicability; description of the automotive glass tempering subcategory.
426.61 Specialized definitions.

426.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.63 [Reserved]
426.64 Pretreatment standards for existing sources.
426.65 Standards of performance for new sources.
426.66 Pretreatment standards for new sources.
426.67 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart G—Automotive Glass Laminating Subcategory

426.70 Applicability; description of the automotive glass laminating subcategory.
426.71 Specialized definitions.
426.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
426.74 [Reserved]
426.75 Standards of performance for new sources.
426.76 Pretreatment standards for new sources.
426.77 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart H—Glass Container Manufacturing Subcategory

426.80 Applicability; description of the glass container manufacturing subcategory.
426.81 Specialized definitions.
426.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.83—426.84 [Reserved]
426.85 Standards of performance for new sources.
426.86 Pretreatment standards for new sources.
426.87 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart I—Machine Pressed and Blown Glass Manufacturing Subcategory [Reserved]

Subpart J—Glass Tubing (Danner) Manufacturing Subcategory

426.100 Applicability; description of the glass tubing (Danner) manufacturing subcategory.
426.101 Specialized definitions.
426.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.103—426.104 [Reserved]
426.105 Standards for performance for new sources.
426.106 Pretreatment standards for new sources.
426.107 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart K—Television Picture Tube Envelope Manufacturing Subcategory

426.110 Applicability; description of the television picture tube envelope manufacturing subcategory.
426.111 Specialized definitions.
426.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
426.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
426.114 [Reserved]
426.115 Standards of performance for new sources.
426.116 Pretreatment standards for new sources.
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AUTHORITY: Secs. 301, 304 (b) and (c), 306 (b) and (c), 307(c), and 316(b) of the Federal Water Pollution Control Act, as amended; 33 U.S.C. 1251, 1311, 1314, 1316 (b) and (c), 1317(b); 86 Stat. 816 et seq., Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 39 FR 2565, Jan. 22, 1974, unless otherwise noted.

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 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 knockout 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 paragraph (b) of this section.

(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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg of product)	
Phenol	0.0006	0.0003
COD	0.33	.165
BOD5	0.024	.012
TSS	0.03	.015
pH	(1)	(1)
	English units (pounds per 1,000 lb. of product)	
Phenol	0.0006	0.0003
COD	0.33	.165
BOD5	0.024	.012
TSS	0.03	.015
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 2565, Jan. 22, 1974; 39 FR 4760, Feb. 7, 1974]

§ 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.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

(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) [Reserved]

[39 FR 2565, Jan. 22, 1974, as amended at 60 FR 33958, June 29, 1995]

§ 426.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.12 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart B—Sheet Glass Manufacturing Subcategory

SOURCE: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.20 Applicability; description of the sheet glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the process in which several mineral ingredients (sand, soda ash, limestone, dolomite, cullen and other ingredients) are mixed, melted in a furnace, and drawn vertically from a melting tank to form sheet glass.

§ 426.21 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'' shall mean any broken glass generated in the manufacturing process.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants to navigable waters.

[60 FR 33958, June 29, 1995]

§ 426.23 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.

§ 426.24 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6444, Feb. 11, 1975, as amended at 60 FR 33958, June 29, 1995]

§ 426.25 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.

§ 426.26 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33958, June 29, 1995]

§ 426.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

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 conventional pollutant control technology: There shall be no discharge of process waste water pollutants to navigable waters.

[44 FR 50746, Aug. 29, 1979]

Subpart C—Rolled Glass Manufacturing Subcategory

SOURCE: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.30 Applicability; description of the rolled glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the process in which several mineral ingredients (sand, soda ash, limestone, dolomite, cullet, and other ingredients) are mixed, melted in a furnace, and cooled by rollers to form rolled glass.

§ 426.31 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 part 401 shall apply to this subpart.

(b) The term ''cullet'' shall mean any broken glass generated in the manufacturing process.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants to navigable waters.

[60 FR 33958, June 29, 1995]

§ 426.33 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.

§ 426.34 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6444, Feb. 11, 1975, as amended at 60 FR 33958, June 29, 1995]

§ 426.35 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.

§ 426.36 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33958, June 29, 1995]

§ 426.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

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 conventional pollutant control technology: There shall be no discharge of process waste water pollutants to navigable waters.

[44 FR 50746, Aug. 29, 1979]

Subpart D—Plate Glass Manufacturing Subcategory

SOURCE: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.40 Applicability; description of the plate glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the process in which several mineral ingredients (sand, soda ash, limestone, dolomite, cullet and other ingredients) are melted in a furnace, pressed between rollers, and finally ground and polished to form plate glass.

§ 426.41 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) The term ''cullet'' shall mean any broken glass generated in the manufacturing process.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	2.76	.138
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	5.52	2.76
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 5714, Feb. 14, 1974, as amended at 60 FR 33958, June 29, 1995]

§ 426.43 [Reserved]

§ 426.44 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6444, Feb. 11, 1975, as amended at 60 FR 33958, June 29, 1995]

§ 426.45 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.

§ 426.46 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33958, June 29, 1995]

§ 426.47 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.42 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart E—Float Glass Manufacturing Subcategory

SOURCE: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.50 Applicability; description of the float glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the process in which several mineral ingredients (sand, soda ash, limestone, dolomite, cullet, and other ingredients) are mixed, melted in a furnace, and floated on a molten tin bath to produce float glass.

§ 426.51 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/kkg of product)	
TSS	2.00	2.00
Oil	1.40	1.40
Phosphorus	0.05	.05
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	0.0040	0.0040
Oil	0.0028	.0028
Phosphorus	0.0001	.0001
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 5714, Feb. 14, 1974, as amended at 60 FR 33958, June 29, 1995]

§ 426.53 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 subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kg of product)	
Phosphorus	0.05	.05
	English units (lb/ton of product)	
Phosphorus	0.0001	.0001

[39 FR 5714, Feb. 14, 1974, as amended at 44 FR 50746, Aug. 29, 1979]

§ 426.54 [Reserved]

§ 426.55 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of product)	
TSS	0.70	0.70
Oil	1.40	1 .40
Phosphorus	0.05	.05
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	0.0014	0.0014
Oil	0.0028	.0028
Phosphorus	0.0001	.0001
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.56 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33958, June 29, 1995]

§ 426.57 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.52 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart F—Automotive Glass Tempering Subcategory

SOURCE: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.60 Applicability; description of the automotive glass tempering subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the processes in which glass is cut and then passed through a series of processes that grind and polish the edges, bend the glass, and then temper the glass to produce side and back windows for automobiles.

§ 426.61 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.

(b) The term ''tempering'' shall mean the process whereby glass is heated near the melting point and then rapidly cooled to increase its mechanical and thermal endurance.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	1.95	1.22
Oil	0.64	.64
pH	(1)	(1)
	English units (lb/1,060 sq ft of product)	
TSS	0.40	0.25
Oil	0.13	.13
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 5714, Feb. 14, 1974, as amended at 60 FR 33959, June 29, 1995]

§ 426.63 [Reserved]

§ 426.64 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
Oil	Do.
TSS	Do.

[40 FR 6444, Feb. 11, 1975, as amended at 60 FR 33959, June 29, 1995]

§ 426.65 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 discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	0.24	0.24
Oil	0.49	.49
pH	(1)	(1)
	English units (lb/1,000 sq ft of product)	
TSS	0.05	0.05
Oil	0.10	.10
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.66 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33959, June 29, 1995]

§ 426.67 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.62 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart G—Automotive Glass Laminating Subcategory

SOURCE: 39 FR 5714, Feb. 14, 1974, unless otherwise noted.

§ 426.70 Applicability; description of the automotive glass laminating subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the processes which laminate a plastic sheet between two layers of glass, and which prepare the glass for lamination such as cutting, bending and washing, to produce automobile windshields.

§ 426.71 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	4.40	4.40
Oil	1.76	1.76
Phosphorus	1.07	1.07
pH	(1)	(1)
	English units (lb/1,000 sq ft of product)	
TSS	0.90	0.90
Oil	0.36	.36
Phosphorus	0.22	.22
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 5714, Feb. 14, 1974, as amended at 60 FR 33959, June 29, 1995]

§ 426.73 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of products)	
Phosphorus	0.30	.30
	English units (lb/1,000 sq ft of product)	
Phosphorus	0.06	.06

[39 FR 5714, Feb. 14, 1974, as amended at 44 FR 50746, Aug. 29, 1979]

§ 426.74 [Reserved]

§ 426.75 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 point source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (q/sq m of product)	
TSS	0.88	0.88
Oil	1.76	1.76
Phosphorus	0.30	.30
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.18	0.18
Oil	0.36	.36
Phosphorus	0.06	.06
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.76 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33959, June 29, 1995]

§ 426.77 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.72 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart H—Glass Container Manufacturing Subcategory

SOURCE: 40 FR 2956, Jan. 16, 1975, unless otherwise noted.

§ 426.80 Applicability; description of the glass container manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and mechanically processed into glass containers.

§ 426.81 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''furnace pull'' shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term ''oil'' shall mean those components of a waste water amenable to measurement by the technique or techniques described in the most recent addition of ''Standard Methods'' for the analysis of grease in polluted waters, waste waters, and effluents, such as ''Standard Methods,'' 13th Edition, 2nd Printing, page 407.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil	60.0	30.0
TSS	140.0	70.0
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil	0.06	0.03
TSS	0.14	0.07
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 2956, Jan. 16, 1975, as amended at 60 FR 33959, June 29, 1995]

§§ 426.83—426.84 [Reserved]

§ 426.85 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil	1.6	0.8
TSS	1.6	0.8
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil	0.0016	0.0008
TSS	0.0016	0.0008
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.86 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart. Because of the recognition that animal and vegetable oils can be adequately removed in a publicly owned treatment works, whereas mineral oil may not be readily removed and may pass through untreated, two separate limitations are established.

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil (animal and vegetable)	(1)	(1)
Oil (mineral)	60.0	30.0
TSS	(1)	(1)
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil (animal and vegetable)	(1)	(1)
Oil (mineral)	0.06	0.03
TSS	(1)	(1)
pH	(1)	(1)

[1] No limitation.

[40 FR 2956, Jan. 16, 1975, as amended at 60 FR 33959, June 29, 1995]

§ 426.87 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.82 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart I—Machine Pressed and Blown Glass Manufacturing Subcategory [Reserved]

Subpart J—Glass Tubing (Danner) Manufacturing Subcategory

SOURCE: 40 FR 2957, Jan. 16, 1975, unless otherwise noted.

§ 426.100 Applicability; description of the glass tubing (Danner) manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and glass tubing mechanically drawn from the furnace horizontally by means of the Danner process, which requires the intermittent quenching of cullet.

§ 426.101 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''furnace pull'' shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term ''cullet'' shall mean any excess glass generated in the manufacturing process.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
TSS	460.0	230.0
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
TSS	0.46	0.23
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 2957, Jan. 16, 1975, as amended at 60 FR 33959, June 29, 1995]

§§ 426.103—426.104 [Reserved]

§ 426.105 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
TSS	0.4	0.2
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
TSS	0.0004	0.0002
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.106 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
TSS	Do.

[40 FR 2957, Jan. 16, 1975, as amended at 60 FR 33959, June 29, 1995]

§ 426.107 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.102 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart K—Television Picture Tube Envelope Manufacturing Subcategory

SOURCE: 40 FR 2957, Jan. 16, 1975, unless otherwise noted.

§ 426.110 Applicability; description of the television picture tube envelope manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and processed into television picture tube envelopes.

§ 426.111 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''furnace pull'' shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term ''oil'' shall mean those components of a waste water amenable

to measurement by the technique or techniques described in the most recent addition of ''Standard Methods'' for the analysis of grease in polluted waters, waste waters, and effluents, such as ''Standard Methods,'' 13th Edition, 2nd Printing, page 407.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). (The fluoride and lead limitations are applicable to the abrasive polishing and acid polishing waste water streams while the TSS, oil, and pH limitations are applicable to the entire process waste water stream):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil	260.0	130.0
TSS	300.0	150.0
Fluoride	140.0	70.0
Lead	39.0	4.5
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil	0.26	0.13
TSS	0.30	0.15
Fluoride	0.14	0.07
Lead	0.009	0.0045
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 2957, Jan. 16, 1975, as amended at 60 FR 33959, June 29, 1995]

§ 426.113 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. These limitations are applicable to the abrasive polishing and acid polishing waste water streams.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Fluoride	120.0	60.0
Lead	0.9	0.45
	English units (lb/1,000 lb of furnace pull)	
Fluoride	0.12	0.06
Lead	0.0009	0.00045

[44 FR 50747, Aug. 29, 1979]

§ 426.114 [Reserved]

§ 426.115 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 (the fluoride and lead limitations are applicable to the abrasive polishing and acid polishing waste water streams while the TSS, oil, and pH limitations are applicable to the entire process waste water stream):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil	260.0	130.0
TSS	260.0	130.0
Fluoride	120.0	60.0
Lead	30.9	0.45
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil	0.26	0.13
TSS	0.26	0.13
Fluoride	0.12	0.06
Lead	0.0009	0.00045
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.116 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart. Because of the recognition that animal and vegetable oils can be adequately removed in a publicly owned treatment works, whereas mineral oil may not be readily removed and may pass through untreated, two separate limitations are established.

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil (animal and vegetable)	(1)	(1)
Oil (mineral)	260.0	130.0
TSS	(1)	(1)
Fluoride	120.0	60.0
Lead	(1)	(1)
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil (animal and vegetable)	(1)	(1)
Oil	0.26	0.13
TSS	(1)	(1)
Fluoride	0.12	0.06
Lead	(1)	(1)
pH	(1)	(1)

[1] No limitation.

[40 FR 2957, Jan. 16, 1975, as amended at 60 FR 33959, June 29, 1995]

§ 426.117 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.112 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart L—Incandescent Lamp Envelope Manufacturing Subcategory

SOURCE: 40 FR 2959, Jan. 16, 1975, unless otherwise noted.

§ 426.120 Applicability; description of the incandescent lamp envelope manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from

the processes by which (a) raw materials are melted in a furnace and mechanically processed into incandescent lamp envelopes or (b) incandescent lamp envelopes are etched with hydrofluoric acid to produce frosted envelopes.

§ 426.121 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''furnace pull'' shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term ''oil'' shall mean those components of a waste water amenable to measurement by the technique or techniques described in the most recent addition of ''Standard Methods'' for the analysis of grease in polluted waters, waste waters, and effluents, such as ''Standard Methods,'' 13th Edition, 2nd Printing, page 407.

(d) The term ''product frosted'' shall mean that portion of the ''furnace pull'' associated with the fraction of finished incandescent lamp envelopes which is frosted; this quantity shall be calculated by multiplying ''furnace pull'' by the fraction of finished incandescent lamp envelopes which is frosted.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) Any manufacturing plant which produces incandescent lamp envelopes shall meet the following limitations with regard to the forming operations.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil	230.0	115.0
TSS	230.0	115.0
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil	0.23	0.115
TSS	0.23	0.115
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any manufacturing plant which frosts incandescent lamp envelopes shall meet the following limitations with regard to the finishing operations.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of product frosted)	
Fluoride	230.0	115.0
Ammonia	(1)	(1)
TSS	460.0	230.0
pH	(2)	(2)
	English units (lb/1000 lb of product frosted)	
Fluoride	0.23	0.115
Ammonia	(1)	(1)
TSS	0.46	0.23
pH	(2)	(2)

[1] No limitation.
[2] Within the range 6.0 to 9.0.

[40 FR 2959, Jan. 16, 1975, as amended at 60 FR 33960, June 29, 1995]

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

Except as provided in §§ 125.30 through 125.32, 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:

(a) [Reserved]

(b) Any manufacturing plant which frosts incandescent lamp envelopes shall meet the following limitations with regard to the finishing operations.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of product frosted)	
Fluoride	104.0	52.0
Ammonia	240.0	120.0
	English units (lb/1,000 lb of product frosted)	
Fluoride	0.104	0.052
Ammonia	0.24	0.12

[51 FR 25001, July 9, 1986]

§ 426.124 [Reserved]

§ 426.125 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) Any manufacturing plant which produces incandescent lamp envelopes shall meet the following limitations with regard to the forming operations.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil	90.0	45.0
TSS	90.0	45.0
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil	0.09	0.045
TSS	0.09	0.045
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any manufacturing plant which frosts incandescent lamp envelopes shall meet the following limitations with regard to the finishing operations.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of product frosted)	
Fluoride	104.0	52.0
Ammonia	240.0	120.0
TSS	80.0	40.0
pH	(1)	(1)
	English units (lb/1,000 lb of product frosted)	
Fluoride	0.104	0.052
Ammonia	0.24	0.12
TSS	0.08	0.04
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 426.126 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart. Because of the recognition that animal and vegetable oils can be adequately removed

in a publicly owned treatment works, whereas mineral oil may not be readily removed and may pass through untreated, two separate limitations are established.

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (g/kkg of furnace pull)	
Oil (animal and vegetable)	(1)	(1)
Oil (mineral)	230.0	115.0
TSS	(1)	(1)
pH	(1)	(1)
	English units (lb/1,000 lb of furnace pull)	
Oil (animal and vegetable)	(1)	(1)
Oil (mineral)	0.23	0.115
TSS	(1)	(1)
pH	(1)	(1)
	Metric units (g/kkg of product frosted)	
Fluoride	104.0	52.0
Ammonia	(1)	(1)
TSS	(1)	(1)
pH	(1)	(1)
	English units (lb/1,000 lb of product frosted)	
Fluoride	0.104	0.052
Ammonia	(1)	(1)
TSS	(1)	(1)
pH	(1)	(1)

[1] No limitation.

[40 FR 2959, Jan. 16, 1975, as amended at 60 FR 33960, June 29, 1995]

§ 426.127 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 426.122 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart M—Hand Pressed and Blown Glass Manufacturing Subcategory

SOURCE: 40 FR 2960, Jan. 16, 1975, unless otherwise noted.

§ 426.130 Applicability; description of the hand pressed and blown glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and processed by hand into pressed or blown glassware. This includes those plants which:

(a) Produce leaded glass and employ hydrofluoric acid finishing techniques,

(b) Produce non-leaded glass and employ hydrofluoric acid finishing techniques, or

(c) Produce leaded or non-leaded glass and do not employ hydrofluoric acid finishing techniques.

§ 426.131 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) Any plant which melts raw materials, produces hand pressed or blown leaded glassware, employs hydrofluoric acid finishing techniques, and discharges greater than 50 gallons per day of process waste water, shall meet the following limitations.

Effluent characteristic	Effluent limitations
Lead	No limitation.
Fluoride	Do.
TSS	Do.
pH	Do.

(b) Any plant which melts raw materials, produces non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and employs hydrofluoric acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations
Fluoride	No limitation.
TSS	Do.
pH	Do.

(c) Any plant which melts raw materials, produces leaded or non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and does not employ hydrofluoric acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations
TSS	No limitation.
pH	Do.

[40 FR 2960, Jan. 16, 1975, as amended at 60 FR 33960, June 29, 1995]

§ 426.133 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:

(a) Any plant which melts raw materials, produces hand pressed or blown leaded glassware, discharges greater than 50 gallons per day of process waste water, and employs hydrofluoric acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations (mg/l)	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Lead	0.2	0.1
Fluoride	26.0	13.0

(b) Any plant which melts raw materials, produces non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and employs hydrofluoric acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations (mg/l)	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Fluoride	26.0	13.0

[44 FR 50747, Aug. 29, 1979, as amended at 51 FR 25001, July 9, 1986]

§ 426.134 [Reserved]

§ 426.135 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) Any plant which melts raw materials, produces hand pressed or blown leaded glassware, discharges greater than 50 gallons per day of process waste water, and employs hydrofluoric acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations (mg/l)	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Lead	0.2	0.1
Fluoride	26.0	13.0
TSS	20.0	10.0
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any plant which melts raw materials, produces non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process

waste water, and employs hydrofluoric acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations (mg/l)	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Fluoride	26.0	13.0
TSS	20.0	10.0
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

(c) Any plant which melts raw materials, produces leaded or non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and does not employ hydrofluoric acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations (mg/l)	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
TSS	20.0	10.0
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

§ 426.136 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standards (mg/l)	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(a):		
Fluoride	26.0	13.0
Lead	(1)	(1)
TSS	(1)	(1)
pH	(1)	(1)
(b):		
Fluoride	26.0	13.0
Lead	(1)	(1)
TSS	(1)	(1)
pH	(1)	(1)
(c):		
TSS	(1)	(1)
pH	(1)	(1)

1 No limitation.

[40 FR 2960, Jan. 16, 1975, as amended at 60 FR 33960, June 29, 1995]

§ 426.137 [Reserved]

PART 427—ASBESTOS MANUFACTURING POINT SOURCE CATEGORY

Subpart A—Asbestos-Cement Pipe Subcategory

Sec.
427.10 Applicability; description of the asbestos-cement pipe subcategory.
427.11 Specialized definitions.
427.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.14 Pretreatment standards for existing sources.
427.15 Standards of performance for new sources.
427.16 Pretreatment standards for new sources.

Subpart B—Asbestos-Cement Sheet Subcategory

427.20 Applicability; description of the asbestos-cement sheet subcategory.
427.21 Specialized definitions.
427.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

427.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.24 Pretreatment standards for existing sources.
427.25 Standards of performance for new sources.
427.26 Pretreatment standards for new sources.

Subpart C—Asbestos Paper (Starch Binder) Subcategory

427.30 Applicability: description of the asbestos paper (starch binder) subcategory.
427.31 Specialized definitions.
427.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.34 Pretreatment standards for existing sources.
427.35 Standards of performance for new sources.
427.36 Pretreatment standards for new sources.

Subpart D—Asbestos Paper (Elastomeric Binder) Subcategory

427.40 Applicability; description of the asbestos paper (elastomeric binder) subcategory.
427.41 Specialized definitions.
427.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.44 Pretreatment standards for existing sources.
427.45 Standards of performance for new sources.
427.46 Pretreatment standards for new sources.

Subpart E—Asbestos Millboard Subcategory

427.50 Applicability; description of the asbestos millboard subcategory.
427.51 Specialized definitions.
427.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.54 Pretreatment standards for existing sources.
427.55 Standards of performance for new sources.
427.56 Pretreatment standards for new sources.

Subpart F—Asbestos Roofing Subcategory

427.60 Applicability; description of the asbestos roofing subcategory.
427.61 Specialized definitions.
427.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.64 Pretreatment standards for existing sources.
427.65 Standards of performance for new sources.
427.66 Pretreatment standards for new sources.

Subpart G—Asbestos Floor Tile Subcategory

427.70 Applicability; description of the asbestos floor tile subcategory.
427.71 Specialized definitions.
427.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.74 Pretreatment standards for existing sources.
427.75 Standards of performance for new sources.
427.76 Pretreatment standards for new sources.

Subpart H—Coating or Finishing of Asbestos Textiles Subcategory

427.80 Applicability; description of the coating or finishing of asbestos textiles subcategory.
427.81 Specialized definitions.
427.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.84 [Reserved]
427.85 Standards of performance for new sources.
427.86 Pretreatment standards for new sources.

Subpart I—Solvent Recovery Subcategory

427.90 Applicability; description of the solvent recovery subcategory.
427.91 Specialized definitions.
427.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.94 [Reserved]
427.95 Standards of performance for new sources.
427.96 Pretreatment standards for new sources.
427.97 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart J—Vapor Absorption Subcategory

427.100 Applicability; description of the vapor absorption subcategory.
427.101 Specialized definitions.
427.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
427.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
427.104 [Reserved]
427.105 Standards of performance for new sources.
427.106 Pretreatment standards for new sources.

Subpart K—Wet Dust Collection Subcategory

427.110 Applicability; description of the wet dust collection subcategory.
427.111 Specialized definitions.
427.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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427.114 [Reserved]
427.115 Standards of performance for new sources.
427.116 Pretreatment standards for new sources.

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

SOURCE: 39 FR 7527, Feb. 26, 1974, unless otherwise noted.

Subpart A—Asbestos-Cement Pipe Subcategory

§427.10 Applicability; description of the asbestos-cement pipe subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which asbestos. Portland cement, silica and other ingredients are used in the manufacturing of asbestos-cement pipe.

§427.11 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.

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

Except as provided in §§125.30 through 125.32, any existing point source subject to this subpart shall

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.57	0.19
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	1.14	0.38
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 7527, Feb. 26, 1974, as amended at 60 FR 33960, June 29, 1995]

§ 427.13 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 pollutants 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.

§ 427.14 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6444, Feb. 11, 1975, as amended at 60 FR 33960, June 29, 1995]

§ 427.15 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.57	0.19
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	1.14	0.38
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 427.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33960, June 29, 1995]

Subpart B—Asbestos-Cement Sheet Subcategory

§ 427.20 Applicability; description of the asbestos-cement sheet subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which asbestos, Portland cement, silica, and other ingredients are used in the manufacturing of asbestos-cement sheets. Discharges resulting from manufacture of asbestos-cement sheet laboratory tops are specifically excluded from the provisions of this subpart.

§ 427.21 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.68	0.23
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	1.35	0.45
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 7527, Feb. 26, 1974, as amended at 60 FR 33960, June 29, 1995]

§ 427.23 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.

§ 427.24 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6444, Feb. 11, 1975, as amended at 60 FR 33960, June 29, 1995]

§ 427.25 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 waters pollutants to navigable waters.

§ 427.26 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33960, June 29, 1995]

Subpart C—Asbestos Paper (Starch Binder) Subcategory

§ 427.30 Applicability; description of the asbestos paper (starch binder) subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which asbestos, starch binders and other ingredients are used in the manufacture of asbestos paper (starch binder).

§ 427.31 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 part 401 shall apply to this subpart.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.55	0.35
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	1.10	0.70
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 7527, Feb. 26, 1974, as amended at 60 FR 33961, June 29, 1995]

§ 427.33 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 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.

§ 427.34 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6445, Feb. 11, 1975, as amended at 60 FR 33961, June 29, 1995]

§ 427.35 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.

§ 427.36 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33961, June 29, 1995]

Subpart D—Asbestos Paper (Elastomeric Binder) Subcategory

§ 427.40 Applicability; description of the asbestos paper (elastomeric binder) subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which asbestos, elastomeric binder, and other ingredients are used in the manufacture of asbestos paper (elastomeric binder).

§ 427.41 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.55	0.35
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	1.10	0.70
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 7527, Feb. 26, 1974, as amended at 60 FR 33961, June 29, 1995]

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

§ 427.44 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6445, Feb. 11, 1975, as amended at 60 FR 33961, June 29, 1995]

§ 427.45 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.55	0.35
pH	(1)	(1)
	English units (lb/ton of product)	
TSS	.110	0.70
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 427.46 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33961, June 29, 1995]

Subpart E—Asbestos Millboard Subcategory

§ 427.50 Applicability; description of the asbestos millboard subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which asbestos in combination with various other materials such as cement, starch, clay, lime, and mineral wool are used in the manufacture of asbestos millboard.

§ 427.51 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants to navigable waters.

[60 FR 33961, June 29, 1995]

§ 427.53 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 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.

§ 427.54 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
TSS	Do.

[40 FR 6445, Feb. 11, 1975, as amended at 60 FR 33961, June 29, 1995]

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

§ 427.56 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33961, June 29, 1995]

Subpart F—Asbestos Roofing Subcategory

§ 427.60 Applicability; description of the asbestos roofing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which asbestos paper is saturated with asphalt or coal tar with the subsequent application of various surface treatments to produce asbestos roofing products.

§ 427.61 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.

(b) COD shall mean COD added to the process waste water.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	0.015	0.008
TSS	0.010	.006
pH	(1)	(1)
	English units (lb/ton of product)	
COD	0.029	0.016
TSS	0.020	.012
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

[39 FR 7527, Feb. 26, 1974, as amended at 60 FR 33961, June 29, 1995]

§427.63 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 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.

§427.64 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
COD	Do.
TSS	Do.

[40 FR 6445, Feb. 11, 1975, as amended at 60 FR 33961, June 29, 1995]

§427.65 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.

§427.66 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33961, June 29, 1995]

Subpart G—Asbestos Floor Tile Subcategory

§427.70 Applicability; description of the asbestos floor tile subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which asbestos, polyvinyl chloride resin, chemical stabilizers, limestone, and other fillers are used in the manufacture of asbestos floor tile.

§427.71 Specialized definitions.

For the purpose of this subpart:

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

(b) The abbreviation ''mpc'' shall mean 1000 pieces of floor tile.

(c) The term ''pieces'' shall mean floor tile measured in the standard size of 12″ × 12″ × 3/32″.

(d) COD shall mean COD added to the process waste water.

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

Except as provided in §§125.30 through 125.32, any existing point source subject to this subpart shall

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/mpc of product)	
COD	0.14	0.09
TSS	0.06	.04
pH	(1)	(1)
	English units (lb/mpc of product)	
COD	0.30	0.18
TSS	0.13	.08
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

[39 FR 7527, Feb. 26, 1974, as amended at 60 FR 33961, June 29, 1995]

§ 427.73 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.

§ 427.74 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
COD	Do.
TSS	Do.

[40 FR 6445, Feb. 11, 1975, as amended at 60 FR 33962, June 29, 1995]

§ 427.75 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.

§ 427.76 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33962, June 29, 1995]

Subpart H—Coating or Finishing of Asbestos Textiles Subcategory

SOURCE: 40 FR 1875, Jan. 9, 1975, unless otherwise noted.

§ 427.80 Applicability; description of the coating or finishing of asbestos textiles subcategory.

The provisions of this subpart are applicable to discharges resulting from the process of coating or impregnating asbestos textiles with materials which impart specific desired qualities to the finished product.

§ 427.81 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process wastewater pollutants to navigable waters.

[60 FR 33962, June 29, 1995]

§ 427.83 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.

[40 FR 1875, Jan. 9, 1975; 40 FR 18172, Apr. 25, 1975]

§ 427.84 [Reserved]

§ 427.85 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.

[40 FR 1875, Jan. 9, 1975; 40 FR 18172, Apr. 25, 1975]

§ 427.86 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
COD	Do.
TSS	Do.

[40 FR 1875, Jan. 9, 1975, as amended at 60 FR 33962, June 29, 1995]

Subpart I—Solvent Recovery Subcategory

SOURCE: 40 FR 1876, Jan. 9, 1975, unless otherwise noted.

§ 427.90 Applicability; description of the solvent recovery subcategory.

The provisions of this subpart are applicable to discharges resulting from the process of solvent recovery in the manufacture of asbestos products.

§ 427.91 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished asbestos product)	
COD	0.30	0.15
TSS	0.18	0.09
pH	(1)	(1)
	English units (lbs/1,000 lbs of finished asbestos product)	
COD	0.30	0.15
TSS	0.18	0.09
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 1876, Jan. 9, 1975, as amended at 60 FR 33962, June 29, 1995]

§ 427.93 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished asbestos products)	
COD	0.30	0.15
	English units (lb/1,000 lb of finished asbestos products)	
COD	0.30	0.15

[44 FR 50747, Aug. 29, 1979]

§ 427.94 [Reserved]

§ 427.95 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished asbestos product)	
COD	0.30	0.15
TSS	0.18	0.09
pH	(1)	(1)
	English units (lbs/1,000 lbs of finished asbestos product)	
COD	0.30	0.15
TSS	0.18	0.09
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 427.96 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
COD	Do.
TSS	Do.

[40 FR 1876, Jan. 9, 1975, as amended at 60 FR 33962, June 29, 1995]

§ 427.97 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

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 conventional pollutant control technology.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished asbestos products)	
TSS	0.18	0.09
pH	(1)	(1)
	English units (lb/1,000 lb of finished asbestos products)	
TSS	0.18	0.09
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[44 FR 50747, Aug. 29, 1979]

Subpart J—Vapor Absorption Subcategory

SOURCE: 40 FR 1876, Jan. 9, 1975, unless otherwise noted.

§ 427.100 Applicability; description of the vapor absorption subcategory.

The provisions of this subpart are applicable to discharges resulting from the removal of volatilized organic materials from atmospheric emissions by means of wet scrubbers.

§ 427.101 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process wastewater pollutants to navigable waters.

[60 FR 33962, June 29, 1995]

§ 427.103 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.

[40 FR 1877, Jan. 9, 1975; 40 FR 18172, Apr. 25, 1975]

§ 427.104 [Reserved]

§ 427.105 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.

[40 FR 1877, Jan. 9, 1975; 40 FR 18172, Apr. 25, 1975]

§ 427.106 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
COD	Do.
TSS	Do.

[40 FR 1876, Jan. 9, 1975, as amended at 60 FR 33962, June 29, 1995]

Subpart K—Wet Dust Collection Subcategory

SOURCE: 40 FR 1877, Jan. 9, 1975, unless otherwise noted.

§ 427.110 Applicability; description of the wet dust collection subcategory.

The provisions of this subpart are applicable to discharges resulting from the removal of dust (particulates) from atmospheric emissions by means of wet scrubbers.

§ 427.111 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/1,000 std cu m of air scrubbed)	
TSS	0.08	0.04
pH	(1)	(1)
	English units (lbs/MM std cu ft of air scrubbed)	
TSS	5.0	2.50
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 1877, Jan. 9, 1975; 40 FR 18172, Apr. 25, 1975, as amended at 60 FR 33962, June 29, 1995]

§ 427.113 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 waste water pollutants to navigable waters.

§ 427.114 [Reserved]

§ 427.115 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.

[40 FR 1877, Jan. 9, 1975; 40 FR 18172, Apr. 25, 1975]

§ 427.116 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
COD	Do.
TSS	Do.

[40 FR 1877, Jan. 9, 1975, as amended at 60 FR 33962, June 29, 1995]

PART 428—RUBBER MANUFACTURING POINT SOURCE CATEGORY

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428.30 Applicability; description of the solution crumb rubber subcategory.
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428.40 Applicability; description of the latex rubber subcategory.
428.41 Specialized definitions.
428.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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Subpart E—Small-Sized General Molded, Extruded, and Fabricated Rubber Plants Subcategory

428.50 Applicability; description of the small-sized general molded, extruded, and fabricated rubber plants subcategory.
428.51 Specialized definitions.
428.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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Subpart F—Medium-Sized General Molded, Extruded, and Fabricated Rubber Plants Sub-category

428.60 Applicability; description of the medium-sized general molded, extruded, and fabricated rubber plants subcategory.
428.61 Specialized definitions.
428.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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428.70 Applicability; description of the large-sized general molded, extruded, and fabricated rubber plants subcategory.
428.71 Specialized definitions.
428.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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428.74 [Reserved]
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428.80 Applicability; description of the wet digestion reclaimed rubber subcategory.
428.81 Specialized definitions.
428.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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428.84 [Reserved]
428.85 Standards of performance for new sources.
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428.90 Applicability; description of the pan, dry digestion, and mechanical reclaimed rubber subcategory.
428.91 Specialized definitions.
428.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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Subpart J—Latex-Dipped, Latex-Extruded, and Latex-Molded Rubber Subcategory

428.100 Applicability; description of the latex-dipped, latex-extruded, and latex-molded rubber subcategory.
428.101 Specialized definitions.
428.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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428.104 [Reserved]
428.105 Standards of performance for new sources.
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Subpart K—Latex Foam Subcategory

428.110 Applicability; description of the latex foam subcategory.
428.111 Specialized definitions.
428.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
428.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
428.114 [Reserved]
428.115 Standards of performance for new sources.
428.116 Pretreatment standards for new sources.

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

SOURCE: 39 FR 6662, Feb. 21, 1974, unless otherwise noted.

Subpart A—Tire and Inner Tube Plants Subcategory

§ 428.10 Applicability; description of the tire and inner tube plants subcategory.

The provisions of this subpart are applicable to discharges of process

wastewater pollutants resulting from the production of pneumatic tires and inner tubes in tire and inner tube plants.

[40 FR 18173, Apr. 25, 1975]

§ 428.11 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 ''raw material'' shall mean all natural and synthetic rubber, carbon black, oils, chemical compounds, fabric and wire used in the manufacture of pneumatic tires and inner tubes or components thereof.

(c) The term ''process waste water'' shall mean, in the case of tire and inner tube plants constructed before 1959, discharges from the following: Soapstone solution applications; steam cleaning operations; air pollution control equipment; unroofed process oil unloading areas; mold cleaning operations; latex applications; and air compressor receivers. Discharges from other areas of such plants shall not be classified as process waste water for the purposes of this section.

(d) Except as provided in paragraphs (c) and (e) of this section, the term ''process waste water'' shall have the meaning set forth in § 401.11(q) of this chapter.

(e) Water used only for tread cooling shall be classified as ''nonprocess waste water.''

[39 FR 6662, Feb. 21, 1974, as amended at 40 FR 18173, Apr. 25, 1975]

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

(a) Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
TSS	0.096	0.064
Oil and grease	0.024	.016
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
TSS	0.096	0.064
Oil and grease	0.024	.016
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) All plants constructed before 1959 shall employ the best practicable maintenance and housekeeping practices in order to minimize the discharge of oil and grease in nonprocess waste waters. The concentration of oil and grease in discharges of nonprocess waste water shall meet the following limitations:

(1) The average of daily values for 30 consecutive days shall not exceed 5 mg/l.

(2) The maximum for any one day shall not exceed 10 mg/l.

[39 FR 6662, Feb. 21, 1974; 39 FR 26423, July 19, 1974, as amended at 40 FR 18173, Apr. 25, 1975; 60 FR 33963, June 29, 1995]

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

(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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
TSS	0.096	0.064
Oil and grease	0.024	.016
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
TSS	0.096	0.064
Oil and grease	0.024	.016
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) All plants constructed before 1959 shall employ the best available maintenance and housekeeping practices in order to minimize the discharge of oil and grease in nonprocess waste waters. The concentration of oil and grease in discharges of nonprocess waste waters shall meet the following limitations:

(1) The average of daily values for 30 consecutive days shall not exceed 5 mg/l.

(2) The maximum for any one day shall not exceed 10 mg/l.

[39 FR 6662, Feb. 21, 1974; 39 FR 26423, July 19, 1974, as amended at 40 FR 18173, Apr. 25, 1975]

§ 428.14 [Reserved]

§ 428.15 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
TSS	0.096	180.064
Oil and grease	0.024	.016
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
TSS	0.096	0.064
Oil and grease	0.024	.016
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 6662, Feb. 21, 1974; 39 FR 26423, July 19, 1974]

§ 428.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33963, June 29, 1995]

Subpart B—Emulsion Crumb Rubber Subcategory

§ 428.20 Applicability; description of the emulsion crumb rubber subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the manufacture of emulsion crumb rubber, other than acrylonitrilebutadiene rubber.

[40 FR 18173, Apr. 25, 1975]

§ 428.21 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.

[39 FR 6662, Feb. 21, 1974, as amended at 40 FR 18173, Apr. 25, 1975]

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	12.00	8.00
BOD5	0.60	.40
TSS	0.98	.65
Oil and grease	0.24	.16
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	12.00	8.00
BOD5	0.60	.40
TSS	0.98	.65
Oil and grease	0.24	.16
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 6662, Feb. 21, 1974, as amended at 60 FR 33963, June 29, 1995]

§ 428.23 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	3.12	2.08
BOD5	0.12	.08
TSS	0.24	.16
Oil and grease	0.12	.08
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	3.12	2.08
BOD5	0.12	.08
TSS	0.24	.16
Oil and grease	0.12	.08
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 428.24 [Reserved]

§ 428.25 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: The limitations shall be as specified in § 428.22.

Subpart C—Solution Crumb Rubber Subcategory

§ 428.30 Applicability; description of the solution crumb rubber subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the manufacture of crumb rubber.

§ 428.31 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 part 401 shall apply to this subpart.

[39 FR 6662, Feb. 21, 1974, as amended at 40 FR 18173, Apr. 25, 1975]

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	5.91	3.94
BOD5	0.60	.40
TSS	0.98	.65
Oil and grease	0.24	.16
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	5.91	3.94
BOD5	0.60	.40
TSS	0.98	.65
Oil and grease	0.24	.16
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 6662, Feb. 21, 1974, as amended at 60 FR 33963, June 29, 1995]

§ 428.33 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	3.12	2.08
BOD5	0.12	.08
TSS	0.24	.16
Oil and grease	0.12	.08
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	3.12	2.08
BOD5	0.12	.08
TSS	0.24	.16
Oil and grease	0.12	.08
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 428.34 [Reserved]

§ 428.35 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: The limitations shall be as specified in § 428.32.

Subpart D—Latex Rubber Subcategory

§ 428.40 Applicability; description of the latex rubber subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the manufacture of latex rubber.

§ 428.41 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.

[39 FR 6662, Feb. 21, 1974, as amended at 40 FR 18173, Apr. 25, 1975]

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	10.27	6.85
BOD5	0.51	.34
TSS	0.82	.55
Oil and grease	0.21	.14
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	10.27	6.85
BOD5	0.51	.34
TSS	0.82	.55
Oil and grease	0.21	.14
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 6662, Feb. 21, 1974, as amended at 60 FR 33963, June 29, 1995]

§ 428.43 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, 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	2.66	1.78
BOD5	0.11	.07
TSS	0.21	.14
Oil and grease	0.11	.07
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	2.66	1.78
BOD5	0.11	.07
TSS	0.21	.14
Oil and grease	0.11	.07
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 428.44 [Reserved]

§ 428.45 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 point source subject to the provisions of this subpart: The limitations shall be as specified for § 428.42.

§ 428.46 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33963, June 29, 1995]

Subpart E—Small-Sized General Molded, Extruded, and Fabricated Rubber Plants Subcategory

SOURCE: 40 FR 2336, Jan. 10, 1975, unless otherwise noted.

§ 428.50 Applicability; description of the small-sized general molded, extruded, and fabricated rubber plants subcategory.

The following provisions of this subpart are applicable to process waste water discharges resulting from the

production of molded, extruded, and fabricated rubber products, foam rubber backing, rubber cement-dipped goods, and retreaded tires by small-sized plants. Specifically excluded from the provisions of this subpart are the discharges resulting from the production of latex-based products, tires and inner tubes, and those discharges from textile plants subject to the provisions of part 410 of this chapter.

§ 428.51 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''raw material'' shall mean all natural and synthetic rubber, carbon black, oils, chemical compounds, and fabric used in the manufacture of general molded, extruded, and fabricated rubber products.

(c) The term ''raw material equivalent'' shall be equal to the raw material usage multiplied by the volume of air scrubbed via wet scrubbers divided by the total volume of air scrubbed.

(d) The term ''small-sized plants'' shall mean plants which process less than 3,720 kg/day (8,200 lbs/day) of raw materials.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.70	0.25
TSS	1.28	0.64
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.70	0.25
TSS	1.28	0.65
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, 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, in addition to the limitations set forth by § 428.52(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to wet scrubbers, 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, in addition to the limitations set forth by § 428.52(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material equivalent)	
TSS	5.8	2.9
	English units (lb/1,000 lb of raw material equivalent)	
TSS	5.8	2.9

[40 FR 2336, Jan. 10, 1975, as amended at 60 FR 33963, June 29, 1995]

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

(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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.70	0.25
TSS	1.28	0.64
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.70	0.25
TSS	1.28	0.64
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable, in addition to the limitations set forth by § 428.53(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to wet scrubbers, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable, in addition to the limitations set forth by § 428.53(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material equivalent)	
TSS	1.0	0.5
	English units (lb/1,000 lb of raw material equivalent)	
TSS	1.0	0.5

§ 428.54 [Reserved]

§ 428.55 Standards of performance for new sources.

(a) 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.70	0.25
TSS	1.28	0.64
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.70	0.25
TSS	1.28	0.64
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, which may be discharged by a new source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.55(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

§ 428.56 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, in addition to the limitations set forth in paragraphs (a) and (b) of this section.

(a) 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 point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
TSS	Do.
Oil and grease	100 mg/l daily maximum.

(b) The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, which may be discharged to a publicly owned treatment works by a new point source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.56(a):

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for thirty consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

[40 FR 2336, Jan. 10, 1975, as amended at 60 FR 33963, June 29, 1995]

Subpart F—Medium-Sized General Molded, Extruded, and Fabricated Rubber Plants Subcategory

SOURCE: 40 FR 2338, Jan. 10, 1975, unless otherwise noted.

§ 428.60 Applicability; description of the medium-sized general molded, extruded, and fabricated rubber plants subcategory.

The following provisions of this subpart are applicable to process waste water discharges resulting from the production of molded, extruded, and fabricated rubber products, foam rubber backing, rubber cement-dipped goods, and retreaded tires by medium-sized plants. Specifically excluded from the provisions of this subpart are the discharges resulting from the production of latex-based products, tires and inner tubes, and those discharges from

textile plants subject to the provisions of part 410 of this chapter.

§ 428.61 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''raw material'' shall mean all natural and synthetic rubber, carbon black, oils, chemical compounds, and fabric used in the manufacture of general molded, extruded, and fabricated rubber products.

(c) The term ''raw material equivalent'' shall be equal to the raw material usage multiplied by the volume of air scrubbed via wet scrubbers divided by the total volume of air scrubbed.

(d) The term ''medium-sized plants'' shall mean plants which process between 3,720 kg/day (8,200 lbs/day) and 10,430 kg/day (23,000 lbs/day) of raw materials.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.42	0.15
TSS	0.80	0.40
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.42	0.15
TSS	0.80	0.40
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to leadsheathed hose production, 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, in addition to the limitations set forth by § 428.62(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to wet scrubbers, 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, in addition to the limitations set forth by § 428.62(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material equivalent)	
TSS	5.8	2.9
	English units (lb/1,000 lb of raw material equivalent)	
TSS	5.8	2.9

[40 FR 2338, Jan. 10, 1975, as amended at 60 FR 33963, June 29, 1995]

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

(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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.42	0.15
TSS	0.80	0.40
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.42	0.15
TSS	0.80	0.40
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable, in addition to the limitations set forth by § 428.63(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to wet scrubbers, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable, in addition to the limitations set forth by § 428.63:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material equivalent)	
TSS	1.0	0.5
	English units (lb/1,000 lb of raw material equivalent)	
TSS	1.0	0.5

§ 428.64 [Reserved]

§ 428.65 Standards of performance for new sources.

(a) 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.42	0.15
TSS	0.80	0.40
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.42	0.0
TSS	0.80	0.4
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, which may be discharged by a new source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.65(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

§ 428.66 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, in addition to the limitations set forth in paragraphs (a) and (b) of this section.

(a) 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 point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
TSS	Do.
Oil and grease	100 mg/l daily maximum.

(b) The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, which may be discharged to a publicly owned treatment works by a new point source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.66(a):

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for thirty consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

[40 FR 2338, Jan. 10, 1975, as amended at 60 FR 33963, June 29, 1995]

Subpart G—Large-Sized General Molded, Extruded, and Fabricated Rubber Plants Subcategory

SOURCE: 40 FR 2340, Jan. 10, 1975, unless otherwise noted.

§ 428.70 Applicability; description of the large-sized general molded, extruded, and fabricated rubber plants subcategory.

The following provisions of this subpart are applicable to process waste water discharges resulting from the production of molded, extruded, and fabricated rubber products, foam rubber backing, rubber cement-dipped goods, and retreaded tires by large-sized plants. Specifically excluded from the provisions of this subpart are the discharges resulting from the production of latex-based products, tires and inner tubes, and those discharges from

textile plants subject to the provisions of part 410 of this chapter.

§ 428.71 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''raw material'' shall mean all natural and synthetic rubber, carbon black, oils, chemical compounds, and fabric used in the manufacture of general molded, extruded, and fabricated rubber products.

(c) The term ''raw material equivalent'' shall be equal to the raw material usage multiplied by the volume of air scrubbed via wet scrubbers divided by the total volume of air scrubbed.

(d) The term ''large-sized plants'' shall mean plants which process more than 10,430 kg/day (23,000 lbs/day) of raw materials.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.26	0.093
TSS	0.50	0.25
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.26	0.093
TSS	0.50	0.25
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, 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, in addition to the limitations set forth by § 428.72(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to wet scrubbers, 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, in addition to the limitations set forth by § 428.72(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material equivalent)	
Lead	5.8	2.9
	English units (lb/1,000 lb of raw material equivalent)	
Lead	5.8	2.9

[40 FR 2340, Jan. 10, 1975, as amended at 60 FR 33963, June 29, 1995]

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

(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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.26	0.093
TSS	0.50	0.25
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.26	0.093
TSS	0.50	0.25
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to lead-sheathed hose production, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable, in addition to the limitations set forth by § 428.73(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to wet scrubbers, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable, in addition to the limitations set forth by § 428.73(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material equivalent)	
Lead	1.0	0.5
	English units (lb/1,000 lb of raw material equivalent)	
Lead	1.0	0.5

§ 428.74 [Reserved]

§ 428.75 Standards of performance for new sources.

(a) 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	0.26	0.093
TSS	0.50	0.25
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	0.26	0.093
TSS	0.50	0.25
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to lead-sheathed hose production, which may be discharged by a new source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.75(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

§ 428.76 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, in addition to the limitations set forth in paragraphs (a) and (b) of this section.

(a) 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 point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
TSS	Do.
Oil and grease	100 mg/l daily maximum.

(b) The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section, and attributable to lead-sheathed hose production, which may be discharged to a publicly owned treatment works by a new point source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.76(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Lead	0.0017	0.0007
	English units (lb/1,000 lb of raw material)	
Lead	0.0017	0.0007

[40 FR 2340, Jan. 10, 1975, as amended at 60 FR 33963, June 29, 1995]

Subpart H—Wet Digestion Reclaimed Rubber Subcategory

SOURCE: 40 FR 2341, Jan. 10, 1975, unless otherwise noted.

§ 428.80 Applicability; description of the wet digestion reclaimed rubber subcategory.

The provisions of this subpart are applicable to process waste water discharges resulting from the production of reclaimed rubber by use of the wet digestion process.

§ 428.81 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	14.7	6.11
Oil and grease	0.40	0.144
TSS	1.04	0.52
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	14.7	6.11
Oil and grease	0.40	0.144
TSS	1.04	0.52
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 2341, Jan. 10, 1975, as amended at 60 FR 33963, June 29, 1995]

§ 428.83 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	14.7	6.11
Oil and grease	0.40	0.144
TSS	1.04	0.52
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	14.7	6.11
Oil and grease	0.40	0.144
TSS	1.04	0.52
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 428.84 [Reserved]

§ 428.85 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	14.7	6.11
Oil and grease	0.40	0.144
TSS	1.04	0.52
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
COD	14.7	6.11
Oil and grease	0.40	0.144
TSS	1.04	0.52
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 428.86 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	14.7	6.11
Oil and grease	(1)	(1)
TSS	(2)	(2)
pH	(2)	(2)
	English units (lb/1,000 lb of product)	
COD	14.7	6.11
Oil and grease	(1)	(1)
TSS	(2)	(2)
pH	(2)	(2)

[1] 100 mg/l.
[2] No limitation.

[40 FR 2341, Jan. 10, 1975, as amended at 60 FR 33964, June 29, 1995]

Subpart I—Pan, Dry Digestion, and Mechanical Reclaimed Rubber Subcategory

SOURCE: 40 FR 2342, Jan. 10, 1975, unless otherwise noted.

§ 428.90 Applicability; description of the pan, dry digestion, and mechanical reclaimed rubber subcategory.

The provisions of this subpart are applicable to process waste water discharges resulting from the production of reclaimed rubber except when produced by the wet digestion process.

§ 428.91 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
Oil and grease	0.40	0.144
TSS	0.384	0.192
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
Oil and grease	0.40	0.144
TSS	0.384	0.192
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to pan, dry digestion, and mechanical reclaimed rubber processes which are integrated with a wet digestion reclaimed process, 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, in addition to the limitations set forth by § 428.92(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	6.7	2.8
	English units (lb/1,000 lb of product)	
COD	6.7	2.8

[40 FR 2342, Jan. 10, 1975, as amended at 60 FR 33964, June 29, 1995]

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

(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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
Oil and grease	0.40	0.144
TSS	0.384	0.192
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
Oil and grease	0.40	0.144
TSS	0.384	0.192
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to pan, dry digestion, and mechanical reclaimed rubber processes which are integrated with a wet digestion reclaimed rubber process, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable in addition to the limitations set forth by § 428.93(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	6.7	2.8
	English units (lb/1,000 lb of product)	
COD	6.7	2.8

§ 428.94 [Reserved]

§ 428.95 Standards of performance for new sources.

(a) 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
Oil and grease	0.40	0.144
TSS	0.384	0.192
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
Oil and grease	0.40	0.144
TSS	0.384	0.192
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to pan, dry digestion, and mechanical reclaimed rubber processes which are integrated with a wet digestion reclaimed rubber process, which

may be discharged by a new source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.95:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	6.7	2.8
	English units (lb/1,000 lb of product)	
COD	6.7	2.8

§ 428.96 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, in addition to the limitations set forth in paragraphs (a) and (b) of this section.

(a) 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 point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
TSS	Do.
Oil and grease	100 mg/l daily maximum.

(b) The following pretreatment standard establishes the quantity or quality or pollutant properties controlled by this section and attributable to pan, dry digestion, and mechanical reclaimed rubber processes which are integrated with a wet digestion reclaimed rubber process, which may be discharged to a publicly owned treatment works by a new point source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.96(a):

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
COD	6.7	2.8
	English units (lb/1,000 lb of product)	
COD	6.7	2.8

[40 FR 2342, Jan. 10, 1975, as amended at 60 FR 33964, June 29, 1995]

Subpart J—Latex-Dipped, Latex-Extruded, and Latex-Molded Rubber Subcategory

SOURCE: 40 FR 2344, Jan. 10, 1975, unless otherwise noted.

§ 428.100 Applicability; description of the latex-dipped, latex-extruded, and latex-molded rubber subcategory.

The provisions of this subpart are applicable to process waste water discharges resulting from the manufacture of latex-dipped, latex-extruded, and latex-molded products with the exception of those discharges from textile plants subject to the provisions of part 410 of this chapter.

§ 428.101 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''chromium'' shall mean total chromium.

(c) The term ''raw material'' shall mean all latex solids used in the manufacture of latex-dipped, latex-extruded, and latex-molded products.

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

Except as provided in §§ 125.30 through 125.32, any existing point

source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	2.0	0.73
BOD5	3.72	2.20
TSS	6.96	2.90
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	2.0	0.73
BOD5	3.72	2.20
TSS	6.96	2.90
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to plants employing the chromic acid form-cleaning operation, by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available, in addition to the limitations set forth by § 428.102(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Chromium	0.0086	0.0036
	English units (lb/1,000 lb of raw material)	
Chromium	0.0086	0.0036

[40 FR 2344, Jan. 10, 1975, as amended at 60 FR 33964, June 29, 1995]

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

(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 available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	2.0	0.73
BOD5	3.72	2.20
TSS	6.96	2.90
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	2.0	0.73
BOD5	3.72	2.20
TSS	6.96	2.90
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to plants employing the chromic acid form-cleaning operation, by a point source subject to the provisions of this subpart after application of the best

available technology economically achievable, in addition to the limitations set forth by § 428.103(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Chromium	0.0086	0.0036
	English units (lb/1,000 lb of raw material)	
Chromium	0.0086	0.0036

§ 428.104 [Reserved]

§ 428.105 Standards of performance for new sources.

(a) 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Oil and grease	2.0	0.73
BOD5	3.72	2.20
TSS	6.96	2.90
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Oil and grease	2.0	0.73
BOD5	3.72	2.20
TSS	6.96	2.90
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, and attributable to plants employing the chromic acid form-cleaning operation, which may be discharged by a new source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.102(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Chromium	0.0086	0.0036
	English units (lb/1,000 lb of raw material)	
Chromium	0.0086	0.0036

§ 428.106 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, in addition to the limitations set forth in paragraphs (a) and (b) of this section.

(a) 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 point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
pH	No limitation.
BOD5	Do.
TSS	Do.
Oil and grease	100 mg/l daily maximum.

(b) The following pretreatment standard establishes the quantity or quality of pollutant properties controlled by this section and attributable to plants employing the chromic acid form-cleaning operation, which may be discharged to a publicly owned treatment works by a new point source subject to the provisions of this subpart, in addition to the limitations set forth by § 428.106(a):

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Chromium	0.0086	0.0036
	English units (lb/1,000 lb of raw material)	
Chromium	0.0086	0.0036

[40 FR 2344, Jan. 10, 1975, as amended at 60 FR 33964, June 29, 1995]

Subpart K—Latex Foam Subcategory

SOURCE: 40 FR 2345, Jan. 10, 1975, unless otherwise noted.

§ 428.110 Applicability; description of the latex foam subcategory.

The provisions of this subpart are applicable to process waste water discharges resulting from the manufacture of latex foam except for those discharges from textile plants subject to the provisions of part 410 of this chapter.

§ 428.111 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''raw material'' shall mean all latex solids used in the manufacture of latex foam.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Zinc	0.058	0.024
BOD5	2.4	1.4
TSS	2.26	0.94
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Zinc	0.058	0.024
BOD5	2.4	1.4
TSS	2.26	0.94
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 2345, Jan. 10, 1975, as amended at 60 FR 33964, June 29, 1995]

§ 428.113 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Zinc	0.058	0.024
BOD5	2.4	1.4
TSS	2.26	0.94
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Zinc	0.058	0.024
BOD5	2.4	1.4
TSS	2.26	0.94
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 428.114 [Reserved]

§ 428.115 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Zinc	0.058	0.024
BOD5	2.4	1.4
TSS	2.26	0.94
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Zinc	0.058	0.024
BOD5	2.4	1.4
TSS	2.26	0.94
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 428.116 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 point source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Zinc	0.058	0.024
BOD5	(1)	(1)
TSS	(1)	(1)
pH	(1)	(1)
	English units (lb/1,000 lb of raw material)	
Zinc	0.058	0.024
BOD5	(1)	(1)
TSS	(1)	(1)
pH	(1)	(1)

[1] No limitation.

[40 FR 2345, Jan. 10, 1975, as amended at 60 FR 33964, June 29, 1995]

PART 429—TIMBER PRODUCTS PROCESSING POINT SOURCE CATEGORY

GENERAL PROVISIONS

Sec.
429.10 Applicability.
429.11 General definitions.
429.12 Monitoring requirements. [Reserved]

Subpart A—Barking Subcategory

429.20 Applicability; description of the barking subcategory.
429.21 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
429.24 New source performance standards (NSPS).
429.25 Pretreatment standards for existing sources (PSES).
429.26 Pretreatment standards for new sources (PSNS).

Subpart B—Veneer Subcategory

429.30 Applicability; description of the veneer subcategory.

429.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.34 New source performance standards (NSPS).
429.35 Pretreatment standards for existing sources (PSES).
429.36 Pretreatment standards for new sources (PSNS).

Subpart C—Plywood Subcategory

429.40 Applicability; description of the plywood subcategory.
429.41 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.44 New source performance standards (NSPS).
429.45 Pretreatment standards for existing sources (PSES).
429.46 Pretreatment standards for new sources (PSNS).

Subpart D—Dry Process Hardboard Subcategory

429.50 Applicability; description of the dry process hardboard subcategory.
429.51 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.54 New source performance standards (NSPS).
429.55 Pretreatment standards for existing sources (PSES).
429.56 Pretreatment standards for new sources (PSNS).

Subpart E—Wet Process Hardboard Subcategory

429.60 Applicability; description of the wet process hardboard subcategory.
429.61 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.62 [Reserved]
429.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
429.64 New source performance standards (NSPS).
429.65 Pretreatment standards for existing sources (PSES).
429.66 Pretreatment standards for new sources (PSNS).

Subpart F—Wood Preserving—Water Borne or Nonpressure Subcategory

429.70 Applicability; description of the wood preserving—water borne or nonpressure subcategory.
429.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.74 New source performance standards (NSPS).
429.75 Pretreatment standards for existing sources (PSES).
429.76 Pretreatment standards for new sources (PSNS).

Subpart G—Wood Preserving—Steam Subcategory

429.80 Applicability; description of the wood preserving—steam subcategory.
429.81 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
429.84 New source performance standards (NSPS).
249.85 Pretreatment standards for existing sources (PSES).
429.86 Pretreatment standards for new sources (PSNS).

Subpart H—Wood Preserving—Boulton Subcategory

429.90 Applicability; description of the wood preserving—Boulton subcategory.
429.91 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.94 New source performance standards (NSPS).
429.95 Pretreatment standards for existing sources (PSES).
429.96 Pretreatment standards for new sources (PSNS).

Subpart I—Wet Storage Subcategory

429.100 Applicability; description of the wet storage subcategory.
429.101 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.103 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.104 New source performance standards (NSPS).
429.105 Pretreatment standards for existing sources (PSES).
429.106 Pretreatment standards for new sources (PSNS).

Subpart J—Log Washing Subcategory

429.110 Applicability; description of the log washing subcategory.
429.111 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.112 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.113 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.114 New source performance standards (NSPS).
429.115 Pretreatment standards for existing sources (PSES).
429.116 Pretreatment standards for new sources (PSNS).

Subpart K—Sawmills and Planing Mills Subcategory

429.120 Applicability; description of the sawmills and planing mills subcategory.
429.121 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.122 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.123 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.124 New source performance standards (NSPS).
429.125 Pretreatment standards for existing sources (PSES).

429.126 Pretreatment standards for new sources (PSNS).

Subpart L—Finishing Subcategory

429.130 Applicability; description of the finishing subcategory.
429.131 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.132 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.133 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.134 New source performance standards (NSPS).
429.135 Pretreatment standards for existing sources (PSES).
429.136 Pretreatment standards for new sources (PSNS).

Subpart M—Particleboard Manufacturing Subcategory

429.140 Applicability; description of the particleboard manufacturing subcategory.
419.141 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.142 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.143 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.144 New source performance standards (NSPS).
429.145 Pretreatment standards for existing sources (PSES).
429.146 Pretreatment standards for new sources (PSNS).

Subpart N—Insulation Board Subcategory

429.150 Applicability; description of the insulation board subcategory.
429.151 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.152 [Reserved]
429.153 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
429.154 New source performance standards (NSPS).
429.155 Pretreatment standards for existing sources (PSES).
429.156 Pretreatment standards for new sources (PSNS).

Subpart O—Wood Furniture and Fixture Production Without Water Wash Spray Booth(s) or Without Laundry Facilities Subcategory

429.160 Applicability; description of the wood furniture and fixture production without water wash spray booth(s) or without laundry facilities subcategory.
429.161 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.162 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
429.163 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.164 New source performance standards (NSPS).
429.165 Pretreatment standards for existing sources (PSES).
429.166 Pretreatment standards for new sources (PSNS).

Subpart P—Wood Furniture and Fixture Production With Water Wash Spray Booth(s) or With Laundry Facilities Subcategory

429.170 Applicability; description of the wood furniture and fixture production with water wash spray booth(s) or with laundry facilities subcategory.
429.171 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
429.172 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

429.173 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
429.174 New source performance standards (NSPS).
429.175 Pretreatment standards for existing sources (PSES).
429.176 Pretreatment standards for new sources (PSNS).

AUTHORITY: Secs. 301, 304(b), (c), (e), and (g), 306(b) and (c), 307(a)(b) and (c) and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314(b), (c), (e), and (g), 1316(b) and (c), 1317(b) and (c), and 1361; 86 Stat. 815, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 46 FR 8285, Jan. 26, 1981, unless otherwise noted.

GENERAL PROVISIONS

§ 429.10 Applicability.

This part applies to any timber products processing operation, and any plant producing insulation board with wood as the major raw material, which discharges or may discharge process wastewater pollutants to the waters of the United States, or which introduces or may introduce process wastewater pollutants into a publicly owned treatment works.

§ 429.11 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) The term ''hydraulic barking'' means a wood processing operation that removes bark from wood by the use of water under a pressure of 6.8 atm (100 psia) or greater.

(b) The terms ''cubic feet'' or ''cubic meters'' of production in subpart A means the cubic feet or cubic meters of logs from which bark is removed.

(c) The term ''process wastewater'' specifically excludes noncontact cooling water, material storage yard runoff (either raw material or processed wood storage), and boiler blowdown. For the dry process hardboard, veneer, finishing, particleboard, and sawmills and planing mills subcategories, fire control water is excluded from the definition.

(d) The term ''gross production of fiberboard products'' means the air dry weight of hardboard or insulation board following formation of the mat and prior to trimming and finishing operations.

(e) The term ''hardboard'' means a panel manufactured from interfelted ligno-cellulosic fibers consolidated under heat and pressure to a density of 0.5 g/cu cm (31 lb/cu ft) or greater.

(f) The term ''insulation board'' means a panel manufactured from interfelted ligno-cellulosic fibers consolidated to a density of less than 0.5 g/cu cm (less than 31 lb/cu ft).

(g) The term ''smooth-one-side (S1S) hardboard'' means hardboard which is produced by the wet-matting, wet-pressing process.

(h) The term ''smooth-two-sides (S2S) hardboard'' means hardboard which is produced by the wet-matting, dry-pressing process.

(i) The term ''debris'' means woody material such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 cm (1.0 in) diameter round opening and is present in the discharge from a wet storage facility.

(j) For the subcategories for which numerical limitations are given, the daily maximum limitation is a value that should not be exceeded by any one effluent measurement. The 30-day limitation is a value that should not be exceeded by the average of daily measurements taken during any 30-day period.

[46 FR 8285, Jan. 26, 1981, as amended at 46 FR 57287, Nov. 23, 1981]

§ 429.12 Monitoring requirements. [Reserved]

Subpart A—Barking Subcategory

§ 429.20 Applicability; description of the barking subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from the barking of logs by plants in SIC major group 24, and by plants producing insulation board (SIC group 2661).

§ 429.21 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The following limitations apply to all mechanical barking installations: There shall be no discharge of process wastewater pollutants into navigable waters.

(b) The following limitations constitute the maximum permissible discharge for hydraulic barking installations:

SUBPART A

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Metric units (kilograms per cubic meter of production)	
BOD5	1.5	0.5
TSS	6.9	2.3
pH	(1)	(1)
	English units (pounds per cubic foot of production)	
BOD5	0.09	0.03
TSS	0.431	0.144
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

§ 429.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 429.24 New source peformance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

(a) The following limitations apply to all mechanical barking installations: There shall be no discharge of process wastewater pollutants into navigable waters.

(b) The following limitations constitute the maximum permissible discharge for hydraulic barking installations:

SUBPART A

Pollutant or pollutant property	NSPS effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Metric units (kilograms per cubic meter of production)	
BOD5	1.5	0.5
TSS	6.9	2.3
pH	(1)	(1)
	English units (pounds per cubic foot of production)	
BOD5	0.09	0.03
TSS	0.431	0.144
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

§ 429.25 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§ 429.26 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart B—Veneer Subcategory

§ 429.30 Applicability; description of the veneer subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from any plant which manufactures veneer and does not store or hold raw materials in wet storage conditions.

§ 429.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by application of the best practicable control technology currently available (BPT):

(a) The following limitations constitute the maximum permissible discharge for all veneer manufacturing installations other than those referred to in paragraphs (b) and (c) of this section: There shall be no discharge of process wastewater pollutants into navigable waters.

(b) The following limitations constitute the maximum permissible discharge for softwood veneer manufacturing processes which use direct steaming for the conditioning of logs:

SUBPART B

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
	Metric units (kilograms per cubic meter of production)	
BOD5	0.72	0.24
pH	(1)	(1)
	English units (pounds per cubic foot of production)	
BOD5	0.045	0.015
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

(c) The following limitations constitute the maximum permissible discharge for hardwood veneer manufacturing processes which use direct steaming for the conditioning of logs:

SUBPART B

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
	Metric units (kilograms per cubic meter of production)	
BOD5	1.62	0.54
pH	(1)	(1)
	English units (pounds per cubic foot of production)	
BOD5	0.10	0.034
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

§ 429.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.34 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.35 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§429.36 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart C—Plywood Subcategory

§429.40 Applicability; description of the plywood subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from any plywood producing plant that does not store or hold raw materials in wet storage conditions.

§429.41 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§429.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.44 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.45 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§429.46 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart D—Dry Process Hardboard Subcategory

§429.50 Applicability; description of the dry process hardboard subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from any plant that produces hardboard using the dry matting process for forming the board mat.

§429.51 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.54 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.55 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§ 429.56 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart E—Wet Process Hardboard Subcategory

§ 429.60 Applicability; description of the wet process hardboard subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from any plant which produces hardboard products using the wet matting process for forming the board mat.

§ 429.61 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The following limitations apply to plants which produce smooth-one-side (S1S) hardboard:

SUBPART E (S1S)

Pollutant or pollutant property	BPT Effluent Limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	kg/kkg (lb/1000 lb) of gross production	
BOD5	20.5	10.7
TSS	37.3	24.6
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

(b) The following limitations apply to plants which produce smooth-two-sides (S2S) hardboard:

SUBPART E (S2S)

Pollutant or pollutant property	BPT Effluent Limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	kg/(kkg (lb/1000 lb) of gross production	
BOD5	32.9	21.4
TSS	54.2	37.1
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

[46 FR 8285, Jan. 26, 1981, as amended at 46 FR 11972, Feb. 12, 1981]

§429.62 [Reserved]

§429.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§429.64 New source performance standards (NSPS).

For purpose of this new source performance standard only, ''new source'' means a source which is constructed at a site at which no other source covered by this part is located. Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

[46 FR 8285, Jan. 26, 1981, as amended at 46 FR 57287, Nov. 23, 1981]

§429.65 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§429.66 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart F—Wood Preserving—Water Borne or Nonpressure Subcategory

§429.70 Applicability; description of the wood preserving–water borne or nonpressure subcategory.

This subpart applies to discharges and to the introduction of process wastewater pollutants into publicly owned treatment works from all nonpressure wood preserving treatment processes and all pressure wood preserving treatment processes employing water borne inorganic salts.

§429.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§429.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.74 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.75 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

There shall be no introduction of process wastewater pollutants into publicly owned treatment works.

§ 429.76 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS): There shall be no introduction of process wastewater pollutants into publicly owned treatment works.

Subpart G—Wood Preserving Steam Subcategory

§ 429.80 Applicability; description of the wood preserving—steam subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from wood preserving processes that use direct steam impingment on wood as the predominant conditioning method; processes that use the vapor drying process as the predominant conditioning method; direct steam conditioning processes which use the same retort to treat with both salt and oil type preservatives; and steam conditioning processes which apply both salt type and oil type preservatives to the same stock.

§ 429.81 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

SUBPART G

Pollutant or pollutant property	BPT Effluent Limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	English units (lb/1000 cubic feet of product)	
COD	68.5	34.5
Phenols	.14	.04
Oil and Grease	1.5	.75
pH	(1)	(1)
	Metric units (kg/1000 cu m of product)	
COD	1,100	550
Phenols	2.18	.65
Oil and Grease	24.0	12.0
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

§ 429.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 429.84 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.85 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and meet the following pretreatment standards for existing sources (PSES):

SUBPART G

[PSES Effluent Limitations]

Pollutant or pollutant property	Maximum for any 1 day (mg/l)
Oil and grease	100
Copper	5
Chromium	4
Arsenic	4

In cases where POTWs find it necessary to impose mass limitations, the following equivalent mass limitations are provided as guidance.

[Grams per cubic meter of production]

Pollutant or pollutant property	Maximum for any 1 day
Oil and grease	20.5
Copper	.62
Chromium	.41
Arsenic	.41

§ 429.86 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS): There shall be no introduction of process wastewater pollutants into publicly owned treatment works.

Subpart H—Wood Preserving—Boulton Subcategory

§ 429.90 Applicability; description of the wood preserving—Boulton subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into a publicly owned treatment works from wood preserving operations which use the Boulton process as the predominant method of conditioning stock.

§ 429.91 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.94 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.95 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and meet

the following pretreatment standards for existing sources (PSES):

SUBPART H

[PSES Effluent Limitations]

Pollutant or pollutant property	Maximum for any 1 day (mg/l)
Oil and grease	100
Copper	5
Chromium	4
Arsenic	4

In cases where POTWs find it necessary to impose mass limitations, the following equivalent mass limitations are provided as guidance.

SUBPART H

[PSES Effluent Limitations; grams per cu m of production]

Pollutant or pollutant property	Maximum for any 1 day
Oil and grease	20.5
Copper	.62
Chromium	.41
Arsenic	.41

§ 429.96 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS): There shall be no introduction of process wastewater pollutants into publicly owned treatment works.

Subpart I—Wet Storage Subcategory

§ 429.100 Applicability; description of the wet storage subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from the storage of unprocessed wood, i.e., the storage of logs or roundwood before or after removal of bark in self-contained bodies of water (mill ponds or log ponds) or the storage of logs or roundwood on land during which water is sprayed or deposited intentionally on the logs (wet decking).

§ 429.101 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no debris discharged and the pH shall be within the range of 6.0 to 9.0

§ 429.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.103 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no debris discharged and the pH shall be within the range of 6.0 to 9.0.

§ 429.104 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no debris discharged and the pH shall be within the range of 6.0 to 9.0.

§ 429.105 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§429.106 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart J—Log Washing Subcategory

§429.110 Applicability; description of the log washing subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from the log washing process in which water under pressure is applied to logs for the purpose of removing foreign material from the surface of the log before further processing.

§429.111 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process wastewater pollutants to navigable waters containing a total suspended solids concentration greater than 50 mg/l and the pH shall be within the range of 6.0 to 9.0.

§429.112 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§429.113 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.114 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§429.115 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§429.116 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart K—Sawmills and Planing Mills Subcategory

§ 429.120 Applicability; description of the sawmills and planing mills subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from the timber products processing procedures that include all or part of the following operations: bark removal (other than hydraulic barking as defined in § 429.11 of this part), sawing, resawing, edging, trimming, planing and machining.

§ 429.121 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.122 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.123 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.124 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.125 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§ 429.126 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart L—Finishing Subcategory

§ 429.130 Applicability; description of the finishing subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from the drying, planing, dipping, staining, end coating, moisture proofing, fabrication, and by-product utilization timber processing operations not otherwise covered by specific guidelines and standards.

§ 429.131 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.132 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.133 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subject must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.134 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.135 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§ 429.136 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart M—Particleboard Manufacturing Subcategory

§ 429.140 Applicability; description of the particleboard manufacturing subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from any plant which manufactures particleboard.

§ 429.141 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.142 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.143 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.144 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.145 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly

owned treatment works must comply with 40 CFR part 403.

§ 429.146 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduce process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart N—Insulation Board Subcategory

§ 429.150 Applicability; description of the insulation board subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from plants which produce insulation board using wood as the primary raw material. Specifically excluded from this subpart is the manufacture of insulation board from the primary raw material bagasse.

§ 429.151 Effluent limitations representing the degree of effluent reduction attaintable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

SUBPART N

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	kg/kkg (lb/1000 lb) of gross production	
BOD5	8.13	4.32
TSS	5.69	2.72
pH	.....	(1)

[1] Within the range 6.0 to 9.0 at all times.

§ 429.152 [Reserved]

§ 429.153 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 429.154 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.155 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into publicly owned treatment works must comply with 40 CFR part 403.

§ 429.156 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into publicly owned treatment works must comply with 40 CFR part 403.

Subpart O—Wood Furniture and Fixture Production Without Water Wash Spray Booth(s) or Without Laundry Facilities Subcategory

§ 429.160 Applicability; description of the wood furniture and fixture production without water wash spray booth(s) or without laundry facilities subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from the manufacture of wood furniture and fixtures at establishments that (a) do not utilize water wash spray booths to collect and contain the overspray from spray applications of finishing materials and (b) do not maintain on-site laundry facilities for fabric utilized in various finishing operations.

§ 429.161 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology limitations (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.162 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.163 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.164 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

There shall be no discharge of process wastewater pollutants into navigable waters.

§ 429.165 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§ 429.166 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

Subpart P—Wood Furniture and Fixture Production With Water Wash Spray Booth(s) or With Laundry Facilities Subcategory

§ 429.170 Applicability; description of the wood furniture and fixture production with water wash spray booth(s) or with laundry facilities subcategory.

This subpart applies to discharges to waters of the United States and to the introduction of process wastewater pollutants into publicly owned treatment works from the manufacture of wood furniture and fixtures at establishments that either (a) utilize water wash spray booth(s) to collect and contain the overspray from spray applications of finishing materials, or (b) utilize on-site laundry facilities for fabric utilized in various finishing operations.

§ 429.171 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): Settleable solids shall be less than or equal to 0.2 ml/l and pH shall be between 6.0 and 9.0 at all times.

§ 429.172 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 429.173 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): There shall be no discharge of process wastewater pollutants.

§ 429.174 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS): There shall be no discharge of process wastewater pollutants.

§ 429.175 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

§ 429.176 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

PART 430—PULP, PAPER, AND PAPERBOARD POINT SOURCE CATEGORY

GENERAL PROVISIONS

Sec.
430.00 Applicability.
430.01 General definitions.
430.02 Monitoring requirements. [Reserved]

Subpart A—Unbleached Kraft Subcategory

430.10 Applicability; description of the unbleached kraft subcategory.
430.11 Specialized definitions.
430.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.15 New source performance standards (NSPS).
430.16 Pretreatment standards for existing sources (PSES).
430.17 Pretreatment standards for new sources (PSNS).

Subpart B—Semi-Chemical Subcategory

430.20 Applicability, description of the semi-chemical subcategory.
430.21 Specialized definitions.
430.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.24 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.25 New source performance standards (NSPS).
430.26 Pretreatment standards for existing sources (PSES).
430.27 Pretreatment standards for new sources (PSNS).

Subpart C [Reserved]

Subpart D—Unbleached Kraft—Neutral Sulfite Semi-Chemical (Cross Recovery) Subcategory

430.40 Applicability; description of the unbleached kraft—neutral sulfite semi-chemical (cross recovery) subcategory.
430.41 Specialized definitions.

430.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.44 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.45 New source performance standards (NSPS).
430.46 Pretreatment standards for existing sources (PSES).
430.47 Pretreatment standards for new sources (PSNS).

Subpart E—Paperboard From Wastepaper Subcategory

430.50 Applicability; description of the paperboard from wastepaper subcategory.
430.51 Specialized definitions.
430.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.54 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.55 New source performance standards (NSPS).
430.56 Pretreatment standards for existing sources (PSES).
430.57 Pretreatment standards for new sources (PSNS).

Subpart F—Dissolving Kraft Subcategory

430.60 Applicability; description of the dissolving kraft subcategory.
430.61 Specialized definitions.
430.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.64 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.65 New source performance standards (NSPS).
430.66 Pretreatment standards for existing sources (PSES).
430.67 Pretreatment standards for new sources (PSNS).

Subpart G—Market Bleached Kraft Subcategory

430.70 Applicability; description of the market bleached kraft subcategory.
430.71 Specialized definitions.
430.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.74 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.75 New source performance standards (NSPS).
430.76 Pretreatment standards for existing sources (PSES).
430.77 Pretreatment standards for new sources (PSNS).

Subpart H—BCT Bleached Kraft Subcategory

430.80 Applicability; description of the BCT bleached kraft subcategory.
430.81 Specialized definitions.
430.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.84 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.85 New source performance standards (NSPS).
430.86 Pretreatment standards for existing sources (PSES).
430.87 Pretreatment standards for new sources (PSNS).

Subpart I—Fine Bleached Kraft Subcategory

430.90 Applicability; description of the fine bleached kraft subcategory.
430.91 Specialized definitions.
430.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.94 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.95 New source performance standards (NSPS).
430.96 Pretreatment standards for existing sources (PSES).
430.97 Pretreatment standards for new sources (PSNS).

Subpart J—Papergrade Sulfite (Blow Pit Wash) Subcategory

430.100 Applicability; description of the papergrade sulfite (blow pit wash) subcategory.
430.101 Specialized definitions.
430.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.104 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.105 New source performance standards (NSPS).
430.106 Pretreatment standards for existing sources (PSES).
430.107 Pretreatment standards for new sources (PSNS).

Subpart K—Dissolving Sulfite Pulp Subcategory

430.110 Applicability; description of the dissolving sulfite pulp subcategory.
430.111 Specialized definitions.
430.112 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.114 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.115 New source performance standards (NSPS).
430.116 Pretreatment standards for existing sources (PSES).
430.117 Pretreatment standards for new sources (PSNS).

Subpart L—Groundwood-Chemi-Mechanical Subcategory

430.120 Applicability; description of the groundwood-chemi-mechanical subcategory.
430.121 Specialized definitions.
430.122 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.123 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
430.124 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
430.125 New source performance standards (NSPS). [Reserved]
430.126 Pretreatment standards for existing sources (PSES). [Reserved]
430.127 Pretreatment standards for new sources (PSNS). [Reserved]

Subpart M—Groundwood-Thermo-Mechanical Subcategory

430.130 Applicability; description of the groundwood-thermo-mechanical subcategory.
430.131 Specialized definitions.
430.132 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

430.133 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
430.134 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.135 New source performance standards (NSPS).
430.136 Pretreatment standards for existing sources (PSES).
430.137 Pretreatment standards for new sources (PSNS).

Subpart N—Groundwood-CMN Papers Subcategory

430.140 Applicability; description of the groundwood-CMN papers subcategory.
430.141 Specialized definitions.
430.142 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.143 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.144 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.145 New source performance standards (NSPS).
430.146 Pretreatment standards for existing sources (PSES).
430.147 Pretreatment standards for new sources (PSNS).

Subpart O—Groundwood-Fine Papers Subcategory

430.150 Applicability; description of the groundwood-fine papers subcategory.
430.151 Specialized definitions.
430.152 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.153 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.154 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.155 New source performance standards (NSPS).
430.156 Pretreatment standards for existing sources (PSES).
430.157 Pretreatment standards for new sources (PSNS).

Subpart P—Soda Subcategory

430.160 Applicability; description of the soda subcategory.
430.161 Specialized definitions.
430.162 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.163 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.164 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.165 New source performance standards (NSPS).
430.166 Pretreatment standards for existing sources (PSES).
430.167 Pretreatment standards for new sources (PSNS).

Subpart Q—Deink Subcategory

430.170 Applicability; description of the deink subcategory.
430.171 Specialized definitions.
430.172 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.173 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.174 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.175 New source performance standards (NSPS).
430.176 Pretreatment standards for existing sources (PSES).
430.177 Pretreatment standards for new sources (PSNS).

Subpart R—Nonintegrated-Fine Papers Subcategory

430.180 Applicability; description of the nonintegrated-fine papers subcategory.
430.181 Specialized definitions.

430.182 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.183 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.184 Effluent limitations representing the degree of effluent reduction attainable by the application of the best technology economically achievable (BAT).
430.185 New source performance standards (NSPS).
430.186 Pretreatment standards for existing sources (PSES).
430.187 Pretreatment standards for new sources (PSNS).

Subpart S—Nonintegrated-Tissue Papers Subcategory

430.190 Applicability; description of the nonintegrated-tissue papers subcategory.
430.191 Specialized definitions.
430.192 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.193 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.194 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.195 New source performance standards (NSPS).
430.196 Pretreatment standards for existing sources (PSES).
430.197 Pretreatment standards for new sources (PSNS).

Subpart T—Tissue From Wastepaper Subcategory

430.200 Applicability; description of the tissue from wastepaper subcategory.
430.201 Specialized definitions.
430.202 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.203 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.204 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.205 New source performance standards (NSPS).
430.206 Pretreatment standards for existing sources (PSES).
430.207 Pretreatment standards for new sources (PSNS).

Subpart U—Papergrade Sulfite (Drum Wash) Subcategory

430.210 Applicability; description of the papergrade sulfite (drum wash) subcategory.
430.211 Specialized definitions.
430.212 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.213 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.214 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.215 New source performance standards (NSPS).
430.216 Pretreatment standards for existing sources (PSES).
430.217 Pretreatment standards for new sources (PSNS).

Subpart V—Unbleached Kraft and Semi-Chemical Subcategory

430.220 Applicability; description of the unbleached kraft and semi-chemical subcategory.
430.221 Specialized definitions.
430.222 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). [Reserved]
430.223 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.224 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.225 New source performance standards (NSPS).
430.226 Pretreatment standards for existing sources (PSES).

430.227 Pretreatment standards for new sources (PSNS).

Subpart W—Wastepaper-Molded Products Subcategory

430.230 Applicability; description of the wastepaper-molded products subcategory.
430.231 Specialized definitions.
430.232 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.233 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.234 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.235 New source performance standards (NSPS).
430.236 Pretreatment standards for existing sources (PSES).
430.237 Pretreatment standards for new sources (PSNS).

Subpart X—Nonintegrated-Lightweight Papers Subcategory

430.240 Applicability; description of the nonintegrated-lightweight papers subcategory.
430.241 Specialized definitions.
430.242 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.243 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.244 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.245 New source performance standards (NSPS).
430.246 Pretreatment standards for existing sources (PSES).
430.247 Pretreatment standards for new sources (PSNS).

Subpart Y—Nonintegrated-Filter and Nonwoven Papers Subcategory

430.250 Applicability; description of the nonintegrated-filter and nonwoven papers subcategory.
430.251 Specialized definitions.
430.252 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.253 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.254 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.255 New source performance standards (NSPS).
430.256 Pretreatment standards for existing sources (PSES).
430.257 Pretreatment standards for new sources (PSNS).

Subpart Z—Nonintegrated-Paperboard Subcategory

430.260 Applicability; description of the nonintegrated-paperboard subcategory.
430.261 Specialized definitions.
430.262 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
430.263 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
430.264 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
430.265 New source performance standards (NSPS).
430.266 Pretreatment standards for existing sources (PSES).
430.267 Pretreatment standards for new sources (PSNS).

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 47 FR 52019, Nov. 18, 1982, unless otherwise noted.

GENERAL PROVISIONS

§ 430.00 Applicability.

This part applies to any pulp, paper, or paperboard mill which discharges or may discharge process wastewater pollutants to the waters of the United States, or which introduces or may introduce process wastewater pollutants into a publicly owned treatment works.

§ 430.01 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) Production shall be defined as the annual off-the-machine production (including off-the-machine coating where applicable) divided by the number of operating days during that year. Paper and paperboard production shall be measured at the off-the-machine moisture content, except for subparts A, B, D, and E where paper and paperboard production shall be measured in air-dry-tons (10% moisture content). Market pulp shall be measured in air-dry-tons (10% moisture). Production shall be determined for each mill based upon past production practices, present trends, or committed growth.

(b) Wet barking operations shall be defined to include hydraulic barking operations and wet drum barking operations which are those drum barking operations that use substantial quantities of water in either water sprays in the barking drums or in a partial submersion of the drums in a ''tub'' of water.

(c) A non-continuous discharger is a mill which is prohibited by the NPDES authority from discharging pollutants during specific periods of time for reasons other than treatment plant upset control, such periods being at least 24 hours in duration. A mill shall not be deemed a non-continuous discharger unless its permit, in addition to setting forth the prohibition described above, requires compliance with the effluent limitations established for non-continuous dischargers and also requires compliance with maximum day and average of 30 consecutive days effluent limitations. Such maximum day and average of 30 consecutive days effluent limitations for non-continuous dischargers shall be established by the NPDES authority in the form of concentrations which reflect wastewater treatment levels that are representative of the application of the best practicable control technology currently available, the best conventional pollutant control technology, or new source performance standards in lieu of the maximum day and average of 30 consecutive days effluent limitations for conventional pollutants set forth in each subpart.

[47 FR 52019, Nov. 18, 1982; 48 FR 13176, Mar. 30, 1983]

§ 430.02 Monitoring requirements. [Reserved]

Subpart A—Unbleached Kraft Subcategory

§ 430.10 Applicability; description of the unbleached kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper at unbleached kraft mills.

§ 430.11 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

SUBPART A

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	5.6	2.8
TSS	12.0	6.0
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13176, Mar. 30, 1983]

§430.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in §401.16) in §430.12 of this subpart for the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average-of-30-consecutive-days limitations, but shall be subject to annual average effluent limitations determined by dividing the average-of-30-consecutive-days limitations for BOD5 by 1.50 and TSS by 1.67.

[51 FR 45241, Dec. 17, 1986]

§430.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART A

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.00058	(0.011)(12.6)/y
Trichlorophenol	0.00053	(0.010)(12.6)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13176, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§430.15 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART A

[Facilities where linerboard is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.4	1.8
TSS	5.8	3.0
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00058	(0.015)(9.4)/y
Trichlorophenol	0.00053	(0.013)(9.4)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART A

[Facilities where bag paper and other mixed products are produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	5.0	2.7
TSS	9.1	4.8
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00058	(0.012)(11.4)/y
Trichlorophenol	0.00053	(0.011)(11.4)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.16 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using those biocides. PSES must be attained on or before July 1, 1984.

SUBPART A

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(12.6)/y
Trichlorophenol	(0.010)(12.6)/y

y=wastewater discharged in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART A

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00058
Trichlorophenol	0.00053

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.17 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART A

[Facilities where linerboard is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.015)(9.4)/y
Trichlorophenol	(0.013)(9.4)/y

y=wastewater discharge in kgal per ton of product.

Subpart A

[Facilities where bag paper and other mixed products are produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.012)(11.4)/y
Trichlorophenol	(0.011)(11.4)/y

y=wastewater discharge in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

Subpart A

[Facilities where linerboard is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00058
Trichlorophenol	0.00053

Subpart A

[Facilities where bag paper and other mixed products are produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00058
Trichlorophenol	0.00053

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13176, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

Subpart B—Semi-Chemical Subcategory

§ 430.20 Applicability; description of the semi-chemical subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of pulp and paper at semi-chemical mills.

§ 430.21 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

SUBPART B

[Ammonia base mills]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	8.0	4.0
TSS	10.0	5.0
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

SUBPART B

[Sodium base mills]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	8.7	4.35
TSS	11.0	5.5
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13176, Mar. 30, 1983]

§ 430.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.22 of this subpart for the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average-of-30-consecutive-days limitations, but shall be subject to annual average effluent limitations determined by dividing the average-of-30-consecutive-days limitations for BOD5 by 1.36 and TSS by 1.36.

[51 FR 45241, Dec. 17, 1986]

§ 430.24 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART B

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0012	(0.029)(10.3)/y
Trichlorophenol	0.00043	(0.010)(10.3)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13176, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.25 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART B

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.0	1.6
TSS	5.8	3.0
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0012	(0.041)(7.3)/y
Trichlorophenol	0.00043	(0.014)(7.3)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§430.26 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART B

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(10.3)/y
Trichlorophenol	(0.010)(10.3)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTW's find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART B

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0014
Trichlorophenol	0.00043

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§430.27 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART B

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.045)(7.3)/y
Trichlorophenol	(0.014)(7.3)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTW's find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

Subpart B

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0014
Trichlorophenol	0.00043

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart C [Reserved]

Subpart D—Unbleached Kraft—Neutral Sulfite Semi-Chemical (Cross Recovery) Subcategory

§ 430.40 Applicability; description of the unbleached kraft-neutral sulfite semi-chemical (cross recovery) subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper at unbleached kraft-neutral sulfite semi-chemical (cross recovery) mills.

§ 430.41 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

SUBPART D

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD_5	8.0	4.0
TSS	12.5	6.25
pH	(1)	(1)

1 Within the range of 6.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13176, Mar. 30, 1983]

§ 430.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

BCT effluent limitations for unbleached kraft-neutral sulfite semi-chemical (cross recovery) mills are presented in subpart V.

[51 FR 45241, Dec. 17, 1986]

§ 430.44 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

BAT effluent limitations for unbleached kraft-neutral sulfite semi-chemical (cross recovery) mills are presented in subpart V.

§ 430.45 New source performance standards (NSPS).

NSPS for unbleached kraft-neutral sulfite semi-chemical (cross recovery) mills are presented in subpart V.

§ 430.46 Pretreatment standards for existing sources (PSES).

PSES for unbleached kraft-neutral sulfite semi-chemical (cross recovery) mills are presented in subpart V.

§ 430.47 Pretreatment standards for new sources (PSNS).

PSNS for unbleached kraft-neutral sulfite semi-chemical (cross recovery) mills are presented in subpart V.

Subpart E—Paperboard From Wastepaper Subcategory

§ 430.50 Applicability; description of the paperboard from wastepaper subcategory.

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

§ 430.51 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 and § 430.01 shall apply to this subpart.

(b) Noncorrugating medium furnish subdivision mills are mills where recycled corrugating medium is not used in the production of paperboard.

(c) Corrugating medium furnish subdivision mills are mills where only recycled corrugating medium is used in the production of paperboard.

§ 430.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

SUBPART E

[Noncorrugating medium finish subdivision]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.0	1.5
TSS	5.0	2.5
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

SUBPART E

[Corrugating medium finish subdivision]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	5.7	2.8
TSS	9.2	4.6
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13176–13177, Mar. 30, 1983]

§ 430.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.52 of this subpart for the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average-of-30-consecutive-days limitations, but shall be subject to annual average effluent limitations determined by dividing the average-of-30-consecutive-days limitations for BOD5 by 1.77 and TSS by 2.18.

[51 FR 45241, Dec. 17, 1986]

§ 430.54 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb./1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART E

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.00087	(0.029)(7.2)/y
Trichlorophenol	0.00030	(0.010)(7.2)/y
y=wastewater discharged in kgal per ton of product.		

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.55 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART E

[Noncorrugating medium finish subdivision]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	2.6	1.4
TSS	3.5	1.8
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00087	(0.065)(3.2)/y
Trichlorophenol	0.00030	(0.023)(3.2)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART E

[Corrugating medium finish subdivision]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.9	2.1
TSS	4.4	2.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00087	(0.065)(3.2)/y
Trichlorophenol	0.00030	(0.023)(3.2)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

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[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.56 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-

containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART E

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(7.2)/y
Trichlorophenol	(0.010)(7.2)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART E

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00096
Trichlorophenol	0.00030

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.57 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing bioides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART E

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.072)(3.2)/y
Trichlorophenol	(0.023)(3.2)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART E

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00096
Trichlorophenol	0.00030

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart F—Dissolving Kraft Subcategory

§ 430.60 Applicability; description of the dissolving kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of dissolving pulp at kraft mills.

§ 430.61 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART F

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	23.6	12.25
TSS	37.3	20.05
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.79 and TSS by 1.88.

SUBPART F

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.2	1.7
TSS	6.9	3.75
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 2.00.

SUBPART F

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.35	0.2
TSS	0.70	0.4
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.75 and TSS by 2.00.

SUBPART F

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.6	0.35
TSS	1.45	0.8
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.62 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.64 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART F

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0025	(0.011)(55.1)/y
Trichlorophenol	0.016	(0.068)(55.1)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.65 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART F

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	15.6	8.4
TSS	27.3	14.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0025	(0.012)(50.7)/y
Trichlorophenol	0.016	(0.074)(50.7)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.66 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART F

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(55.1)/y
Trichlorophenol	(0.082)(55.1)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART F

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0025
Trichlorophenol	0.019

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.67 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART F

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.012)(50.7)/y
Trichlorophenol	(0.089)(50.7)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART F

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0025
Trichlorophenol	0.019

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart G—Market Bleached Kraft Subcategory

§430.70 Applicability; description of the market bleached kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of market pulp at bleached kraft mills.

§430.71 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and §430.01 shall apply to this subpart.

§430.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous discharges shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	15.45	8.05
TSS	30.4	16.4
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.71 and TSS by 1.84.

SUBPART G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	2.3	1.2
TSS	5.3	2.85
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.00 and TSS by 2.00.

SUBPART G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.2	0.1
TSS	0.6	0.3
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.33 and TSS by 1.71.

SUBPART G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.4	0.2
TSS	1.15	0.6
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.72 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.74 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1,000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART G

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0019	(0.011)(41.6)/y
Trichlorophenol	0.012	(0.068)(41.6)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.75 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers

shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART G

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	10.3	5.5
TSS	18.2	9.5
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0019	(0.013)(36.6)/y
Trichlorophenol	0.012	(0.077)(36.6)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.76 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART G

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(41.6)/y
Trichlorophenol	(0.082)(41.6)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART G

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0019
Trichlorophenol	0.014

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.77 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART G

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.013)(36.6)/y
Trichlorophenol	(0.093)(36.6)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART G

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0019
Trichlorophenol	0.014

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart H—BCT Bleached Kraft Subcategory

§ 430.80 Applicability; description of the BCT bleached kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of paperboard, coarse paper, and tissue paper at bleached kraft mills.

§ 430.81 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART H

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	13.65	7.1
TSS	24.0	12.9
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.85 and TSS by 1.82.

SUBPART H

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	2.25	1.2
TSS	5.75	3.1
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity of quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section

and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 3.00 and TSS by 1.75.

SUBPART H

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.25	0.15
TSS	0.65	0.35
pH	(1)	(1)

[1] Within the range of .0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.50 and TSS by 2.00.

SUBPART H

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.45	0.25
TSS	1.25	0.7
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983]

§ 430.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.82 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.84 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass

limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART H

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0016	(0.011)(35.4)/y
Trichlorophenol	0.010	(0.068)(35.4)/y
y=wastewater discharged in kgal per ton of product.		

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.85 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART H

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	8.5	4.6
TSS	14.6	7.6
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0016	(0.012)(31.7)/y
Trichlorophenol	0.010	(0.076)(31.7)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.86 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART H

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(35.4)/y
Trichlorophenol	(0.082)(35.4)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART H

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0016
Trichlorophenol	0.012

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.87 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART H

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.012)(31.7)/y
Trichlorophenol	(0.092)(31.7)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART H

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0016
Trichlorophenol	0.012

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart I—Fine Bleached Kraft Subcategory

§ 430.90 Applicability; description of the fine bleached kraft subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of pulp and fine papers at bleached kraft mills.

§ 430.91 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	10.6	5.5
TSS	22.15	11.9
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These

limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.82 and TSS by 1.84.

SUBPART I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	1.95	1.0
TSS	5.3	2.85
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 2.00.

SUBPART I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.2	0.1
TSS	0.55	0.3
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 2.00.

SUBPART I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.35	0.2
TSS	1.15	0.6
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983]

§ 430.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.92 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.94 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0014	(0.011)(30.9)/y
Trichlorophenol	0.0088	(0.068)(30.9)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.95 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not these biocides.

SUBPART I

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	5.7	3.1
TSS	9.1	4.8
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0014	(0.014)(25.1)/y
Trichlorophenol	0.0088	(0.084)(25.1)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

430.96 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART I

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(30.9)/y
Trichlorophenol	(0.082)(30.9)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART I

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0014
Trichlorophenol	0.011

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.97 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART I

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.014)(25.1)/y
Trichlorophenol	(0.101)(25.1)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART I

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0014
Trichlorophenol	0.011

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart J—Papergrade Sulfite (Blow Pit Wash) Subcategory

§ 430.100 Applicability; description of the papergrade sulfite (blow pit wash) subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of pulp and paper at papergrade sulfite mills, where blow pit pulp washing techniques are used.

§ 430.101 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 and § 430.01 shall apply to this subpart.

(b) Sulfite cooking liquor shall be defined as bisulfite cooking liquor when the pH of the liquor is between 3.0 and 6.0 and as acid sulfite cooking liquor when the pH is less than 3.0.

§ 430.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 1.78 and TSS by 1.82.

SUBPART J

[Bisulfite liquor/surface condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	31.8	16.55
TSS	43.95	23.65
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

SUBPART J

[Bisulfite liquor/barometric condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	34.7	18.05
TSS	52.2	28.1
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

SUBPART J

[Acid sulfite liquor/surface condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	32.3	16.8
TSS	43.95	23.65
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

SUBPART J

[Acid sulfite liquor/barometric condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	35.55	18.5
TSS	52.2	28.1
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 1.81 and TSS by 1.80.

SUBPART J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	2.7	1.45
TSS	7.5	3.95
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 1.80.

SUBPART J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.15	0.1
TSS	2.55	1.35
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 1.80.

SUBPART J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.35	0.2
TSS	1.7	0.9
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

[47 FR 52019, Nov. 17, 1982; 48 FR 13177, Mar. 30, 1983]

§ 430.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.102 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.104 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are

used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1,000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00058exp(0.017x)	((0.011)(12.67)exp(0.017x))/y
Trichlorophenol	0.0036exp(0.017x)	((0.068)(12.67)exp(0.017x))/y

x=percent sulfite pulp in final product.
y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.105 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART J

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb.) of product	
BOD5	4.38exp(0.017x)	2.36exp(0.017x)
TSS	5.81exp(0.017x)	3.03exp(0.107x)
pH	(1)	(1)

x=percent sulfite pulp in final product.

[1] Within the range of 5.0 to 9.0 at all times.

	Maximum for any 1 day	
	Kg/kkg (pounds per/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00058exp(0.017x)	((0.015)(9.12)exp(0.017x))/y
Trichlorophenol	0.0036exp(0.017x)	((0.094)(9.12)exp(0.017x))/y

x=percent sulfite pulp in final product.
y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.106 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART J

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	((0.011)(12.67)exp(0.017x))/y
Trichlorophenol	((0.082)(12.67)exp(0.017x))/y
x=percent sulfite pulp in final product.	
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART J

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per/1,000 lb) of product
Pentachlorophenol	0.00058exp(0.017x)
Trichlorophenol	0.0043exp(0.017x)
x = percent sulfite pulp in final product.	

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.107 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART J

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	((0.015)(9.12)exp(0.017x))/y
Trichlorophenol	((0.114)(9.12)exp(0.017x))/y
x=percent sulfite pulp in final product.	
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART J

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00058exp(0.017x)
Trichlorophenol	0.0043exp(0.017x)
x=percent sulfite pulp in final product.	

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart K—Dissolving Sulfite Pulp Subcategory

§ 430.110 Applicability; description of the dissolving sulfite pulp subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp at dissolving sulfite mills.

§ 430.111 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.112 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART K

[Facilities where nitration grade pulp is produced]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	41.4	21.5
TSS	70.65	38.05
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART K

[Facilities where viscose grade pulp is produced]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	44.3	23.0
TSS	70.65	38.05
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART K

[Facilities where cellophane grade pulp is produced]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	48.05	24.95
TSS	70.65	38.05
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART K

[Facilities where acetate grade pulp is produced]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	[1]50.80	[1]26.40
TSS	70.65	38.05
pH	(2)	(2)

[1] BOD5 effluent limitations were remanded (*Weyerhaeuser Company, et al.* v. *Costle,* 590 F.2nd 1011; D.C. Circuit 1978.
[2] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.75 and TSS by 2.00.

SUBPART K

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.7	0.35
TSS	0.15	0.1
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 2.00.

SUBPART K

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.15	0.1
TSS	0.15	0.1
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 2.00.

SUBPART K

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.15	0.1
TSS	0.15	0.1
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983]

§ 430.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.112 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.114 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are

used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART K

[Facilities where nitration, viscose, or cellophane grade pulps are produced]

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0030	(0.011)(66.0)/y
Trichlorophenol	0.019	(0.068)(66.0)/y

y=wastewater discharged in kgal per ton of product.

SUBPART K

[Facilities where acetate grade pulp is produced]

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0033	(0.011)(72.7)/y
Trichlorophenol	0.021	(0.068)(72.7)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.115 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART K

[Facilities where nitration grade pulp is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	26.9	14.5
TSS	40.8	21.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0030	(0.012)(59.0)/y
Trichlorophenol	0.019	(0.012)(59.0)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART K

[Facilities where viscose grade pulp is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	28.7	15.5
TSS	40.8	21.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0030	(0.012)(59.0)/y
Trichlorophenol	0.019	(0.012)(59.0)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART K

[Facilities where cellophane grade pulp is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	31.2	16.8
TSS	40.8	21.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0030	(0.012)(59.0)/y
Trichlorophenol	0.019	(0.076)(59.0)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART K

[Facilities where acetate grade pulp is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	39.6	21.4
TSS	41.1	21.5
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0033	(0.012)(65.7)/y
Trichlorophenol	0.021	(0.075)(65.7)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.116 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART K

[Facilities where nitration, viscose, or cellophane grade pulps are produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(66.0)/y
Trichlorophenol	(0.082)(66.0)/y

y=wastewater discharged in kgal per ton of product.

SUBPART K

[Facilities where acetate grade pulp is produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(72.7)/y
Trichlorophenol	(0.082)(72.7)/y

y=wastewater discharged in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART K

[Facilities where nitration, viscose, or cellophane grade pulps are produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0030
Trichlorophenol	0.023

SUBPART K

[Facilities where acetate grade pulp is produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0033
Trichlorophenol	0.025

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.117 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART K

[Facilities where nitration, viscose, or cellophane grade pulps are produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.012)(59.0)/y
Trichlorophenol	(0.092)(59.0)/y

y=wastewater discharge in kgal per ton of product.

SUBPART K

[Facilities where acetate grade pulp is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.012)(65.7)/y
Trichlorophenol	(0.091)(65.7)/y

y=wastewater discharge in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART K

[Facilities where nitration, viscose, or cellophane grade pulps are produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0030
Trichlorophenol	0.023

SUBPART K

[Facilities where acetate grade pulp is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0033
Trichlorophenol	0.025

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart L—Groundwood-Chemi-Mechanical Subcategory

§ 430.120 Applicability; description of the groundwood-chemi-mechanical subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper at groundwood chemi-mechanical mills.

§ 430.121 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.122 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	13.5	7.05
TSS	19.75	10.65
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.80 and TSS by 1.81.

SUBPART L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.9	0.45
TSS	2.6	1.45
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.00 and TSS by 1.50.

SUBPART L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.05	0.05
TSS	0.25	0.15
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.00 and TSS by 2.00.

SUBPART L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.15	0.05
TSS	0.55	0.3
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(e) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a) of this section. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations by 1.50.

SUBPART L

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
Zinc	0.34	0.17

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983]

§ 430.123 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 430.124 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 430.125 New source performance standards (NSPS). [Reserved]

§ 430.126 Pretreatment standards for existing sources (PSES). [Reserved]

§ 430.127 Pretreatment standards for new sources (PSNS). [Reserved]

Subpart M—Groundwood—Thermo—Mechanical Subcategory

§ 430.130 Applicability; description of the groundwood-thermo-mechanical subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper at groundwood mills through the application of the thermo-mechanical process.

§ 430.131 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.132 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days

limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART M

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	10.6	5.55
TSS	15.55	8.35
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.50 and TSS by 1.93.

SUBPART M

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.9	0.45
TSS	2.7	1.45
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.00 and TSS by 3.00.

SUBPART M

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.05	0.05
TSS	0.30	0.15
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 2.33.

SUBPART M

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.15	0.1
TSS	0.60	0.35
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(e) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a) of this section. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations by 1.50.

SUBPART M

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
Zinc	0.26	0.13

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983]

§ 430.133 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 430.134 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT), except that non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART M

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.00097	(0.011)(21.1)/y
Trichlorophenol	0.00088	(0.010)(21.1)/y
Zinc	0.26	(3.0)(21.1)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.135 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and

TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART M

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	4.6	2.5
TSS	8.7	4.6
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00097	(0.017)(13.8)/y
Trichlorophenol	0.00088	(0.015)(13.8)/y
Zinc	0.17	(3.0)(13.8)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.136 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES). Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit-issuing authority that they are not using this bleaching compound. PSES must be attained on or before July 1, 1984.

SUBPART M

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(21.1)/y
Trichlorophenol	(0.010)(21.1)/y
Zinc	(3.0)(21.1)/y

y=wastewater discharged in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART M

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00097
Trichlorophenol	0.00088
Zinc	0.26

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.137 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing

biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART M

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.017)(13.8)/y
Trichlorophenol	(0.015)(13.8)/y
Zinc	(3.0)(13.8)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTW's find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART M

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00097
Trichlorophenol	0.00088
Zinc	0.17

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

Subpart N—Groundwood-CMN Papers Subcategory

§ 430.140 Applicability; description of the groundwood-CMN papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of pulp and coarse paper, molded pulp products, and newsprint at groundwood mills.

§ 430.141 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.142 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART N

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	7.45	3.9
TSS	12.75	6.85
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.83 and TSS by 1.83.

SUBPART N

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	1.15	0.55
TSS	2.0	1.1
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.00 and TSS by 1.50.

SUBPART N

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.15	0.05
TSS	0.20	0.15
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 1.67.

SUBPART

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.25	0.1
TSS	0.45	0.25
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(e) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a) of this section. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations by 1.50.

SUBPART N

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
Zinc	0.30	0.15

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983]

§ 430.143 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.142 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.144 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT), except that non-continuous dischargers shall not be subject to the maximum day mass limitations in Kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART N

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0011	(0.011)(23.8)/y
Trichlorophenol	0.00099	(0.010)(23.8)/y
Zinc	0.30	(3.0)(23.8)/y
y=wastewater discharged in kgal per ton of product.		

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.145 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Pentachlorophenol and trichlorphenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART N

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	4.6	2.5
TSS	7.3	3.8
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0011	(0.016)(16.8)/y
Trichlorophenol	0.00099	(0.014)(16.8)/y
Zinc	0.21	(3.0)(16.8)/y
y=wastewater discharged in kgal per ton of production.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13177, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.146 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES). Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound. PSES must be attained on or before July 1, 1984.

SUBPART N

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(23.8)/y
Trichlorophenol	(0.010)(23.8)/y
Zinc	(3.0)(23.8)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART N

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0011
Trichlorophenol	0.00099
Zinc	0.30

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.147 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART N

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.016)(16.8)/y
Trichlorophenol	(0.014)(16.8)/y
Zinc	(3.0)(16.8)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART N

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0011
Trichlorophenol	0.00099
Zinc	0.21

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

Subpart O—Groundwood-Fine Papers Subcategory

§ 430.150 Applicability; description of the groundwood-fine papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of pulp and fine paper at groundwood mills.

§ 430.151 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.152 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART O

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	6.85	3.6
TSS	11.75	6.3
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average

effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.57 and TSS by 1.83.

SUBPART O

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	1.1	0.55
TSS	1.95	1.1
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.00 and TSS by 1.50.

SUBPART O

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.15	0.05
TSS	0.2	0.15
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.00 and TSS by 1.67.

SUBPART O

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.2	0.05
TSS	0.4	0.25
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(e) For those mills using zinc hydrosulfite as a bleaching agent in the manufacturing process, the following effluent limitations are to be added to the base limitations set forth in paragraph (a) of this section. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations by 1.5).

SUBPART O

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
Zinc	0.275	0.135

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983]

§ 430.153 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.152 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.154 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT), except that non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are uses. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART O

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0010	(0.011)(21.9)/y
Trichlorophenol	0.00092	(0.010)(21.9)/y
Zinc	0.27	(3.0)(21.9)/y
y=wastewater discharged in kgal per ton of product.		

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.155 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART O

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.5	1.9
TSS	5.8	3.0
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0010	(0.016)(15.4)/y
Trichlorophenol	0.00092	(0.014)(15.4)/y
Zinc	0.19	(3.0)(15.4)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.156 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES). Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound. PSES must be attained on or before July 1, 1984.

SUBPART O

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(21.9)/y
Trichlorophenol	(0.010)(21.9)/y
Zinc	(3.0)(21.9)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART O

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0010
Trichlorophenol	0.00092
Zinc	0.27

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

§ 430.157 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). Pentachlorophenol and trichlorophenol limitations are only applicable at facilities where chlorophenolic-containing biocides are used. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. Zinc limitations are only applicable at facilities where zinc hydrosulfite is used as a bleaching agent. Permittees not using zinc hydrosulfite as a bleaching agent must certify to the permit issuing authority that they are not using this bleaching compound.

SUBPART O

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.016)(15.4)/y
Trichlorophenol	(0.014)(15.4)/y
Zinc	(3.0)(15.4)/y

y=wastewater discharge in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART O

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0010
Trichlorophenol	0.00092
Zinc	0.19

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31404, July 8, 1983]

Subpart P—Soda Subcategory

§ 430.160 Applicability; description of the soda subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of pulp and paper at soda mills.

§ 430.161 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401, and § 430.01 shall apply to this subpart.

§ 430.162 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART P

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	13.7	7.1
TSS	24.5	13.2
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.83 and TSS by 1.81.

SUBPART P

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	2.05	1.1
TSS	5.25	2.8
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 2.00 and TSS by 1.67.

SUBPART P

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	0.15	0.1
TSS	0.5	0.25
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 2.00 and TSS by 1.57.

SUBPART P

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	0.3	0.2
TSS	1.1	0.55
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983]

§ 430.163 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.162 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.164 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using

chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART P

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0014	(0.011)(30.9)/y
Trichlorophenol	0.0088	(0.068)(30.9)/y
y=wastewater discharged in kgal per ton of product.		

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.165 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART P

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	5.7	3.1
TSS	9.1	4.8
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0014	(0.014)(25.1)/y
Trichlorophenol	0.0088	(0.084)(25.1)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.166 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permitees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART P

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(30.9)/y
Trichlorophenol	(0.082)(30.9)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART P

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0014
Trichlorophenol	0.011

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 430.167 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit issuing authority that they are not using these biocides.

SUBPART P

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.014)(25.1)/y
Trichlorophenol	(0.101)(25.1)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART P

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0014
Trichlorophenol	0.011

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31404, July 8, 1983]

Subpart Q—Deink Subcategory

§ 430.170 Applicability; description of the deink-subcategory.

The provisions of this subpart are applicable to discharges resulting from the integrated production of pulp and paper at deink mills.

§ 430.171 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.172 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART Q

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	18.1	9.4
TSS	24.05	12.95
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.173 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.172 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.174 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1,000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Q

[Facilities where fine or tissue paper is produced]

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0030	(0.029)(24.4)/y
Trichlorophenol	0.0069	(0.068)(24.4)/y

y=wastewater discharged in kgal per ton of product.

SUBPART Q

[Facilities where newsprint is produced]

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0030	(0.029)(24.4)/y
Trichlorophenol	0.0010	(0.010)(24.4)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.175 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for DOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitation. Permittees not using chlorophenolic-containing biocides

must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Q

[Facilities where fine paper is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	5.7	3.1
TSS	8.7	4.6
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0030	(0.045)(15.9)/y
Trichlorophenol	0.0069	(0.104)(15.9)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART Q

[Facilities where tissue paper is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	9.6	5.2
TSS	13.1	6.8
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0030	(0.036)(19.5)/y
Trichlorophenol	0.0069	(0.085)(19.5)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART Q

[Facilities where newsprint is produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	6.0	3.2
TSS	12.0	6.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0030	(0.044)(16.2)/y
Trichlorophenol	0.0010	(0.015)(16.2)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.176 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART Q

[Facilities where fine or tissue paper is produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(24.4)/y
Trichlorophenol	(0.082)(24.4)/y

y=wastewater discharged in kgal per ton of product.

SUBPART Q
[Facilities where newsprint is produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(24.4)/y
Trichlorophenol	(0.010)(24.4)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART Q
[Facilities where fine or tissue paper is produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0033
Trichlorophenol	0.0084

SUBPART Q
[Facilities where newsprint is produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0033
Trichlorophenol	0.0010

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.177 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Q
[Facilities where fine paper is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.049)(15.9)/y
Trichlorophenol	(0.126)(15.9)/y
y=wastewater discharge in kgal per ton of product.	

SUBPART Q
[Facilities where tissue paper is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.040)(19.5)/y
Trichlorophenol	(0.103)(19.5)/y
y=wastewater discharge in kgal per ton of product.	

SUBPART Q
[Facilities where newsprint is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.048)(16.2)/y
Trichlorophenol	(0.015)(16.2)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART Q
[Facilities where fine or tissue paper is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0033
Trichlorophenol	0.0084

SUBPART Q
[Facilities where newsprint is produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0033
Trichlorophenol	0.0010

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

Subpart R—Nonintegrated-Fine Papers Subcategory

§ 430.180 Applicability; description of the nonintegrated-fine papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of fine paper at nonintegrated mills.

§ 430.181 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 and § 430.01 shall apply to this subpart.

(b) Cotton fiber furnish subdivision mills are those mills where significant quantities of cotton fibers (equal to or greater than 4 percent of the total product) are used in the production of fine papers.

(c) Wood fiber furnish subdivision mills are those mills where cotton fibers are not used in the production of fine papers.

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983]

§ 430.182 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART R

[Wood fiber furnish subdivision]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	8.2	4.25
TSS	11.0	5.9
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

SUBPART R

[Cotton fiber furnish subdivision]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	17.4	9.1
TSS	24.3	13.1
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

§ 430.183 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.182 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.184 Effluent limitations representing the degree of effluent reduction attainable by the application of the best technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are

used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1,000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART R

[Wood fiber furnish subdivision]

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0018	(0.029)(15.2)/y
Trichlorophenol	0.00064	(0.010)(15.2)/y

y=wastewater discharged in kgal per ton of product.

SUBPART R

[Cotton fiber furnish subdivision]

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0051	(0.029)(42.3)/y
Trichlorophenol	0.0018	(0.010)(42.3)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.185 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART R

[Wood fiber furnish subdivision]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.5	1.9
TSS	4.4	2.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0018	(0.047)(9.4)/y
Trichlorophenol	0.00064	(0.016)(9.4)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART R

[Cotton fiber furnish subdivision]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	7.8	4.2
TSS	9.5	4.9
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0051	(0.039)(31.1)/y
Trichlorophenol	0.0018	(0.014)(31.1)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

§ 430.186 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART R

[Wood fiber furnish subdivision]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(15.2)/y
Trichlorophenol	(0.010)(15.2)/y
y=wastewater discharged in kgal per ton of product.	

SUBPART R

[Cotton fiber furnish subdivision]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(42.3)/y
Trichlorophenol	(0.010)(42.3)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART R

[Wood fiber furnish subdivision]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0020
Trichlorophenol	0.00064

SUBPART R

[Cotton fiber furnish subdivision]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0056
Trichlorophenol	0.0018

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

§ 430.187 Pretreatment standards for new sources (PSNS).

(a) Except as provided in CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART R

[Wood fiber furnish subdivision]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.052)(9.4)/y
Trichlorophenol	(0.016)(9.4)/y
y=wastewater discharge in kgal per ton of product.	

SUBPART R

[Cotton fiber furnish subdivision]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.044)(31.1)/y
Trichlorophenol	(0.014)(31.1)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART R

[Wood fiber furnish subdivision]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0020
Trichlorophenol	0.00064

SUBPART R

[Cotton fiber furnish subdivision]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0056
Trichlorophenol	0.0018

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

Subpart S—Nonintegrated-Tissue Papers Subcategory

§ 430.190 Applicability; description of the nonintegrated-tissue papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of tissue papers at nonintegrated mills.

§ 430.191 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.192 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.79 and TSS by 1.76.

SUBPART S

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	11.4	6.25
TSS	10.25	5.0
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.193 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.192 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.194 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass

limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART S

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0028	(0.029)(22.9)/y
Trichlorophenol	0.00096	(0.010)(22.9)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.195 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.48 and TSS by 1.64. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART S

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	7.0	3.4
TSS	6.0	2.6
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0028	(0.035)(19.1)/y
Trichlorophenol	0.00096	(0.012)(19.1)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.196 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART S

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	0.032(22.9)/y
Trichlorophenol	0.010(22.9)/y

y=wastewater discharged in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART S

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0031
Trichlorophenol	0.00096

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

§ 430.197 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART S

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.038)(19.1)/y
Trichlorophenol	(0.012)(19.1)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART S

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0031
Trichlorophenol	0.00096

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983; 48 FR 31405, July 8, 1983]

Subpart T—Tissue from Wastepaper Subcategory

§ 430.200 Applicability; description of the tissue from wastepaper subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of tissue paper from wastepaper without deinking at secondary fiber mills.

§ 430.201 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.202 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82

SUBPART T

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	13.7	7.1
TSS	17.05	9.2
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.203 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.202 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.204 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART T

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0030	(0.029)(25.2)/y
Trichlorophenol	0.0011	(0.010)(25.2)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.205 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations of BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART T

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	4.6	2.5
TSS	10.2	5.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0030	(0.045)(16.3)/y
Trichlorophenol	0.0011	(0.015)(16.3)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

§ 430.206 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART T

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(25.2)/y
Trichlorophenol	(0.010)(25.2)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTW's find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART T

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0034
Trichlorophenol	0.0011

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.207 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses cholorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART T

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.049)(16.3)/y
Trichlorophenol	(0.015)(16.3)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART T

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0034
Trichlorophenol	0.0011

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

Subpart U—Papergrade Sulfite (Drum Wash) Subcategory

§ 430.210 Applicability; description of the papergrade sulfite (drum wash) subcategory.

The provisions of this subpart are applicable to discharge resulting from the integrated production of pulp and paper at papergrade sulfite mills, where vacuum or pressure drums are used to wash pulp.

§ 430.211 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 and § 430.01 shall apply to this subpart.

(b) Sulfite cooking liquor shall be defined as bisulfite cooking liquor when the pH of the liquor is between 3.0 and 6.0 and as acid sulfite cooking liquor when the pH is less than 3.0.

§ 430.212 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 1.78 and TSS by 1.82.

SUBPART U

[Bisulfite liquor/surface condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	26.7	13.9
TSS	43.95	23.65
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

NOTE: Limitations above do not apply to mills using continuous digesters.

SUBPART U

[Bisulfite liquor/barometric condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	29.4	15.3
TSS	52.2	28.1
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

NOTE: Limitations above do not apply to mills using continuous digesters.

SUBPART U

[Acid sulfite liquor/surface condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	29.75	15.5
TSS	43.95	23.65
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

NOTE: Limitations above do not apply to mills using continuous digesters.

SUBPART U

[Acid sulfite liquor/barometric condensers]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	32.5	16.9
TSS	52.2	28.1
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

NOTE: Limitations above do not apply to mills using continuous digesters.

SUBPART U

[Continuous digesters]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	38.15	19.85
TSS	53.75	28.95
pH	(1)	(1)

1 Within the range of 5.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of wet barking operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are

subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.80.

SUBPART U

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	3.05	1.6
TSS	7.5	3.95
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(c) The following limitations establish the quantity or quality of pollutants or pollutant parameters, controlled by this section, resulting from the use of log washing or chip washing operations, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs and/or chips which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 2.00 and TSS by 1.80.

SUBPART U

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.35	0.2
TSS	2.55	1.35
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, resulting from the use of log flumes or log ponds, which may be discharged by a point source subject to the provisions of this subpart. These limitations are in addition to the limitations set forth in paragraph (a) of this section and shall be calculated using the proportion of the mill's total production due to use of logs which are subject to such operations. Noncontinuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.75 and TSS by 1.80.

SUBPART U

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	0.7	0.35
TSS	1.7	0.9
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.213 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.212 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.214 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART U

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00058exp(0.017x)	((0.011)(12.67)exp(0.017x))/y
Trichlorophenol	0.0036exp(0.017x)	((0.068)(12.67)exp(0.017x))/y

x=percent sulfite pulp in final product.
y=wastewater discharged in kgal per ton of production.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

§ 430.215 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD*5* and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART U

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	4.38 exp(0.017x)	2.36 exp(0.017x)
TSS	5.81 exp(0.017x)	3.03 exp(0.017x)
pH	(1)	(1)

x=percent sulfite pulp in final product.

	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00058 exp(0.017x)	((0.015)(9.12) exp(0.017x))/y
Trichlorophenol	0.0036 exp(0.017x)	((0.094)(9.12) exp(0.017x))/y

x=percent sulfite pulp in final product.
y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

§ 430.216 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART U

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	((0.011)(12.67) exp(0.017x))/y
Trichlorophenol	((0.082)(12.67) exp(0.017x))/y

x=percent sulfite pulp in final product.
y=wastewater discharged in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART U

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00058 exp(0.017x)
Trichlorophenol	0.0043 exp(0.017x)

x=percent sulfite pulp in final product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.217 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART U

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Miligrams per liter (mg/l)
Pentachlorophenol	((0.015)(9.12) exp (0.017x))/y
Trichlorophenol	((0.114)(9.12) exp (0.017x))/y
x=percent sulfite pulp in final product.	
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART U

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00058 exp (0.017x)
Trichlorophenol	0.0043 exp (0.017x)
x=percent sulfite pulp in final product.	

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[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

Subpart V—Unbleached Kraft and Semi-Chemical Subcategory

§ 430.220 Applicability; description of the unbleached kraft and semi-chemical subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of pulp and paper at combined unbleached kraft and semi-chemical mills, wherein the spent semi-chemical cooking liquor is burned within the unbleached kraft chemical recovery system.

§ 430.221 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.222 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). [Reserved]

§ 430.223 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT):

Pollutant or pollutant property	Maximum for any one day [1]	Average of daily values for 30 consecutive days
BOD5	8.0	4.0
TSS	12.5	6.25
pH	([2])	([2])

[1] Kg/kkg (or pounds per 1,000 lb of product).
[2] Within the range of 6.0 to 9.0 at all times.

Non-continuous dischargers shall not be subject to the maximum day and average-of-30-consecutive-days limitations, but shall be subject to annual average effluent limitations determined by dividing the average-of-30-consecutive-days limitations for BOD5 by 1.36 and TSS by 1.75.

[51 FR 45241, Dec. 17, 1986]

§ 430.224 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are

only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART V

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.00064	(0.011)(14.0)/y
Trichlorophenol	0.00059	(0.010)(14.0)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.225 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD*5* and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART V

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	3.9	2.1
TSS	7.3	3.8
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.00064	(0.013)(11.5)/y
Trichlorophenol	0.00059	(0.012)(11.5)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.226 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART V

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.011)(14.0)/y
Trichlorophenol	(0.010)(14.0)/y

y=wastewater discharged in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART V

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00064
Trichlorophenol	0.00059

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.227 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART V

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.013)(11.5)/y
Trichlorophenol	(0.012)(11.5)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART V

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.00064
Trichlorophenol	0.00059

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

Subpart W—Wastepaper-Molded Products Subcategory

§ 430.230 Applicability; description of the wastepaper-molded products subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of molded products from wastepaper without deinking at secondary fiber mills.

§ 430.231 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.232 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.78 and TSS by 1.82.

SUBPART W

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	4.4	2.3
TSS	10.8	5.8
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.233 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.232 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.234 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART W

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0026	(0.029)(21.1)/y
Trichlorophenol	0.00088	(0.010)(21.1)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.235 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART W

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	2.1	1.1
TSS	4.4	2.3
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0026	(0.107)(5.7)/y
Trichlorophenol	0.00088	(0.037)(5.7)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.236 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART W

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(21.1)/y
Trichlorophenol	(0.010)(21.1)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART W

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0028
Trichlorophenol	0.00088

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.237 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART W

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.118)(5.7)/y
Trichlorophenol	(0.037)(5.7)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART W

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0028
Trichlorophenol	0.00088

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

Subpart X—Nonintegrated-Lightweight Papers Subcategory

§ 430.240 Applicability; description of the nonintegrated-lightweight papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of lightweight paper at nonintegrated mills.

§ 430.241 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.242 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.79 and TSS by 1.76.

SUBPART X

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	24.1	13.2
TSS	21.6	10.6
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART X

[Facilities where electrical grade papers are produced]

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	38.0	20.9
TSS	34.2	16.7
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.243 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.242 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.244 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides

must certify to the permit-issuing authority that they are not using these biocides.

SUBPART X

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0059	(0.029)(48.7)/y
Trichlorophenol	0.0020	(0.010)(48.7)/y

y=wastewater discharged in kgal per ton of product.

SUBPART X

[Facilities where electrical grade papers are produced]

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0093	(0.029)(76.9)/y
Trichlorophenol	0.0032	(0.010)(76.9)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.245 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD*5* and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 1.48 and TSS by 1.64. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART X

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	13.7	6.7
TSS	12.0	5.2
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0059	(0.037)(38.2)/y
Trichlorophenol	0.0020	(0.013)(38.2)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

SUBPART X

[Facilities where electrical grade papers are produced]

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	24.1	11.7
TSS	21.1	9.2
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0093	(0.033)(66.8)/y
Trichlorophenol	0.0032	(0.012)(66.8)/y

y=wastewater discharged in kgal per ton of product.

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983, as amended at 48 FR 31405, July 8, 1983]

§ 430.246 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the

permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART X

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(48.7)/y
Trichlorophenol	(0.010)(48.7)/y
y=wastewater discharged in kgal per ton of product.	

SUBPART X

[Facilities where electrical grade papers are produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(76.9)/y
Trichlorophenol	(0.010)(76.9)/y
y=wastewater discharged in kgal per ton of product..	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART X

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0065
Trichlorophenol	.0020

SUBPART X

[Facilities where electrical grade papers are produced]

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.010
Trichlorophenol	.0032

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.247 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART X

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.041)(38.2)/y
Trichlorophenol	(0.013)(38.2)/y
y=wastewater discharge in kgal per ton of product.	

SUBPART X

[Facilities where electrical grade papers are produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.037)(66.8)/y
Trichlorophenol	(0.012)(66.8)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART X

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0065
Trichlorophenol	00.0020

SUBPART X

[Facilities where electrical grade papers are produced]

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.010
Trichlorophenol	0.0032

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983; 48 FR 31405, July 8, 1983]

Subpart Y—Nonintegrated-Filter and Nonwoven Papers Subcategory

§ 430.250 Applicability; description of the nonintegrated-filter and nonwoven papers subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of filter and nonwoven papers at nonintegrated mills.

§ 430.251 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.252 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.79 and TSS by 1.76.

SUBPART Y

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	29.6	16.3
TSS	26.6	13.0
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.253 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.252 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.254 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Y

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0072	(0.029) (59.9)/y
Trichlorophenol	0.0025	(0.010) (59.9)/y

y=wastewater discharged in kgal per ton of product.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.255 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.48 and TSS by 1.64. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Y

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	17.1	8.3
TSS	15.0	6.6
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0072	(0.037)(47.5)/y
Trichlorophenol	0.0025	(0.013)(47.5)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.256 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART Y

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(59.9)/y
Trichlorophenol	(0.010)(59.9)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART Y

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0080
Trichlorophenol	0.0025

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.257 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the

permit-issuing authority that they are not using these biocides.

SUBPART Y

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.040)(47.5)/y
Trichlorophenol	(0.013)(47.5)/y

y=wastewater discharge in kgal per ton of product.

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART Y

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0080
Trichlorophenol	0.0025

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

Subpart Z—Nonintegrated-Paperboard Subcategory

§ 430.260 Applicability; description of the nonintegrated-paperboard subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of paperboard at nonintegrated mills. The production of electrical grades of board and matrix board is not included in this subpart.

§ 430.261 Specialized definitions.

For the purpose of this subpart, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 and § 430.01 shall apply to this subpart.

§ 430.262 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.79 and TSS by 1.76.

SUBPART Z

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	6.5	3.6
TSS	5.8	2.8
pH	(1)	(1)

[1] Within the range of 5.0 to 9.0 at all times.

§ 430.263 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 430.262 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 45240, Dec. 17, 1986]

§ 430.264 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where

chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Z

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0016	(0.029)(12.9)/y
Trichlorophenol	0.00054	(0.010)(12.9)/y
y=wastewater discharged in kgal per ton of product.		

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.265 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD*5* and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD*5* by 1.48 and TSS by 1.64. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Z

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD*5*	4.0	1.9
TSS	3.5	1.5
pH	([1])	([1])
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0016	(0.033)(11.2)/y
Trichlorophenol	0.00054	(0.012)(11.2)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.266 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART Z

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(12.9)/y
Trichlorophenol	(0.010)(12.9)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART Z

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0017
Trichlorophenol	0.00054

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 430.267 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART Z

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	0.037(11.2)/y
Trichlorophenol	0.012(11.2)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART Z

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0017
Trichlorophenol	0.00054

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52019, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

PART 431—THE BUILDERS' PAPER AND BOARD MILLS POINT SOURCE CATEGORY

Subpart A—Builders' Paper and Roofing Felt Subcategory

Sec.
431.10 Applicability; description of the builders' paper and roofing felt subcategory.
431.11 Specialized definitions.
431.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
431.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
431.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
431.15 New source performance standards (NSPS).
431.16 Pretreatment standards for existing sources (PSES).
431.17 Pretreatment standards for new sources (PSNS).

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 47 FR 52063, Nov. 18, 1982, unless otherwise noted.

Subpart A—Builders' Paper and Roofing Felt Subcategory

§ 431.10 Applicability; description of the builders' paper and roofing felt subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of builders' paper and roofing felt from wastepaper.

§ 431.11 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 and §430.01 shall apply to this subpart.

(b) Production shall be defined as the annual off-the-machine production (including off-the-machine coating where applicable) divided by the number of operating days during that year. Production shall be measured at the off-the-machine moisture content. Production shall be determined for each mill based upon past production practices, present trends, or committed growth.

(c) A non-continuous discharger is a mill which is prohibited by the NPDES authority from discharging pollutants during specific periods of time for reasons other than treatment plant upset control, such periods being at least 24 hours in duration. A mill shall not be deemed a non-continuous discharger unless its permit, in addition to setting forth the prohibition described above, requires compliance with the effluent limitations established by this subpart for non-continuous dischargers and also requires compliance with maximum day and average of 30 consecutive days effluent limitations. Such maximum day and average of 30 consecutive days effluent limitations for non-continuous dischargers shall be established by the NPDES authority in the form of concentrations which reflect wastewater treatment levels that are representative of the application of the best practicable control technology currently available, the best conventional pollutant control technology, or new source performance standards in lieu of the maximum day and average of 30 consecutive days effluent limitations for conventional pollutants set forth in this subpart.

§431.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

SUBPART A

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	5.0	3.0
TSS	5.0	3.0
pH	(1)	(1)
Settleable Solids	(2)	(2)

[1] Within the range of 6.0 to 9.0 at all times.
[2] Not to exceed 0.2 ml/l.

[47 FR 52063, Nov. 18, 1982; 48 FR 13178, Mar. 30, 1983]

§431.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in §§125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in §401.16) in §431.12 of this subpart for the best practicable control technology currently available (BPT), except that noncontinuous dischargers shall not be subject to the maximum day and average-of-30-consecutive-days limitations, but shall be subject to annual average effluent limitations determined by dividing the average-of-30-consecutive-days limitations for BOD5 by 1.90 and TSS by 1.90.

[51 FR 45242, Dec. 17, 1986]

§431.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where chlorophenolic-containing biocides are used must achieve the following effluent limitations representing the degree of effluent reduction attainable by the

application of the best available technology economically achievable (BAT). Non-continuous dischargers shall not be subject to the maximum day mass limitations in kg/kkg (lb/1000 lb), but shall be subject to concentration limitations. Concentration limitations are only applicable to non-continuous dischargers. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART A

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	
	Kg/kkg (pounds per 1,000 lb)	Milligrams/liter
Pentachlorophenol	0.0017	(0.029)(14.4)/y
Trichlorophenol	0.00060	(0.010)(14.4)/y
y=wastewater discharged in kgal per ton of product.		

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52063, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 431.15 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days effluent limitations for BOD5 and TSS, but shall be subject to annual average effluent limitations determined by dividing the average of 30 consecutive days limitations for BOD5 by 1.91 and TSS by 1.90. Also, for non-continuous dischargers, concentration limitations (mg/l) shall apply, where provided. Concentration limitations will only apply to non-continuous dischargers. Only facilities where chlorophenolic-containing biocides are used shall be subject to pentachlorophenol and trichlorophenol limitations. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART A

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	1.7	0.94
TSS	2.7	1.40
pH	(1)	(1)
	Kg/kkg(lb/1,000 lb) of product	Milligrams/liter
Pentachlorophenol	0.0017	(0.155)(2.7)/y
Trichlorophenol	0.00060	(0.053)(2.7)/y
y=wastewater discharged in kgal per ton of product.		

[1] Within the range of 5.0 to 9.0 at all times.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52063, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 431.16 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for existing sources (PSES) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides. PSES must be attained on or before July 1, 1984.

SUBPART A

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.032)(14.4)/y
Trichlorophenol	(0.010)(14.4)/y
y=wastewater discharged in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART A

Pollutant or pollutant property	PSES
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0019
Trichlorophenol	0.00060

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[47 FR 52063, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 431.17 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must (1) comply with 40 CFR part 403 and (2) achieve the following pretreatment standards for new sources (PSNS) if it uses chlorophenolic-containing biocides. Permittees not using chlorophenolic-containing biocides must certify to the permit-issuing authority that they are not using these biocides.

SUBPART A

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Milligrams per liter (mg/l)
Pentachlorophenol	(0.171)(2.7)/y
Trichlorophenol	(0.053)(2.7)/y
y=wastewater discharge in kgal per ton of product.	

(b) In cases when POTWs find it necessary to impose mass effluent limitations, the following equivalent mass limitations are provided as guidance:

SUBPART A

Pollutant or pollutant property	PSNS
	Maximum for any 1 day
	Kg/kkg (or pounds per 1,000 lb) of product
Pentachlorophenol	0.0019
Trichlorophenol	0.00060

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 52063, Nov. 18, 1982, as amended at 48 FR 31405, July 8, 1983]

PART 432—MEAT PRODUCTS POINT SOURCE CATEGORY

Subpart A—Simple Slaughterhouse Subcategory

Sec.
432.10 Applicability; description of the simple slaughterhouse subcategory.
432.11 Specialized definitions.
432.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.13 [Reserved]
432.14 Pretreatment standards for existing sources.
432.15 Standards of performance for new sources.
432.16 Pretreatment standards for new sources.
432.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart B—Complex Slaughterhouse Subcategory

432.20 Applicability; description of the complex slaughterhouse subcategory.
432.21 Specialized definitions.
432.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.23 [Reserved]
432.24 Pretreatment standards for existing sources.
432.25 Standards of performance for new sources.
432.26 Pretreatment standards for new sources.
432.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart C—Low–Processing Packinghouse Subcategory

432.30 Applicability; description of the low–processing packinghouse subcategory.
432.31 Specialized definitions.
432.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.33 [Reserved]
432.34 Pretreatment standards for existing sources.

432.35 Standards of performance for new sources.
432.36 Pretreatment standards for new sources.
432.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart D—High–Processing Packinghouse Subcategory

432.40 Applicability; description of the high–processing packinghouse subcategory.
432.41 Specialized definitions.
432.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.43 [Reserved]
432.44 Pretreatment standards for existing sources.
432.45 Standards of performance for new sources.
432.46 Pretreatment standards for new sources.
432.47 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart E—Small Processor Subcategory

432.50 Applicability; description of the small processor subcategory.
432.51 Specialized definitions.
432.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.53—432.54 [Reserved]
432.55 Standards of performance for new sources.
432.56 Pretreatment standards for new sources.
432.57 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart F—Meat Cutter Subcategory

432.60 Applicability; description of the meat cutter subcategory.
432.61 Specialized definitions.
432.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
432.64 [Reserved]
432.65 Standards of performance for new sources.
432.66 Pretreatment standards for new sources.
432.67 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart G—Sausage and Luncheon Meats Processor Subcategory

432.70 Applicability; description of the sausage and luncheon meat processor subcategory.
432.71 Specialized definitions.
432.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.73 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
432.74 [Reserved]
432.75 Standards of performance for new sources.
432.76 Pretreatment standards for new sources.
432.77 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart H—Ham Processor Subcategory

432.80 Applicability; description of the ham processor subcategory.
432.81 Specialized definitions.
432.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
432.84 [Reserved]
432.85 Standards of performance for new sources.
432.86 Pretreatment standards for new sources.

432.87 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart I—Canned Meats Processor Subcategory

432.90 Applicability; description of the canned meats processor subcategory.
432.91 Specialized definitions.
432.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
432.94 [Reserved]
432.95 Standards of performance for new sources.
432.96 Pretreatment standards for new sources.
432.97 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Subpart J—Renderer Subcategory

432.100 Applicability; description of the renderer subcategory.
432.101 Specialized definitions.
432.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
432.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
432.104 [Reserved]
432.105 Standards of performance for new sources.
432.106 Pretreatment standards for new sources.
432.107 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology.

AUTHORITY: Secs. 301, 304 (b) and (c), 306 (b) and (c), and 307(c) of the Federal Water Pollution Control Act, as amended; 33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316 (b) and (c), 1317(c); 86 Stat. 816 et seq., Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 39 FR 7897, Feb. 28, 1974, unless otherwise noted.

Subpart A—Simple Slaughterhouse Subcategory

§ 432.10 Applicability; description of the simple slaughterhouse subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of red meat carcasses, in whole or part, by simple slaughterhouses.

§ 432.11 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 ''slaughterhouse'' shall mean a plant that slaughters animals and has as its main product fresh meat as whole, half or quarter carcasses or smaller meat cuts.

(c) The term ''simple slaughterhouse'' shall mean a slaughterhouse which accomplishes very limited byproduct processing, if any, usually no more than two of such operations as rendering, paunch and viscera handling, blood processing, hide processing, or hair processing.

(d) The term ''LWK'' (live weight killed) shall mean the total weight of the total number of animals slaughtered during the time to which the effluent limitations apply; i.e., during any one day or any period of thirty consecutive days.

(e) The term ''ELWK'' (equivalent live weight killed) shall mean the total weight of the total number of animals slaughtered at locations other than the slaughterhouse or packinghouse, which animals provide hides, blood, viscera or renderable materials for processing at that slaughterhouse, in addition to those derived from animals slaughtered on site.

(f) The term ''oil and grease'' shall mean those components of process waste water amenable to measurement by the method described in ''Methods for Chemical Analysis of Water and Wastes,'' 1971, EPA, Analytical Quality Control Laboratory, page 217.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to onsite slaughter or subsequent meat, meat product or by-product processing of carcasses of animals slaughtered onsite, 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
BOD5	0.24	0.12
TSS	0.40	0.20
Oil and grease	0.12	0.06
Fecal coliform	(1)	(1)
pH	(2)	(2)
	English units (pounds per 1,000 lb LWK)	
BOD5	0.24	0.12
TSS	0.40	0.20
Oil and grease	0.12	0.06
Fecal coliform	(1)	(1)
pH	(2)	(2)

[1] Maximum at any time 400 mpn/100 ml.
[2] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing (defleshing, washing and curing) of hides derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by § 432.12(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by § 432.12(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by § 432.12(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.06	0.03
TSS	0.12	0.06
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.06	0.03
TSS	0.12	0.06

(e) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by § 432.12(a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.02	0.01
TSS	0.04	0.02
pH	(1)	(1)
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.02	0.01
TSS	0.04	0.02
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[39 FR 7897, Feb. 28, 1974, as amended at 60 FR 33964, June 29, 1995]

§ 432.13 [Reserved]

§ 432.14 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
BOD5	Do.
TSS	Do.
Oil and grease	Do.
Fecal coliform	Do.

[40 FR 6446, Feb. 11, 1975, as amended at 60 FR 33964, June 29, 1995]

§ 432.15 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to on-site slaughter or subsequent meat, meat product or by-product processing of carcasses of animals slaughtered on-site which may be discharged by a new source subject to the provisions of this subpart: the limitations shall be as specified in § 432.12(a), with the exception that in addition to the pollutants or pollutant properties controlled by that subsection, discharges of ammonia shall not exceed the limitations set forth below:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
Ammonia	0.34	0.17
	English units (pounds per 1,000 lb LWK)	
Ammonia	0.34	0.17

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a new source subject to the provisions of this

subpart, in addition to the discharge allowed by §§ 432.15(a) and 432.12(c):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.06	0.03
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.06	0.03

(c) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than slaughterhouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by §§ 432.15(a) and 432.12(d):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.10	0.05
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.10	0.05

(d) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the slaughterhouse which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by §§ 432.15(a) and 432.12(e):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.04	0.02
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.04	0.02

[39 FR 7897, Feb. 28, 1974; 39 FR 26423, July 19, 1974]

§ 432.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33964, June 29, 1995]

§ 432.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.12 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart B—Complex Slaughterhouse Subcategory

§ 432.20 Applicability; description of the complex slaughterhouse subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of red meat carcasses, in whole or part, by complex slaughterhouses.

§ 432.21 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 ''slaughterhouse'' shall mean a plant that slaughters animals and has as its main product fresh meat as whole, half or quarter carcasses or smaller meat cuts.

(c) The term ''complex slaughterhouse'' shall mean a slaughterhouse that accomplishes extensive by-product processing, usually at least three of such operations as rendering, paunch and viscera handling, blood processing, hide processing, or hair processing.

(d) The term ''LWK'' (live weight killed) shall mean the total weight of the total number of animals slaughtered during the time to which the effluent limitations apply; i.e., during any one day or any period of thirty consecutive days.

(e) The term ''ELWK'' (equivalent live weight killed) shall mean the total weight of the total number of animals slaughtered at locations other than the slaughterhouse or packinghouse, which animals provide hides, blood, viscera or renderable materials for processing at that slaughterhouse, in addition to those derived from animals slaughtered on site.

(f) The term ''oil and grease'' shall mean those components of process waste water amenable to measurement by the method described in ''Methods for Chemical Analysis of Water and Wastes,'' 1971, EPA, Analytical Quality Control Laboratory, page 217.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to onsite slaughter or subsequent meat, meat product or by-product processing of carcasses of animals slaughtered onsite, which may be discharged by a point source subject to the provisions of this subpart after application of the best practical control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
BOD5	0.42	0.21
TSS	0.50	0.25
Oil and grease	0.16	0.08
Fecal coliform	(1)	(1)
pH	(2)	(2)
	English units (pounds per 1,000 lb LWK)	
BOD5	0.42	0.21
TSS	0.50	0.25
Oil and grease	0.16	0.08
Fecal coliform	(1)	(1)
pH	(2)	(2)

[1] Maximum at any time 400 mpn/100 ml.
[2] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing (defleshing, washing and curing) of hides derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD*5*	0.04	0.02
TSS	0.08	0.04
	English units (pounds per 1,000 lb ELWK)	
BOD*5*	0.04	0.02
TSS	0.08	0.04

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD*5*	0.06	0.03
TSS	0.12	0.06
	English units (pounds per 1,000 lb ELWK)	
BOD*5*	0.06	0.03
TSS	0.12	0.06

(e) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD*5*	0.02	0.01
TSS	0.04	0.02
	English units (pounds per 1,000 lb ELWK)	
BOD*5*	0.02	0.01
TSS	0.04	0.02

[39 FR 7897, Feb. 28, 1974; 39 FR 26423, July 19, 1974, as amended at 45 FR 82254, Dec. 15, 1980; 60 FR 33964, June 29, 1995]

§ 432.23 [Reserved]

§ 432.24 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
BOD*5*	Do.
TSS	Do.
Oil and grease	Do.
Fecal coliform	Do.

[40 FR 6446, Feb. 11, 1975, as amended at 60 FR 33965, June 29, 1995]

§ 432.25 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or

quality of pollutants or pollutant properties, controlled by this section and attributable to on-site slaughter or subsequent meat, meat product or by-product processing of carcasses of animals slaughtered on-site which may be discharged by a new source subject to the provisions of this subpart: The limitations shall be as specified in § 432.22(a), with the exception that in addition to the pollutants or pollutant properties controlled by that subsection, discharges of ammonia shall not exceed the limitations set forth below:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
Ammonia	0.48	0.24
	English units (pounds per 1,000 lb LWK)	
Ammonia	0.48	0.24

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.22(c):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.06	0.03
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.06	0.03

(c) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.22(d):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.10	0.05
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.10	0.05

(d) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the slaughterhouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.22(e):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.04	0.02
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.04	0.02

[39 FR 7897, Feb. 28, 1974; 39 FR 26423, July 19, 1974]

§ 432.26 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly

owned treatment works must comply with 40 CFR part 403.

[60 FR 33965, June 29, 1995]

§ 432.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.22 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart C—Low-Processing Packinghouse Subcategory

§ 432.30 Applicability; description of the low-processing packinghouse subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of red meat carcasses in whole or part, by low-processing packinghouses.

§ 432.31 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 part 401 shall apply to this subpart.

(b) The term ''packinghouse'' shall mean a plant that both slaughters animals and subsequently processes carcasses into cured, smoked, canned or other prepared meat products.

(c) The term ''low processing packinghouse'' shall mean a packinghouse that processes no more than the total animals killed at that plant, normally processing less than the total kill.

(d) The term ''LWK'' (live weight killed) shall mean the total weight of the total number of animals slaughtered during the time to which the effluent limitations apply; i.e., during any one day or any period of thirty consecutive days.

(e) The term ''ELWK'' (equivalent live weight killed) shall mean the total weight of the total number of animals slaughtered at locations other than the slaughterhouse or packinghouse, which animals provide hides, blood, viscera or renderable materials for processing at that slaughterhouse, in addition to those derived from animals slaughtered on-site.

(f) The term ''oil and grease'' shall mean those components of process waste water amenable to measurement by the method described in ''Methods for Chemical Analysis of Water and Wastes,'' 1971, EPA, Analytical Quality Control Laboratory, page 217.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to onsite slaughter or subsequent meat, meat product or byproduct, processing of carcasses of animals slaughtered onsite, 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
BOD5	0.34	0.17
TSS	0.48	0.24
Oil and grease	0.16	0.08
Fecal coliform	(1)	(1)
pH	(2)	(2)
	English units (pounds per 1,000 lb LWK)	
BOD5	0.34	0.17
TSS	0.48	0.24
Oil and grease	0.16	0.08
Fecal coliform	(1)	(1)
pH	(2)	(2)

[1] Maximum at any time 400 mpn/100 ml.
[2] Within the range 6.0 to 9.0.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing (defleshing, washing and curing) of hides derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.06	0.03
TSS	0.12	0.06
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.06	0.03
TSS	0.12	0.06

(e) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.02	0.01
TSS	0.04	0.02
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.02	0.01
TSS	0.04	0.02

[39 FR 7897, Feb. 28, 1974, as amended at 60 FR 33965, June 29, 1995]

§ 432.33 [Reserved]

§ 432.34 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
BOD5	Do.
TSS	Do.
Oil and grease	Do.
Fecal coliform	Do.

[40 FR 6447, Feb. 11, 1975, as amended at 60 FR 33965, June 29, 1995]

§ 432.35 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to on-site slaughter or subsequent meat, meat product or by product processing of carcasses of animals slaughtered on-site which may be discharged by a new source subject to the provisions of this subpart: The limitations shall be as specified in § 432.32(a), with the exception that in addition to the pollutants or pollutant properties controlled by that subsection, discharges of ammonia shall not exceed the limitations set forth below:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
Ammonia	0.48	0.24
	English units (pounds per 1,000 lb LWK)	
Ammonia	0.48	0.24

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.32(c):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.06	0.03
	English units (pounds per 1,000 lb ELWK)	
Ammonia	10.06	0.03

(c) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.32(a).

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.10	0.05
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.10	0.05

(d) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.32(e):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.04	0.02
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.04	0.02

[39 FR 7897, Feb. 28, 1974; 39 FR 26423, July 19, 1974]

§ 432.36 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33965, June 29, 1995]

§ 432.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.32 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart D—High-Processing Packinghouse Subcategory

§ 432.40 Applicability; description of the high-processing packinghouse subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of red meat carcasses, in whole or part, by high-processing packinghouses.

§ 432.41 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) The term ''packinghouse'' shall mean a plant that both slaughters animals and subsequently processes carcasses into cured, smoked, canned or other prepared meat products.

(c) The term ''high-processing packinghouse'' shall mean a packinghouse which processes both animals slaughtered at the site and additional carcasses from outside sources.

(d) The term ''LWK'' (live weight killed) shall mean the total weight of the total number of animals slaughtered during the time to which the effluent limitations apply; i.e., during any one day or any period of thirty consecutive days.

(e) The term ''ELWK'' (equipment live weight killed) shall mean the total

weight of the total number of animals slaughtered at locations other than the slaughterhouse or packinghouse, which animals provide hides, blood, viscera or renderable materials for processing at that slaughterhouse, in addition to those derived from animals slaughtered on-site.

(f) The term ''oil and grease'' shall mean those components of process waste water amenable to measurement by the method described in ''Methods for Chemical Analysis of Water and Wastes,'' 1971, EPA, Analytical Quality Control Laboratory, page 217.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to on-site slaughter or subsequent meat, meat product or byproduct processing of carcasses of animals slaughtered on-site, 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
BOD5+	0.48	0.24
TSS+	0.62	0.31
Oil and grease	0.26	0.13
Fecal coliform	(1)	(1)
pH	(2)	(2)
	English units (pounds per 1,000 lb LWK)	
BOD5+	0.48	0.24
TSS+	0.62	0.31
Oil and grease	0.26	0.13
Fecal coliform	(1)	(1)
pH	(2)	(2)

[1] Maximum at any time 400 mpn/100 ml.
[2] Within the range 6.0 to 9.0.

+The values for BOD5 and suspended solids are for average plants, i.e., plants with a ratio of average weight of processed meat products to average LWK of 0.55. Adjustments can be made for high-processing packing-houses at other ratios according to the following equations:

$$\text{kg BOD5/1000 kg LWK} = 0.21 + 0.23 \quad (v—0.4)$$

$$\text{kg SS/1000 kg LWK} = 0.28 + 0.30 \quad (v—0.4)$$

where

v-kg processed meat products/kg LWK.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing (defleshing, washing and curing) of hides derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.04	0.02
TSS	0.08	0.04

(d) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.06	0.03
TSS	0.12	0.06
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.06	0.03
TSS	0.12	0.06

(e) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
BOD5	0.02	0.01
TSS	0.04	0.02
	English units (pounds per 1,000 lb ELWK)	
BOD5	0.02	0.01
TSS	0.04	0.02

[39 FR 7897, Feb. 28, 1974, as amended at 60 FR 33965, June 29, 1995]

§ 432.43 [Reserved]

§ 432.44 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
pH	No limitation.
BOD5	Do.
TSS	Do.
Oil and grease	Do.
Fecal coliform	Do.

[40 FR 6447, Feb. 11, 1975, as amended at 60 FR 33965, June 29, 1995]

§ 432.45 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to on-site slaughter or subsequent meat, meat product or by-product processing or carcasses of animals slaughtered onsite which may be discharged by a new source subject to the provisions of this subpart: The limitations shall be as specified in § 432.42(a), with the exception that in addition to the pollutants or pollutant properties controlled by that subsection, discharges of ammonia shall not exceed the limitations set forth below:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg LWK)	
Ammonia	0.80	0.40
	English units (pounds per 1,000 lb LWK)	
Ammonia	0.80	0.40

(b) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the processing of blood derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.42(c):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.06	0.03
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.06	0.03

(c) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the wet or low temperature rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 423.42(d):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.10	0.05
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.10	0.05

(d) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the dry rendering of material derived from animals slaughtered at locations other than the packinghouse, which may be discharged by a new source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section and § 432.42(e):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg ELWK)	
Ammonia	0.04	0.02
	English units (pounds per 1,000 lb ELWK)	
Ammonia	0.04	0.02

[39 FR 7897, Feb. 28, 1974; 39 FR 26423, July 19, 1974]

§ 432.46 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[60 FR 33965, June 29, 1995]

§ 432.47 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.42 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart E—Small Processor Subcategory

SOURCE: 40 FR 905, Jan. 3, 1975, unless otherwise noted.

§ 432.50 Applicability; description of the small processor subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of finished meat products such as fresh meat cuts, smoked products, canned products, hams, sausages, luncheon meats, or similar products by a small processor.

§ 432.51 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) The term ''small processor'' shall mean an operation that produces up to 2730 kg (6000 lb) per day of any type or combination of finished products.

(c) The term ''finished product'' shall mean the final manufactured product as fresh meat cuts, hams, bacon or other smoked meats, sausage, luncheon meats, stew, canned meats or related products.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	2.0	1.0
TSS	2.4	1.2
Oil and grease	1.0	0.5
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	2.0	1.0
TSS	2.4	1.2
Oil and grease	1.0	0.5
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] No limitation.

[40 FR 905, Jan. 3, 1975, as amended at 60 FR 33965, June 29, 1995]

§§ 432.53—432.54 [Reserved]

§ 432.55 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	1.0	0.5
TSS	1.2	0.6
Oil and grease	0.5	0.25
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	1.0	0.5
TSS	1.2	0.6
Oil and grease	0.5	0.25
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] No limitation.

§ 432.56 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
Oil and grease	Do.
pH	Do.
Fecal coliform	Do.

[40 FR 905, Jan. 3, 1975, as amended at 60 FR 33965, June 29, 1995]

§ 432.57 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, 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 conventional pollutant control technology:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	1.0	0.5
TSS	1.2	0.6
Oil and grease	0.5	0.25
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	1.0	0.5
TSS	1.2	0.6
Oil and grease	0.5	0.25
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] No limitation.

[51 FR 25001, July 9, 1986]

Subpart F—Meat Cutter Subcategory

SOURCE: 40 FR 906, Jan. 3, 1975, unless otherwise noted.

§ 432.60 Applicability; description of the meat cutter subcategory.

The provisions of this subpart are applicable to discharges resulting from the fabrication or manufacture of fresh meat cuts such as steaks, roasts, chops, etc. by a meat cutter.

§ 432.61 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.

(b) The term ''meat cutter'' shall mean an operation which fabricates, cuts, or otherwise produces fresh meat cuts and related finished products from livestock carcasses, at rates greater than 2730 kg (6000 lb) per day.

(c) The term ''finished product'' shall mean the final manufactured product as fresh meat cuts including, but not limited to, steaks, roasts, chops, or boneless meats.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.036	0.018
TSS	0.044	0.022
Oil and grease	0.012	0.000
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.036	0.018
TSS	10.044	0.022
Oil and grease	0.012	0.006
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

[40 FR 906, Jan. 3, 1975, as amended at 60 FR 33965, June 29, 1995]

§ 432.63 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Milligrams per liter—effluent	
Ammonia	8.0 mg/l	4.0

[44 FR 50748, Aug. 29, 1979]

§ 432.64 [Reserved]

§ 432.65 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 discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.036	0.018
TSS	0.044	0.022
Oil and grease	0.012	0.006
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.030	0.015
TSS	0.036	0.018
Oil and grease	0.012	0.006
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

§ 432.66 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
Oil and grease	Do.
pH	Do.
Fecal coliform	Do.

[40 FR 906, Jan. 3, 1975, as amended at 60 FR 33965, June 29, 1995]

§ 432.67 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.62 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart G—Sausage and Luncheon Meats Processor Subcategory

SOURCE: 40 FR 907, Jan. 3, 1975, unless otherwise noted.

§ 432.70 Applicability; description of the sausage and luncheon meat processor subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of fresh meat cuts, sausage, bologna, and other luncheon meats by a sausage and luncheon meat processor.

§ 432.71 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''sausage and luncheon meat processor'' shall mean an operation which cuts fresh meats, grinds, mixes, seasons, smokes or otherwise produces finished products such as sausage, bologna and luncheon meats at rates greater than 2730 kg (6000 lb) per day.

(c) The term ''finished product'' shall mean the final manufactured product as fresh meat cuts including steaks, roasts, chops or boneless meat, bacon or other smoked meats (except hams) such as sausage, bologna or other luncheon meats, or related products (except canned meats).

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.56	0.28
TSS	0.68	0.34
Oil and grease	0.20	0.10
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.56	0.28
TSS	0.68	0.34
Oil and grease	0.20	0.10
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

[40 FR 907, Jan. 3, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.73 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:

[Milligrams per liter—effluent]

Effluent characteristics	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Ammonia	80 mg/l	4.0

[44 FR 50748, Aug. 29, 1979]

§ 432.74 [Reserved]

§ 432.75 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 sources subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.56	0.28
TSS	0.68	0.34
Oil and grease	0.20	0.10
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.48	0.24
TSS	0.58	0.29
Oil and grease	0.20	0.10
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

§ 432.76 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
Oil and grease	Do.
pH	Do.
Fecal coliform	Do.

[40 FR 907, Jan. 3, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.77 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.72 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart H—Ham Processor Subcategory

SOURCE: 40 FR 908, Jan. 3, 1975, unless otherwise noted.

§ 432.80 Applicability; description of the ham processor subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of hams alone or in combination with other finished products by a ham processor.

§ 432.81 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''ham processor'' shall mean an operation which manufactures hams alone or in combination with other finished products at rates greater than 2730 kg (6000 lb) per day.

(c) The term ''finished products'' shall mean the final manufactured product as fresh meat cuts including steaks, roasts, chops or boneless meat, smoked or cured hams, bacon or other smoked meats, sausage, bologna or other luncheon meats (except canned meats).

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.62	0.31
TSS	0.74	0.37
Oil and grease	0.22	0.11
pH	(1)	(1)
Fecal coliform	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.62	0.31
TSS	0.74	0.37
Oil and grease	0.22	0.11
pH	(1)	(1)
Fecal coliform	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

[40 FR 908, Jan. 3, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.83 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:

[Milligrams per liter—effluent]

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Ammonia	8.0 mg/l	4.0

[44 FR 50748, Aug. 29, 1979]

§ 432.84 [Reserved]

§ 432.85 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.62	0.31
TSS	0.74	0.37
Oil and grease	0.22	0.11
pH	(1)	(1)
Fecal coliform	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.62	0.31
TSS	0.74	0.37
Oil and grease	0.22	0.11
pH	(1)	(1)
Fecal coliform	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

§ 432.86 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
Oil and grease	Do.
pH	Do.
Fecal coliform	Do.

[40 FR 908, Jan. 3, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.87 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.82 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart I—Canned Meats Processor Subcategory

SOURCE: 40 FR 909, Jan. 3, 1975, unless otherwise noted.

§ 432.90 Applicability; description of the canned meats processor subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of canned meats alone or in combination with any other finished products, by a canned meats processor.

§ 432.91 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 ''canned meat processor'' shall mean an operation which prepares and cans meats (such as stew, sandwich spreads, or similar products) alone or in combination with other finished products at rates greater than 2730 kg (6000 lb.) per day.

(c) The term ''finished products'' shall mean the final manufactured product as fresh meat cuts including steaks, roasts, chops or boneless meat, hams, bacon or other smoked meats, sausage, bologna or other luncheon meats, stews, sandwich spreads or other canned meats.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.74	0.37
TSS	0.90	0.45
Oil and grease	0.26	0.12
pH	(1)	(1)
Fecal coliform	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.74	0.37
TSS	0.90	0.45
Oil and grease	0.26	0.13
pH	(1)	(1)
Fecal coliform	(2)	(2)

[1] Within the range 6.0 to 9.0.

[2] Maximum at any time 400 mpn/100 ml.

[40 FR 909, Jan. 3, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.93 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:

[Milligrams per liter—effluent]

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Ammonia	8.0 mg/l	4.0

[44 FR 50748, Aug. 29, 1979]

§ 432.94 [Reserved]

§ 432.95 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of finished product)	
BOD5	0.74	0.37
TSS	0.90	0.45
Oil and grease	0.26	0.13
pH	(1)	(1)
Fecal coliform	(2)	(2)
	English units (lb/1,000 lb of finished product)	
BOD5	0.74	0.37
TSS	0.90	0.45
Oil and grease	0.26	0.13
pH	(1)	(1)
Fecal coliform	(2)	(2)

[1] Within the range 6.0 to 9.0.

[2] Maximum at any time 400 mpn/100 ml.

§ 432.96 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
Oil and grease	Do.
pH	Do.
Fecal coliform	Do.

[40 FR 909, Jan. 3, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.97 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 432.92 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25001, July 9, 1986]

Subpart J—Renderer Subcategory

SOURCE: 40 FR 910, Jan. 3, 1975, unless otherwise noted.

§ 432.100 Applicability; description of the renderer subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of meat meal, dried animal by-product residues (tankage),

animal oils, grease and tallow, perhaps including hide curing, by a renderer.

§ 432.101 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 ''renderer'' shall mean an independent or off-site rendering operation, conducted separate from a slaughterhouse, packinghouse or poultry dressing or processing plant, which manufactures at rates greater than 75,000 pounds of raw material per day of meat meal, tankage, animal fats or oils, grease, and tallow, and may cure cattle hides, but excluding marine oils, fish meal, and fish oils.

(c) The term ''tankage'' shall mean dried animal by-product residues used in feedstuffs.

(d) The term ''tallow'' shall mean a product made from beef cattle or sheep fat that has a melting point of 40°C or greater.

(e) The term ''raw material'' or as abbreviated herein, ''RM'', shall mean the basic input materials to a renderer composed of animal and poultry trimmings, bones, meat scraps, dead animals, feathers and related usable by-products.

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
BOD5	0.34	0.17
TSS	0.42	0.21
Oil and grease	0.20	0.10
pH	(1)	(1)
Fecal coliform	(2)	(2)
	English units (lb/1,000 lb of raw material)	
BOD5	0.34	0.17
TSS	0.42	0.21
Oil and grease	0.20	0.10
pH	(1)	(1)
Fecal coliform	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

(b) The limitations given in paragraph (a) of this section for BOD5 and TSS are derived for a renderer which does no cattle hide curing as part of the plant activities. If a renderer does conduct hide curing, the following empirical formulas should be used to derive an additive adjustment to the effluent limitations for BOD5 and TSS.

BOD5 Adjustment (kg/kkg RM)=[8.0×(number of hides)/kg of raw material]
(lb/1,000 lb RM)=[17.6×(number of hides)/lbs of raw material]
TSS Adjustment (kg/kkg RM)=[11.0×(number of hides)/kg of raw material]
(lb/1,000 lb RM)=[24.2×(number of hides)/lbs of raw material]

[40 FR 910, Jan. 3, 1975; 40 FR 11874, Mar. 14, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.103 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
Ammonia	0.14	0.07
	English units (lb/1,000 lb of raw material)	
Ammonia	0.14	0.07

[44 FR 50748, Aug. 29, 1979]

§ 432.104 [Reserved]

§ 432.105 Standards of performance for new sources.

(a) Subject to the provisions of paragraph (b) of this section, 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:

Effluent characteristics	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 kg of raw material)	
BOD5	0.18	0.09
TSS	.22	.11
Oil and grease	.10	.05
Ammonia	.14	.07
pH	(1)	(1)
Fecal coliforms	(2)	(2)
	English units (pounds per 1,000 lb of raw material)	
BOD5	0.18	0.09
TSS	.22	.11
Oil and grease	.10	.05
Ammonia	.14	.07
pH	(1)	(1)
Fecal coliforms	(2)	(2)

[1] Within the range 6.0 to 9.0.
[2] Maximum at any time 400 mpn/100 ml.

(b) The standards given in paragraph (a) of this section for BOD5 and TSS are derived for a renderer which does no cattle hide curing as part of the plant activities. If a renderer does conduct hide curing, the following empirical formulas should be used to derive an additive adjustment to the standards for BOD5 and TSS.

BOD5 adjustment (kilograms per 1,000 kg of raw material)=
8.0×(number of hides)/kilograms of raw material
(pounds per 1,000 lb of raw material)=
17.6×(number of hides)/pounds of raw material
TSS adjustment (kilograms per 1,000 kg of raw material)=
11.0×(number of hides)/kilograms of raw material
(pounds per 1,000 lb of raw material)=
24.2×(number of hides)/pounds of raw material

[42 FR 54419, Oct. 6, 1977]

§ 432.106 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
Oil and grease	Do.
pH	Do.
Fecal coliform	Do.

[40 FR 910, Jan. 3, 1975, as amended at 60 FR 33966, June 29, 1995]

§ 432.107 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology.

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, 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 conventional pollutant control technology:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of raw material)	
BOD5	0.18	0.09
TSS	0.22	0.11
Oil and grease	0.10	0.05
Fecal coliforms	(1)	(1)
pH	(2)	(2)
	English units (lb/1,000 lb. of raw material)	
BOD5	0.18	0.09
TSS	0.22	0.11
Oil and grease	0.10	0.05
Fecal coliforms	(1)	(1)
pH	(2)	(2)

[1] Maximum at any time: 400 mpn/100 ml.
[2] Within the range 6.0 to 9.0.

(b) The limitations given in paragraph (a) of this section for BOD5 and TSS are derived for a renderer which does no cattle hide curing as part of the plant activities. If a renderer does conduct hide curing, the following empirical formulas should be used to derive an additive adjustment to the effluent limitations for BOD5 and TSS.

BOD5 Adjustment (kg/kkg RM)=3.6×(number of hides)/kg of raw material
(lb/1,000 lb RM)=7.9×(number of hides)/lbs of raw material
TSS Adjustment (kg/kkg RM)=6.2×(number of hides)/kg of raw material
(lb/1,000 lb RM)=13.6×(number of hides)/lbs of raw material

[51 FR 25001, July 9, 1986]

PART 433—METAL FINISHING POINT SOURCE CATEGORY

Subpart A—Metal Finishing Subcategory

Sec.
433.10 Applicability; description of the metal finishing point source category.
433.11 Specialized definitions.
433.12 Monitoring requirements.
433.13 Effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT).
433.14 Effluent limitations representing the degree of effluent reduction attainable by applying the best available technology economically achievable (BAT).
433.15 Pretreatment standards for existing sources (PSES).
433.16 New source performance standards (NSPS).
433.17 Pretreatment standards for new sources (PSNS).

AUTHORITY: Secs. 301, 304(b), (c), (e), and (g), 306(b) and (c), 307(b) and (c), 308 and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1971, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314(b) (c), (e), and (g), 1316(b) and (c), 1317(b) and (c), 1318 and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 48 FR 32485, July 15, 1983, unless otherwise noted.

Subpart A—Metal Finishing Subcategory

§ 433.10 Applicability; description of the metal finishing point source category.

(a) Except as noted in paragraphs (b) and (c), of this section, the provisions of this subpart apply to plants which perform any of the following six metal finishing operations on any basis material: Electroplating, Electroless Plating, Anodizing, Coating (chromating, phosphating, and coloring), Chemical Etching and Milling, and Printed Circuit Board Manufacture. If any of those six operations are present, then this part applies to discharges from those operations and also to discharges from any of the following 40 process operations: Cleaning, Machining, Grinding, Polishing, Tumbling, Burnishing, Impact Deformation, Pressure Deformation, Shearing, Heat Treating, Thermal Cutting, Welding, Brazing, Soldering, Flame Spraying, Sand Blasting, Other Abrasive Jet Machining, Electric Discharge Machining, Electrochemical Machining, Electron Beam Machining, Laser Beam Machining, Plasma Arc Machining, Ultrasonic Machining, Sintering, Laminating, Hot Dip Coating, Sputtering, Vapor Plating, Thermal Infusion, Salt Bath Descaling, Solvent Degreasing, Paint Stripping, Painting, Electrostatic Painting, Electropainting, Vacuum Metalizing, Assembly, Calibration, Testing, and Mechanical Plating.

(b) In some cases effluent limitations and standards for the following industrial categories may be effective and

applicable to wastewater discharges from the metal finishing operations listed above. In such cases these part 433 limits shall not apply and the following regulations shall apply:

Nonferrous metal smelting and refining (40 CFR part 421)
Coil coating (40 CFR part 465)
Porcelain enameling (40 CFR part 466)
Battery manufacturing (40 CFR part 461)
Iron and steel (40 CFR part 420)
Metal casting foundries (40 CFR part 464)
Aluminum forming (40 CFR part 467)
Copper forming (40 CFR part 468)
Plastic molding and forming (40 CFR part 463)
Nonferrous forming (40 CFR part 471)
Electrical and electronic components (40 CFR part 469)

(c) This part does not apply to:

(1) Metallic platemaking and gravure cylinder preparation conducted within or for printing and publishing facilities; and

(2) Existing indirect discharging job shops and independent printed circuit board manufacturers which are covered by 40 CFR part 413.)

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983; 48 FR 45105, Oct. 3, 1983; 51 FR 40421, Nov. 7, 1986]

§ 433.11 Specialized definitions.

The definitions set forth in 40 CFR part 401 and the chemical analysis methods set forth in 40 CFR part 136 are both incorporated here by reference. In addition, the following definitions apply to this part:

(a) The term ''T'', as in ''Cyanide, T'', shall mean total.

(b) The term ''A'', as in ''Cyanide A'', shall mean amenable to alkaline chlorination.

(c) The term ''job shop'' shall mean a facility which owns not more than 50% (annual area basis) of the materials undergoing metal finishing.

(d) The term ''independent'' printed circuit board manufacturer shall mean a facility which manufacturers printed circuit boards principally for sale to other companies.

(e) The term ''TTO'' shall mean total toxic organics, which is the summation of all quantifiable values greater than .01 milligrams per liter for the following toxic organics:

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobenzene
1,2,-Dichloroethane
1,1,1-Trichloroethane
Hexachloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-Chloroethyl vinyl ether (mixed)
2-Chloronaphthalene
2,4,6-Trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-Chlorophenol
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3-Dichlorobenzidine
1,1-Dichloroethylene
1,2-Trans-dichloroethylene
2,4-Dichlorophenol
1,2-Dichloropropane
1,3-Dichloropropylene (1,3-dichloropropene)
2,4-Dimethylphenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Ethylbenzene
Fluoranthene
4-Chlorophenyl phenyl ether
4-Bromophenyl phenyl ether
Bis (2-chloroisopropyl) ether
Bis (2-chloroethoxy) methane
Methylene chloride (dichloromethane)
Methyl chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
4,6-Dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate

1,2-Benzanthracene
(benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-Benzofluoranthene (benzo(b)fluoranthene)
11,12-Benzofluoranthene
(benzo(k)fluoranthene)
Chrysene
Acenaphthylene
Anthracene
1,12-Benzoperylene (benzo(ghi)perylene)
Fluorene
Phenanthrene
1,2,5,6-Dibenzanthracene
(dibenzo(a,h)anthracene)
Indeno(1,2,3-cd) pyrene (2,3-o-phenlene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture and metabolites)
4,4-DDT
4,4-DDE (p,p-DDX)
4,4-DDD (p,p-TDE)
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
(BHC-hexachloro-
cyclohexane)
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC
(PCB-polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983, as amended at 51 FR 40421, Nov. 7, 1986]

§ 433.12 Monitoring requirements.

(a) In lieu of requiring monitoring for TTO, the permitting authority (or, in the case of indirect dischargers, the control authority) may allow dischargers to make the following certification statement: ''Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation [or pretreatment standard] for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the permitting [or control] authority.'' For direct dischargers, this statement is to be included as a ''comment'' on the Discharge Monitoring Report required by 40 CFR 122.44(i), formerly 40 CFR 122.62(i). For indirect dischargers, the statement is to be included as a comment to the periodic reports required by 40 CFR 403.12(e). If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyse for only those pollutants which would reasonably be expected to be present.

(b) In requesting the certification alternative, a discharger shall submit a solvent management plan that specifies to the satisfaction of the permitting authority (or, in the case of indirect dischargers, the control authority) the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for ensuring that toxic organics do not routinely spill or leak into the wastewater. For direct dischargers, the permitting authority shall incorporate the plan as a provision of the permit.

(c) Self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, samples may be taken of the final effluent, if the plant limitations are adjusted based on the dilution ratio of the cyanide waste stream flow to the effluent flow.

(Approved by the Office of Management and Budget under control number 2040–0074)

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983, as amended at 49 FR 34823, Sept. 4, 1984]

§ 433.13 Effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by applying the best practicable control technology currently available (BPT):

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	.....
Oil & Grease	52	26
TSS	60	31
pH	(1)	(1)

[1] Within 6.0 to 9.0.

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

§ 433.14 Effluent limitations representing the degree of effluent reduction attainable by applying the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by applying the best available technology economically achievable (BAT):

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	.....

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

§ 433.15 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following

pretreatment standards for existing sources (PSES):

PSES FOR ALL PLANTS EXCEPT JOB SHOPS AND INDEPENDENT PRINTED CIRCUIT BOARD MANUFACTURERS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	.....

(b) Alternatively, for industrial facilities with cyanide treatment, upon agreement between a source subject to those limits and the pollution control authority. The following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user introducing wastewater pollutants into a publicly owned treatment works under the provisions of this subpart shall augment the use of process wastewater as a partial or total substitute for adequate treatment to achieve compliance with this standard.

(d) An existing source submitting a certification in lieu of monitoring pursuant to § 433.12 (a) and (b) of this regulation must implement the toxic organic management plan approved by the control authority.

(e) An existing source subject to this subpart shall comply with a daily maximum pretreatment standard for TTO of 4.57 mg/l.

(f) Compliance with the provisions of paragraph (c), (d), and (e) of this section shall be achieved as soon as possible, but not later than June 30, 1984, however metal finishing facilities which are also covered by part 420 (iron and steel) need not comply before July 10, 1985. Compliance with the provisions of paragraphs (a) and (b) of this section shall be achieved as soon as possible, but not later than February 15, 1986.

[48 FR 32485, July 15, 1983, as amended at 48 FR 41410, Sept. 15, 1983; 48 FR 43682, Sept. 26, 1983]

§ 433.16 New source performance standards (NSPS).

(a) Any new source subject to this subpart must achieve the following performance standards:

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	.....
Oil and Grease	52	26
TSS	60	31
pH	(1)	(1)

[1] Within 6.0 to 9.0.

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983]

§ 433.17 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	.....

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to these limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

(d) An existing source submitting a certification in lieu of monitoring pursuant to § 433.12 (a) and (b) of this regulation must implement the toxic organic management plan approved by the control authority.

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983]

PART 434—COAL MINING POINT SOURCE CATEGORY BPT, BAT, BCT LIMITATIONS AND NEW SOURCE PERFORMANCE STANDARDS

Subpart A—General Provisions

Sec.
434.10 Applicability.
434.11 General definitions.

Subpart B—Coal Preparation Plants and Coal Preparation Plant Associated Areas

434.20 Applicability.
434.21 [Reserved]
434.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
434.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
434.24 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
434.25 New source performance standard (NSPS).

Subpart C—Acid or Ferruginous Mine Drainage

434.30 Applicability; description of the acid or ferruginous mine drainage subcategory.
434.31 [Reserved]
434.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
434.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
434.34 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
434.35 New source performance standards (NSPS).

Subpart D—Alkaline Mine Drainage

434.40 Applicability; description of the alkaline mine drainage subcategory
434.41 [Reserved]

434.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
434.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
434.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
434.45 New source performance standards (NSPS).

Supbart E—Post-Mining Areas

434.50 Applicability.
434.51 [Reserved]
434.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
434.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
434.54 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
434.55 New source performance standards (NSPS).

Subpart F—Miscellaneous Provisions

434.60 Applicability.
434.61 Commingling of waste streams.
434.62 Alternate effluent limitations for pH.
434.63 Effluent limitations for precipitation events.
434.64 Procedure and method detection limit for measurement of settleable solids.
434.65 Modifications of NPDES Permits for New Sources.
APPENDIX A TO PART 434—ALTERNATE STORM LIMITATIONS FOR ACID OR FERRUGINOUS MINE DRAINAGE

AUTHORITY: 33 U.S.C. 1311 1314(b), (c), (e), and (g), 1316(b) and (c), 1317(b) and (c), and 1361.

SOURCE: 50 FR 41305, Oct. 9, 1985, unless otherwise noted.

Subpart A—General Provisions

§ 434.10 Applicability.

This part applies to discharges from any coal mine at which the extraction of coal is taking place or is planned to be undertaken and to coal preparation plants and associated areas.

§ 434.11 General definitions.

(a) The term ''acid or ferruginous mine drainage'' means mine drainage which, before any treatment, either has a pH of less than 6.0 or a total iron concentration equal to or greater than 10 mg/l.

(b) The term ''active mining area'' means the area, on and beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas and post-mining areas.

(c) The term ''alkaline, mine drainage'' means mine drainage which, before any treatment, has a pH equal to or greater than 6.0 and total iron concentration of less than 10 mg/l.

(d) The term ''bond release'' means the time at which the appropriate regulatory authority returns a reclamation or performance bond based upon its determination that reclamation work (including, in the case of underground mines, mine sealing and abandonment procedures) has been satisfactorily completed.

(e) The term ''coal preparation plant'' means a facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then is loaded for transit to a consuming facility.

(f) The term ''coal preparation plant associated areas'' means the coal preparation plant yards, immediate access roads, coal refuse piles and coal storage piles and facilities.

(g) The term ''coal preparation plant water circuit'' means all pipes, channels, basins, tanks, and all other structures and equipment that convey, contain, treat, or process any water that is used is coal preparation processes within a coal preparation plant.

(h) The term ''mine drainage'' means any drainage, and any water pumped or

siphoned, from an active mining area or a post-mining area.

(i) The abbreviation ''ml/l'' means milliliters per liter.

(j)(1) Notwithstanding any other provision of this Chapter, subject to paragraph (j)(2) of this section the term ''new source coal mine'' means a coal mine (excluding coal preparation plants and coal preparation plant associated areas) including an abandoned mine which is being re-mined.

(i) The construction of which is commenced after May 4, 1984; or

(ii) Which is determined by the EPA Regional Administrator to constitute a ''major alteration''. In making this determination, the Regional Administrator shall take into account whether one or more of the following events resulting in a new, altered or increased discharge of pollutants has occurred after May 4, 1984 in connection with the mine for which the NPDES permit is being considered:

(A) Extraction of a coal seam not previously extracted by that mine;

(B) Discharge into a drainage area not previously affected by wastewater discharge from the mine;

(C) Extensive new surface disruption at the mining operation;

(D) A construction of a new shaft, slope, or drift; and

(E) Such other factors as the Regional Administrator deems relevant.

(2) No provision in this part shall be deemed to affect the classification as a new source of a facility which was classified as a new source coal mine under previous EPA regulations, but would not be classified as a new source under this section, as modified. Nor shall any provision in this part be deemed to affect the standards applicable to such facilities, except as provided in § 434.65 of this chapter.

(k) The term ''post-mining area'' means:

(1) A reclamation area or

(2) The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

(l) The term ''reclamation area'' means the surface area of a coal mine which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced.

(m) The term ''settleable solids'' is that matter measured by the volumetric method specified in § 434.64.

(n) The terms ''1-year, 2-year, and 10-year, 24-hour precipitation events'' means the maximum 24-hour precipitation event with a probable recurrence interval of once in one, two, and ten years respectively as defined by the National Weather Service and Technical Paper No. 40, ''Rainfall Frequency Altas of the U.S.,'' May 1961, or equivalent regional or rainfall probability information developed therefrom.

(o) The terms ''treatment facility'' and ''treatment system'' mean all structures which contain, convey, and as necessay, chemically or physically treat coal rine drainage, coal preparation plant process wastewater, or drainage from coal preparation plant associated areas, which remove pollutants regulated by this part from such waters. This includes all pipes, channels, ponds, basins, tanks and all other equipment serving such structures.

(p) The term ''coal refuse disposal pile'' means any coal refuse deposited on the earth and intended as permanent dispoal or long-term storage (greater than 180 days) of such material, but does not include coal refuse deposited within the active mining area or coal refuse never removed from the active mining area.

(q) The term ''controlled surface mine drainage'' means any surface mine drainage that is pumped or siphoned from the active mining area.

(r) The term ''abandoned mine'' means a mine where mining operations have occurred in the past and

(1) The applicable reclamation bond or financial assurance has been released or forfeited or

(2) If no reclamation bond or other financial assurance has been posted, no mining operations have occurred for five years or more.

(s) The term ''1-year, 24-hour precipitation event'' means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year as defined by the National Weather Service and Technical Paper No. 40, ''Rainfall Frequency Atlas of the

U.S.,'' May 1961, or equivalent regional or rainfall probability information developed therefrom.

(t) The Term ''2-year, 24-hour precipitation event'' means the maximum 24-hour precipitation event with a probable recurrence interval of once in two years as defined by the National Weather Service and Technical Paper No. 40, ''Rainfall Frequency Atlas of the U.S., ''May 1961, or equivalent regional or rainfall probability information developed therefrom.

Subpart B—Coal Preparation Plants and Coal Preparation Plant Associated Areas

§ 434.20 Applicability.

The provisions of this subpart are applicable to discharges from coal preparation plants and coal preparation plant association areas, as indicated, including discharges which are pumped, siphoned, or drained from the coal preparation plant water circuit and coal storage, refuse storage, and ancillary areas related to the cleaning or beneficiation of coal of any rank including, but not limited to, bituminous, lignite, and anthracite.

§ 434.21 [Reserved]

§ 434.22 Effluent limitation guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best practicable control technology currently available if discharges from such point sources normally exhibit a pH of less than 6.0 prior to treatment:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
Manganese, total	4.0	2.0
TSS	70	35
pH	[1]	[1]

[1] Within the range of 6.0 to 9.0 at all times.

(b) Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17 and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best practicable control technology currently available if discharges from such point sources normally exhibit a pH equal to or greater than 6.0 prior to treatment:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
TSS	70	35
pH	[1]	[1]

[1] Within the range of 6.0 to 9.0 at all times.

§ 434.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30–125.32, and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best available technology economically achievable if discharges

from such point sources normally exhibit a pH of less than 6.0 prior to treatment:

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
Manganese, total	4.0	2.0

(b) Except as provided in 40 CFR 125.30–125.32, and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best available technology economically achievable if discharges from such point sources normally exhibit a pH equal to or greater than 6.0 prior to treatment:

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5

§ 434.24 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 434.25 New source performance standards (NSPS).

The following new source performance standards (NSPS) shall be achieved by any new source coal preparation plant and coal preparation plant associated areas, as indicated:

(a) Except as provided in 40 CFR 401.17 and §§ 434.61, 434.62 and 434.63 of this part, the following new source performance standards shall apply to discharges from new source coal preparation plants and new source coal preparation plant associated areas, if such discharges normally exhibit a pH of less than 6.0 prior to treatment:

NSPS EFFLUENT LIMITATIONS (MG/L)

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total	6.0	3.0
Manganese, total	4.0	2.0
TSS	70	35
pH	(1)	(1)

1 6.0–9.0 at all times.

(b) Except as provided in 40 CFR 401.17 and §§ 434.61, 434.62 and 434.63 of this part, the following new source performance standards shall apply to discharges from new source coal preparation plants and new source coal preparation plant associated areas, if such discharges normally exhibit a pH equal to or greater than 6.0 prior to treatment:

NSPS EFFLUENT LIMITATIONS (MG/L)

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
Iron, total	6.0	3.0
TSS	70	35
pH	(1)	(1)

1 6.0–9.0 at all times.

Subpart C—Acid or Ferruginous Mine Drainage

§ 434.30 Applicability; description of the acid or ferruginous mine drainage subcategory.

The provisions of this subpart are applicable to acid or ferruginous mine drainage from an active mining area resulting from the mining of coal of any rank including, but not limited to, bituminous, lignite, and anthracite.

§ 434.31 [Reserved]

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

Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants 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:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
Manganese, total	4.0	2.0
TSS	70.0	35.0
pH	(1)	(1)

1 Within the range 6.0 to 9.0 at all times.

§ 434.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
Manganese, total	4.0	2.0

§ 434.34 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 434.35 New source performance standards (NSPS).

Except as provided in 40 CFR 401.17, and §§ 434.61, 434.62 and 434.63 of this part, the following new source performance standards shall be achieved for any discharge from a new source subject to this subpart:

NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	6.0	3.0
Manganese, total	4.0	2.0
TSS	70.0	35.0
pH	(1)	(1)

1 Within the range 6.0 to 9.0 at all times.

Subpart D—Alkaline Mine Drainage

§ 434.40 Applicability; description of the alkaline mine drainage subcategory.

The provisions of this subpart are applicable to alkaline mine drainage from an active mining area resulting from the mining of coal of any rank including, but not limited to, bituminous, lignite, and anthracite.

§ 434.41 [Reserved]

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

Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants 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:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
TSS	70.	35.
pH	(1)	(1)

1 Within the range 6.0 to 9.0 at all times.

§ 434.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30–125.32, and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5

§ 434.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 434.45 New source performance standards (NSPS).

Except as provided in 40 CFR 401.17 and §§ 434.61 and 434.63 of this part, the following new source performance standards shall be achieved for any discharge from a new source subject to this subpart:

NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	6.0	3.0
TSS	70.0	35.0
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

Subpart E—Post-Mining Areas

§ 434.50 Applicability.

The provisions of this subpart are applicable to discharges from post-mining areas.

§ 434.51 [Reserved]

§ 434.52 Effluent limitations quidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) *Reclamation areas.* The limitations in this subsection apply to discharges from reclamation areas until the performance bond issued to the facility by the appropriate SMCRA authority has been released.

Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17 and §§ 434.61 and 434.63(d)(2) of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subsection after application of the best practicable control technology currently available:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Limitations
Settleable Solids	0.5 ml/l maximum not to be exceeded.
pH	(1)

[1] Within the range 6.0 to 9.0 at all times.

(b) *Underground mine drainage.* The limitations in this subsection apply to discharges from the underground workings of underground mines until SMCRA bond release.

(1) Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17 and §§ 434.61, 434.62 and 434.63 of this part, the following limitations establish the concentration of quality of pollutants in acid or ferruginous mine drainage subject to the provisions of this subsection after application of the best practicable control technology currently available:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
Manganese, total	4.0	2.0
TSS	70.0	35.0
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

(2) Except as provided in 40 CFR 125.30–125.32, 40 CFR 401.17, and §§ 434.61 and 434.63 of this part, the following limitations establish the concentration or quality of pollutants in alkaline mine drainage subject to the provisions of this subsection after application of the best practicable control technology currently available:

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
TSS	70.0	35.0
pH	(1)	(1)

[1] Within the range 6.0 to 9.0 at all times.

§ 434.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by application of the best available technology economically achievable (BAT).

(a) *Reclamation areas.* The limitations of this subsection apply to discharges from reclamation areas until SMCRA bond release.

Except as provided in 40 CFR 125.30–125.32, and §§ 434.61 and 434.63(d)(2) of this part, the following limitations establish the concentration or quality of pollutants which may be discharged by a point source subject to the provisions of this subsection after application of the best available technology economically achievable:

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Limitations
Settleable solids	0.5 ml/l maximum not to be exceeded.

(b) *Underground mine drainage.* The limitations in this subsection apply to discharges from the underground workings of underground mines until SMCRA bond release.

(1) Except as provided in 40 CFR 125.30–125.32, and §§ 434.61, 434.62, and 434.63 of this part, the following limitations establish the concentration or quality of pollutants in acid or ferruginous mine drainage subject to the provisions of this subsection after application of the best available technology economically achievable:

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5
Manganese, total	4.0	2.0

(2) Except as provided in 40 CFR 125.30–125.32, and §§ 434.61, and 434.63 of this part, the following limitations establish the concentration or quality of pollutants in alkaline mine drainage subject to the provisions of this subsection after application of the best available technology economically achievable:

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentration in mg/l	
Iron, total	7.0	3.5

§ 434.54 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 434.55 New source performance standards (NSPS).

The following new source performance standards shall apply to the post-mining areas of all new source coal mines:

(a) *Reclamation areas.* The standards of this subsection apply to discharges from reclamation areas at new source coal mines until SMCRA bond release.

Except as provided in 40 CFR 401.17 and §§ 434.61 and 434.63 (d)(2) of this part, the following new source performance standards shall be achieved for a discharge subject to the provisions of this subsection:

NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Limitations
Settleable Solids	0.5 ml/1 maximum not to be exceeded.
pH	(1)

(1) Within the range 6.0 to 9.0 at all times.

(b) *Underground mine drainage.* The standards in this subsection apply to discharges from the underground workings of new source underground mines until bond release.

(1) Except as provided in 40 CFR 401.17 and §§ 434.61, 434.62, and 434.63 of this part, the following new source performance standards shall be achieved for the discharge of any acid or ferruginous mine drainage subject to this subsection:

NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentrations in mg/1	
Iron, total	6.0	3.0
Manganese, total	4.0	2.0
TSS	70.0	35.0
pH	(1)	(1)

1 Within the range 6.0 to 9.0 at all times.

(2) Except as provided in 40 CFR 401.17 and §§ 434.61 and 434.63 of this part, the following new source performance standards shall be achieved for the discharge of any alkaline mine drainage subject to this subsection:

NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Concentrations in mg/1	
Iron, total	6.0	3.0
TSS	70.0	35.0
pH	(1)	(1)

1 Within the range 6.0 to 9.0 at all times.

Subpart F—Miscellaneous Provisions

§ 434.60 Applicability.

The provisions of this subpart F apply to this part 434 as specified in subparts B, C, D and E.

§ 434.61 Commingling of waste streams.

Where waste streams from any facility covered by this part are combined for treatment or discharge with waste streams from another facility covered by this part, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component waste stream of the discharge.

§ 434.62 Alternate effluent limitation for pH.

Where the application of neutralization and sedimentation treatment technology results in inability to comply with the otherwise applicable manganese limitations, the permit issuer may allow the pH level in the final effluent to exceed 9.0 to a small extent in order that the manganese limitations can be achieved.

§ 434.63 Effluent limitations for precipitation events.

(a)(1) The alternate limitations specified in paragraph (a)(2) of this section apply with respect to:

(i) All discharges of alkaline mine drainage except discharges from underground workings of underground mines that are not commingled with other discharges eligible for these alternate limitations;

(ii) All discharges from steep slope areas, (as defined in section 515(d)(4) of the Surface Mining Control and Reclamation Act of 1977, as amended (SMCRA)), and from mountaintop removal operations (conducted pursuant to section 515(c) of SMCRA);

(iii) Discharges from coal preparation plants and preparation plant associated areas (excluding acid or ferruginous mine drainage from coal refuse disposal piles).

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION

Pollutant or pollutant property	Effluent limitations
Settleable solids	0.5 ml/1 maximum not to be exceeded.
pH	6.0–9.0 at all times.

(b) The following alternate limitations apply with respect to acid or ferruginous drainage from coal refuse disposal piles:

Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 1-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION

Pollutant or pollutant property	Effluent limitations
Settleable solids	0.5 ml/1 maximum not to be exceeded.
pH	6.0–9.0 at all times.

(c) The following alternate limitations apply with respect to acid or ferruginous mine drainage, except for discharges addressed in paragraphs (a) (mountaintop removal and steep slope areas), (d) (controlled surface mine discharges) and (f) (discharges from underground workings of underground mines) of this section:

(1) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period less than or equal to the 2-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION

Pollutant or pollutant property	Effluent limitations
Iron, total	7.0 mg/l maximum for any 1 day.
Settleable solids	0.5 ml/l maximum not to be exceeded.
pH	6.0–9.0 at all times.

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 2-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION

Pollutant or pollutant property	Effluent limitations
Settleable solids	0.5 ml/l maximum not to be exceeded.
pH	6.0–9.0 at all times.

(d)(1) The alternate limitations specified in paragraph (d)(2) of this section apply with respect to all discharges described in paragraphs (a), (b) and (c) of this section *and* to:

(i) Discharges of acid or ferruginous mine drainage from underground workings of underground mines which are commingled with other discharges eligible for these alternate limitations; and

(ii) Controlled acid or ferruginous surface mine discharges; and

(iii) Discharges from reclamation areas.

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION

Pollutant or pollutant property	Effluent limitations
pH	6.0–9.0 at all times.

(e) The operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event described in paragraphs (a), (b), (c), and (d) of this section.

(f) Discharges of mine drainage from underground workings of underground mines which are not commingled with discharges eligible for alternate limitations set forth in this section shall in no event be eligible for the alternate limitations set forth in this section.

§ 434.64 Procedure and method detection limit for measurement of settleable solids.

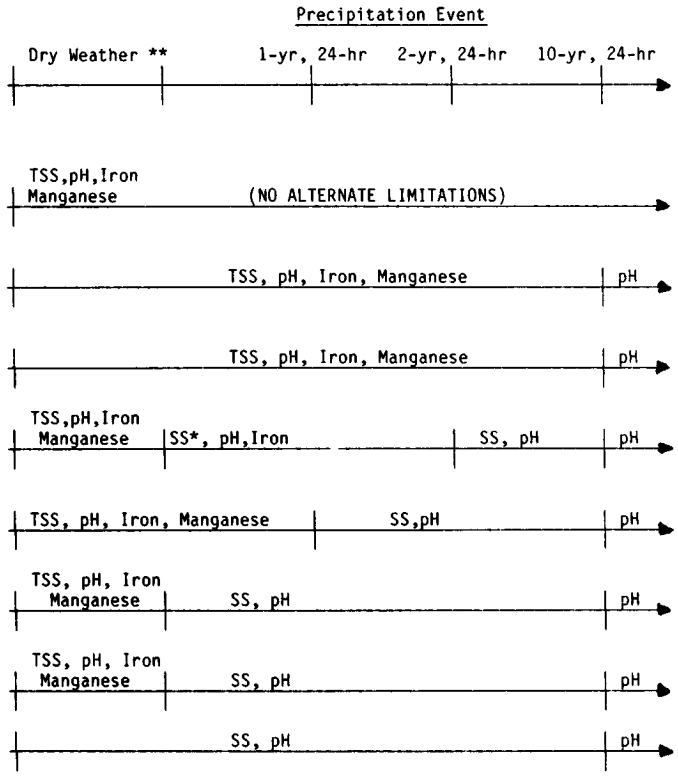
For the purposes of this part, the following procedure shall be used to determine settleable solids: Fill an

Imhoff cone to the one-liter mark with a thoroughly mixed sample. Allow to settle undisturbed for 45 minutes. Gently stir along the inside surface of the cone with a stirring rod. Allow to settle undisturbed for 15 minutes longer. Record the volume of settled material in the cone as milliliters per liter. Where a separation of settleable and floating materials occurs, do not include the floating material in the reading. Notwithstanding any provision of 40 CFR part 136, the method detection limit for measuring settleable solids under this part shall be 0.4 ml/l.

§ 434.65 Modification of NPDES permits for new sources.

Any coal mine or coal preparation plant which was considered a new source under previous EPA regulations may, notwithstanding § 122.62 of this chapter, apply to have its NPDES permit modified to incorporate the revised new source performance standards.

APPENDIX A
ALTERNATE STORM LIMITATIONS
FOR ACID OR FERRUGINOUS MINE DRAINAGE



* SS = Settleable Solids
** Discharge caused by precipitation
\+ These categories do not differ from the Oct. 13, 1982 regulation.

PART 435—OIL AND GAS EXTRACTION POINT SOURCE CATEGORY

Subpart A—Offshore Subcategory

Sec.
435.10 Applicability; description of the offshore subcategory.
435.11 Specialized definitions.
435.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
435.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
435.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
435.15 Standards of performance for new sources (NSPS).
APPENDIX 1 TO SUBPART A OF PART 435—STATIC SHEEN TEST
APPENDIX 2 TO SUBPART A OF PART 435—DRILLING FLUIDS TOXICITY TEST

Subpart B [Reserved]

Subpart C—Onshore Subcategory

435.30 Applicability; description of the onshore subcategory.
435.31 Specialized definitions.
435.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best praticable control technology currently available.

Subpart D—Coastal Subcategory

435.40 Applicability; description of the coastal subcategory.
435.41 Specialized definitions.
435.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
435.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
435.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
435.45 Standards of performance for new sources (NSPS).
435.46 Pretreatment standards of performance for existing sources (PSES).
435.47 Pretreatment standards of performance for new sources (PSNS).

Subpart E—Agricultural and Wildlife Water Use Subcategory

435.50 Applicability; description of the beneficial use subcategory.
435.51 Specialized definitions.
435.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart F—Stripper Subcategory

435.60 Applicability; description of the stripper subcategory.
435.61 Specialized definitions.

Subpart G—General Provisions

435.70 Applicability.

AUTHORITY: 33 U.S.C. 1311, 1314, 1316, 1317, 1318 and 1361.

SOURCE: 44 FR 22075, Apr. 13, 1979, unless otherwise noted.

Subpart A—Offshore Subcategory

SOURCE: 58 FR 12504, Mar. 4, 1993, unless otherwise noted.

§ 435.10 Applicability; description of the offshore subcategory.

The provisions of this subpart are applicable to those facilities engaged in field exploration, drilling, well production, and well treatment in the oil and gas industry which are located in waters that are seaward of the inner boundary of the territorial seas (''offshore'') as defined in section 502(g) of the Clean Water Act.

[61 FR 66123, Dec. 16, 1996]

§ 435.11 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 *average of daily values for 30 consecutive days* shall be the average of the daily values obtained during any 30 consecutive day period.

(c) The term *daily values* as applied to produced water effluent limitations

and NSPS shall refer to the daily measurements used to assess compliance with the maximum for any one day.

(d) The term *deck drainage* shall refer to any waste resulting from deck washings, spillage, rainwater, and runoff from gutters and drains including drip pans and work areas within facilities subject to this subpart. Within the definition of deck drainage for the purpose of this subpart, the term rainwater for those facilities located on land is limited to that precipitation runoff that reasonably has the potential to come into contact with process wastewater. Runoff not included in the deck drainage definition would be subject to control as storm water under 40 CFR 122.26. For structures located over water, all runoff is included in the deck drainage definition.

(e) The term *development facility* shall mean any fixed or mobile structure subject to this subpart that is engaged in the drilling of productive wells.

(f) The term *diesel oil* shall refer to the grade of distillate fuel oil, as specified in the American Society for Testing and Materials Standard Specification for Diesel Fuel Oils D975–91, that is typically used as the continuous phase in conventional oil-based drilling fluids. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket; Room M2616, 401 M Street SW., Washington, DC 20460.

(g) The term *domestic waste* shall refer to materials discharged from sinks, showers, laundries, safety showers, eye-wash stations, hand-wash stations, fish cleaning stations, and galleys located within facilities subject to this subpart.

(h) The term *drill cuttings* shall refer to the particles generated by drilling into subsurface geologic formations and carried to the surface with the drilling fluid.

(i) The term *drilling fluid* refers to the circulating fluid (mud) used in the rotary drilling of wells to clean and condition the hole and to counterbalance formation pressure. The four classes of drilling fluids are:

(1) A water-based drilling fluid has water as the continuous phase and the suspending medium for solids, whether or not oil is present.

(2) An oil-based drilling fluid has diesel oil, mineral oil, or some other oil, but neither a synthetic material nor enhanced mineral oil, as its continuous phase with water as the dispersed phase.

(3) An enhanced mineral oil-based drilling fluid has an enhanced mineral oil as its continuous phase with water as the dispersed phase.

(4) A synthetic-based drilling fluid has a synthetic material as its continuous phase with water as the dispersed phase.

(j) The term *enhanced mineral oil* as applied to enhanced mineral oil-based drilling fluid means a petroleum distillate which has been highly purified and is distinguished from diesel oil and conventional mineral oil in having a lower polycyclic aromatic hydrocarbon (PAH) content. Typically, conventional mineral oils have a PAH content on the order of 0.35 weight percent expressed as phenanthrene, whereas enhanced mineral oils typically have a PAH content of 0.001 or lower weight percent PAH expressed as phenanthrene.

(k) The term *exploratory facility* shall mean any fixed or mobile structure subject to this subpart that is engaged in the drilling of wells to determine the nature of potential hydrocarbon reservoirs.

(l) The term *maximum* as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings shall mean the maximum concentration allowed as measured in any single sample of the barite.

(m) The term *maximum for any one day* as applied to BPT, BCT and BAT effluent limitations and NSPS for oil and grease in produced water shall mean the maximum concentration allowed as measured by the average of four grab samples collected over a 24-hour period that are analyzed separately. Alternatively, for BAT and

NSPS the maximum concentration allowed may be determined on the basis of physical composition of the four grab samples prior to a single analysis.

(n) The term *minimum* as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings shall mean the minimum 96-hour LC50 value allowed as measured in any single sample of the discharged waste stream. The term minimum as applied to BPT and BCT effluent limitations and NSPS for sanitary wastes shall mean the minimum concentration value allowed as measured in any single sample of the discharged waste stream.

(o) The term *M9IM* shall mean those offshore facilities continuously manned by nine (9) or fewer persons or only intermittently manned by any number of persons.

(p) The term *M10* shall mean those offshore facilities continuously manned by ten (10) or more persons.

(q) The term *new source* means any facility or activity of this subcategory that meets the definition of ''new source'' under 40 CFR 122.2 and meets the criteria for determination of new sources under 40 CFR 122.29(b) applied consistently with all of the following definitions:

(1) The term *water area* as used in the term ''site'' in 40 CFR 122.29 and 122.2 shall mean the water area and ocean floor beneath any exploratory, development, or production facility where such facility is conducting its exploratory, development or production activities.

(2) The term *significant site preparation work* as used in 40 CFR 122.29 shall mean the process of surveying, clearing or preparing an area of the ocean floor for the purpose of constructing or placing a development or production facility on or over the site. ''New Source'' does *not* include facilities covered by an existing NPDES permit immediately prior to the effective date of these guidelines pending EPA issuance of a new source NPDES permit.

(r) The term *no discharge of free oil* shall mean that waste streams may not be discharged when they would cause a film or sheen upon or a discoloration of the surface of the receiving water or fail the static sheen test defined in Appendix 1 to 40 CFR part 435, subpart A.

(s) The term *produced sand* shall refer to slurried particles used in hydraulic fracturing, the accumulated formation sands and scales particles generated during production.

Produced sand also includes desander discharge from the produced water waste stream, and blowdown of the water phase from the produced water treating system.

(t) The term *produced water* shall refer to the water (brine) brought up from the hydrocarbon-bearing strata during the extraction of oil and gas, and can include formation water, injection water, and any chemicals added downhole or during the oil/water separation process.

(u) The term *production facility* shall mean any fixed or mobile structure subject to this subpart that is either engaged in well completion or used for active recovery of hydrocarbons from producing formations.

(v) The term *sanitary waste* shall refer to human body waste discharged from toilets and urinals located within facilities subject to this subpart.

(w) The term *static sheen test* shall refer to the standard test procedure that has been developed for this industrial subcategory for the purpose of demonstrating compliance with the requirement of no discharge of free oil. The methodology for performing the static sheen test is presented in appendix 1 to 40 CFR part 435, subpart A.

(x) The term *synthetic material* as applied to synthetic-based drilling fluid means material produced by the reaction of specific purified chemical feedstock, as opposed to the traditional base fluids such as diesel and mineral oil which are derived from crude oil solely through physical separation processes. Physical separation processes include fractionation and distillation and/or minor chemical reactions such as cracking and hydro processing. Since they are synthesized by the reaction of purified compounds, synthetic materials suitable for use in drilling fluids are typically free of polycyclic aromatic hydrocarbons (PAH's) but are sometimes found to contain levels of PAH up to 0.001 weight percent PAH expressed as phenanthrene. Poly(alpha olefins) and vegetable esters are two examples of synthetic materials used

by the oil and gas extraction industry in formulating drilling fluids. Poly(alpha olefins) are synthesized from the polymerization (dimerization, trimerization, tetramerization, and higher oligomerization) of purified straight-chain hydrocarbons such as C_6–C_{14} alpha olefins. Vegetable esters are synthesized from the acid-catalyzed esterification of vegetable fatty acids with various alcohols. The mention of these two branches of synthetic fluid base materials is to provide examples, and is not meant to exclude other synthetic materials that are either in current use or may be used in the future. A synthetic-based drilling fluid may include a combination of synthetic materials.

(y) The term *toxicity* as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings shall refer to the bioassay test procedure presented in Appendix 2 of 40 CFR part 435, subpart A.

(z) The term *well completion fluids* shall refer to salt solutions, weighted brines, polymers, and various additives used to prevent damage to the well bore during operations which prepare the drilled well for hydrocarbon production.

(aa) The term *well treatment fluids* shall refer to any fluid used to restore or improve productivity by chemically or physically altering hydrocarbon-bearing strata after a well has been drilled.

(bb) The term *workover fluids* shall refer to salt solutions, weighted brines, polymers, or other specialty additives used in a producing well to allow for maintenance, repair or abandonment procedures.

(cc) The term *96-hour LC50* shall refer to the concentration (parts per million) or percent of the suspended particulate phase (SPP) from a sample that is lethal to 50 percent of the test organisms exposed to that concentration of the SPP after 96 hours of constant exposure.

[61 FR 66124, Dec. 16, 1996]

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

Except as provided in 40 CFR 125.30–32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

BPT EFFLUENT LIMITATIONS—OIL AND GREASE

[In milligrams per liter]

Pollutant parameter waste source	Maximum for any 1 day	Average of values for 30 consecutive days shall not exceed	Residual chlorine minimum for any 1 day
Produced water	72	48	NA
Deck drainage	(1)	(1)	NA
Drilling muds	(1)	(1)	NA
Drill cuttings	(1)	(1)	NA
Well treatment fluids	(1)	(1)	NA
Sanitary:			
M10	NA	NA	2 1
M9IM 3	NA	NA	NA
Domestic	NA	NA	NA

1 No discharge of free oil.
2 Minimum of 1 mg/l and maintained as close to this concentration as possible.
3 There shall be no floating solids as a result of the discharge of these wastes.

§ 435.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30–32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

BAT EFFLUENT LIMITATIONS

Waste source	Pollutant parameter	BAT effluent limitation
Produced water	Oil & grease	The maximum for any one day shall not exceed 42 mg/l; the average of daily values for 30 consecutive days shall not exceed 29 mg/l.
Drilling fluids and drill cuttings:		
(A) For facilities located within 3 miles from shore.	.....	No discharge.[1]
(B) For facilities located beyond 3 miles from shore.	Toxicity	Minimum 96-hour LC50 of the SPP shall be 3% by volume.[2]
	Free oil	No discharge.[3]
	Diesel oil	No discharge.
	Mercury	1 mg/kg dry weight maximum in the stock barite.
	Cadmium	3 mg/kg dry weight maximum in the stock barite.
Well treatment, completion, and workover fluids.	Oil and grease.	The maximum for any one day shall not exceed 42 mg/l; the average of daily values for 30 consecutive days shall not exceed 29 mg/l.
Deck drainage	Free oil	No discharge.[4]
Produced sand	.....	No discharge.
Domestic Waste	Foam	No discharge.

[1] All Alaskan facilities are subject to the drilling fluids and drill cuttings discharge limitations for facilities located beyond 3 miles offshore.
[2] As determined by the toxicity test (appendix 2).
[3] As determined by the static sheen test (appendix 1).
[4] As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).

§ 435.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30–32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT):

BCT Effluent Limitations

Waste source	Pollutant parameter	BCT effluent limitation
Produced water	Oil & grease	The maximum for any one day shall not exceed 72 mg/l; the average of values for 30 consecutive days shall not exceed 48 mg/l.
Drilling fluids and drill cuttings:		
(A) For facilities located within 3 miles from shore.	.....	No discharge.[1]
(B) For facilities located beyond 3 miles from shore.	Free oil	No discharge.[2]
Well treatment, completion and workover fluids.	Free oil	No discharge.[2]
Deck drainage	Free oil	No discharge.[3]
Produced sand	.....	No discharge.
Sanitary M10	Residual chlorine.	Minimum of 1 mg/l and maintained as close to this concentration as possible.
Sanitary M91M	Floating solids.	No discharge.
Domestic Waste	Floating solids.	No discharge.
	All other domestic waste.	See 33 CFR part 151.

[1] All Alaskan facilities are subject to the drilling fluids and drill cuttings discharge limitations for facilities located more than 3 miles offshore.
[2] As determined by the static sheen test (appendix 1).
[3] As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).

§ 435.15 Standards of performance for new sources (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

NEW SOURCE PERFORMANCE STANDARDS

Waste source	Pollutant parameter	NSPS
Produced water	Oil and grease.	The maximum for any one day shall not exceed 42 mg/l; the average of daily values for 30 consecutive days shall not exceed 29 mg/l.
Drilling fluids and drill cuttings:		
(A) For facilities located within 3 miles from shore.	.....	No discharge.[1]
(B) For facilities located more than 3 miles from shore.	Toxicity	Minimum 96-hour LC50 of the SPP shall be 3 percent by volume.[2]

NEW SOURCE PERFORMANCE STANDARDS—Continued

Waste source	Pollutant parameter	NSPS
	Free oil	No discharge.[3]
	Diesel oil	No discharge.
	Mercury	1 mg/kg dry weight maximum in the stock barite.
	Cadmium	3 mg/kg dry weight maximum in the stock barite.
Well treatment, completion, and workover fluids.	Oil and grease.	The maximum for any one day shall not exceed 42 mg/l; the average of daily values for 30 consecutive days shall not exceed 29 mg/l.
Deck drainage	Free oil	No discharge.[4]
Produced sand		No discharge.
Sanitary M10	Residual chlorine.	Minimum of 1 mg/l and maintained as close to this as possible.
Sanitary M9IM	Floating solids.	No discharge.
Domestic Waste	Floating solids.	No discharge.
	Foam	No discharge.
	All other domestic wastes.	See 33 CFR part 151.

[1] All Alaskan facilities are subject to the drilling fluids and drill cuttings discharge standards for facilities located more than three miles offshore.
[2] As determined by the toxicity test (appendix 2).
[3] As determined by the static sheen test (appendix 1).
[4] As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).

APPENDIX 1 TO SUBPART A OF PART 435—STATIC SHEEN TEST

1. Scope and Application

This method is to be used as a compliance test for the ''no discharge of free oil'' requirement for discharges of drilling fluids, drill cuttings, produced sand, and well treatment, completion and workover fluids. ''Free oil'' refers to any oil contained in a waste stream that when discharged will cause a film or sheen upon or a discoloration of the surface of the receiving water.

2. Summary of Method

15-mL samples of drilling fluids or well treatment, completion, and workover fluids, and 15-g samples (wet weight basis) of drill cuttings or produced sand are introduced into ambient seawater in a container having an air-to-liquid interface area of 1000 cm^2 (155.5 in^2). Samples are dispersed within the container and observations made no more than one hour later to ascertain if these materials cause a sheen, iridescence, gloss, or increased reflectance on the surface of the test seawater. The occurrence of any of these visual observations will constitute a demonstration that the tested material contains ''free oil,'' and therefore results in a prohibition of its discharge into receiving waters.

3. Interferences

Residual ''free oil'' adhering to sampling containers, the magnetic stirring bar used to mix the sample, and the stainless steel spatula used to mix the sample will be the principal sources of contamination problems. These problems should only occur if improperly washed and cleaned equipment are used for the test. The use of disposable equipment minimizes the potential for similar contamination from pipettes and the test container.

4. Apparatus, Materials, and Reagents

4.1 Apparatus

4.1.1 Sampling Containers: 1-liter polyethylene beakers and 1-liter glass beakers.

4.1.2 Graduated cylinder: 100-mL graduated cylinder required only for operations where predilution of mud discharges is required.

4.1.3 Plastic disposable weighing boats.

4.1.4 Triple-beam scale.

4.1.5 Disposable pipettes: 25-mL disposable pipettes.

4.1.6 Magnetic stirrer and stirring bar.

4.1.7 Stainless steel spatula.

4.1.8 Test container: Open plastic container whose internal cross-section parallel to its opening has an area of 1000 $cm^2 \pm 50$ cm^2 (155.5 ± 7.75 in^2), and a depth of at least 13 cm (5 inches) and no more than 30 cm (11.8 inches).

4.2 Materials and Reagents.

4.2.1 Plastic liners for the test container: Oil-free, heavy-duty plastic trash can liners that do not inhibit the spreading of an oil film. Liners must be of sufficient size to completely cover the interior surface of the test container. Permittees must determine an appropriate local source of liners that do not inhibit the spreading of 0.05 mL of diesel fuel added to the lined test container under the test conditions and protocol described below.

4.2.2 Ambient receiving water.

5. Calibration

None currently specified.

6. Quality Control Procedures

None currently specified.

7. Sample Collection and Handling

7.1 Sampling containers must be thoroughly washed with detergent, rinsed a minimum of three times with fresh water, and allowed to air dry before samples are collected.

7.2 Samples of drilling fluid to be tested shall be taken at the shale shaker after

cuttings have been removed. The sample volume should range between 200 mL and 500 mL.

7.3 Samples of drill cuttings will be taken from the shale shaker screens with a clean spatula or similar instrument and placed in a glass beaker. Cuttings samples shall be collected prior to the addition of any washdown water and should range between 200 g and 500 g.

7.4 Samples of produced sand must be obtained from the solids control equipment from which the discharge occurs on any given day and shall be collected prior to the addition of any washdown water; samples should range between 200 g and 500 g.

7.5 Samples of well treatment, completion, and workover fluids must be obtained from the holding facility prior to discharge; the sample volume should range between 200 mL and 500 mL.

7.6 Samples must be tested no later than 1 hour after collection.

7.7 Drilling fluid samples must be mixed in their sampling containers for 5 minutes prior to the test using a magnetic bar stirrer. If predilution is imposed as a permit condition, the sample must be mixed at the same ratio with the same prediluting water as the discharged muds and stirred for 5 minutes.

7.8 Drill cuttings must be stirred and well mixed by hand in their sampling containers prior to testing, using a stainless steel spatula.

8. Procedure

8.1 Ambient receiving water must be used as the ''receiving water'' in the test. The temperature of the test water shall be as close as practicable to the ambient conditions in the receiving water, not the room temperature of the observation facility. The test container must have an air-to-liquid interface area of 1000 ±50 cm^2. The surface of the water should be no more than 1.27 cm (.5 inch) below the top of the test container.

8.2 Plastic liners shall be used, one per test container, and discarded afterwards. Some liners may inhibit spreading of added oil; operators shall determine an appropriate local source of liners that do not inhibit the spreading of the oil film.

8.3 A 15-mL sample of drilling fluid or well treatment, completion, and workover fluids must be introduced by pipette into the test container 1 cm below the water surface. Pipettes must be filled and discharged with test material prior to the transfer of test material and its introduction into test containers. The test water/test material mixture must be stirred using the pipette to distribute the test material homogeneously throughout the test water. The pipette must be used only once for a test and then discarded.

8.4 Drill cuttings or produced sand should be weighed on plastic weighing boats; 15-g samples must be transferred by scraping test material into the test water with a stainless steel spatula. Drill cuttings shall not be prediluted prior to testing. Also, drilling fluids and cuttings will be tested separately. The weighing boat must be immersed in the test water and scraped with the spatula to transfer any residual material to the test container. The drill cuttings or produced sand must be stirred with the spatula to an even distribution of solids on the bottom of the test container.

8.5 Observations must be made no later than 1 hour after the test material is transferred to the test container. Viewing points above the test container should be made from at least three sides of the test container, at viewing angles of approximately 60° and 30° from the horizontal. Illumination of the test container must be representative of adequate lighting for a working environment to conduct routine laboratory procedures. It is recommended that the water surface of the test container be observed under a fluorescent light source such as a dissecting microscope light. The light source shall be positioned above and directed over the entire surface of the pan.

8.6 Detection of a ''silvery'' or ''metallic'' sheen or gloss, increased reflectivity, visual color, iridescence, or an oil slick on the water surface of the test container surface shall constitute a demonstration of ''free oil.'' These visual observations include patches, streaks, or sheets of such altered surface characteristics. If the free oil content of the sample approaches or exceeds 10%, the water surface of the test container may lack color, a sheen, or iridescence, due to the increased thickness of the film; thus, the observation for an oil slick is required. The surface of the test container shall not be disturbed in any manner that reduces the size of any sheen or slick that may be present.

If an oil sheen or slick occurs on less than one-half of the surface area after the sample is introduced to the test container, observations will continue for up to 1 hour. If the sheen or slick increases in size and covers greater than one-half of the surface area of the test container during the observation period, the discharge of the material shall cease. If the sheen or slick does not increase in size to cover greater than one-half of the test container surface area after one hour of observation, discharge may continue and additional sampling is not required.

If a sheen or slick occurs on greater than one-half of the surface area of the test container after the test material is introduced, discharge of the tested material shall cease. The permittee may retest the material causing the sheen or slick. If subsequent tests do

not result in a sheen or slick covering greater than one-half of the surface area of the test container, discharge may continue.

APPENDIX 2 TO SUBPART A OF PART 435—DRILLING FLUIDS TOXICITY TEST

I. Sample Collection

The collection and preservation methods for drilling fluids (muds) and water samples presented here are designed to minimize sample contamination and alteration of the physical or chemical properties of the samples due to freezing, air oxidation, or drying.

I–A Apparatus

(1) The following items are required for water and drilling mud sampling and storage:

a. Acid-rinsed linear-polyethylene bottles or other appropriate noncontaminating drilling mud sampler.

b. Acid-rinsed linear-polyethylene bottles or other appropriate noncontaminating water sampler.

c. Acid-rinsed linear-polyethylene bottles or other appropriate noncontaminated vessels for water and mud samples.

d. Ice chests for preservation and shipping of mud and water samples.

I–B. Water Sampling

(1) Collection of water samples shall be made with appropriate acid-rinsed linear-polyethylene bottles or other appropriate non-contaminating water sampling devices. Special care shall be taken to avoid the introduction of contaminants from the sampling devices and containers. Prior to use, the sampling devices and containers should be thoroughly cleaned with a detergent solution, rinsed with tap water, soaked in 10 percent hydrochloric acid (HCl) for 4 hours, and then thoroughly rinsed with glass-distilled water.

I–C. Drilling Mud Sampling

(1) Drilling mud formulations to be tested shall be collected from active field systems. Obtain a well-mixed sample from beneath the shale shaker after the mud has passed through the screens. Samples shall be stored in polyethylene containers or in other appropriate uncontaminated vessels. Prior to sealing the sample containers on the platform, flush as much air out of the container by filling it with drilling fluid sample, leaving a one inch space at the top.

(2) Mud samples shall be immediately shipped to the testing facility on blue or wet ice (do not use dry ice) and continuously maintained at 0–4° C until the time of testing.

(3) Bulk mud samples shall be thoroughly mixed in the laboratory using a 1000 rpm high shear mixer and then subdivided into individual, small wide-mouthed (e.g., one or two liter) non-contaminating containers for storage.

(4) The drilling muds stored in the laboratory shall have any excess air removed by flushing the storage containers with nitrogen under pressure anytime the containers are opened. Moreover, the sample in any container opened for testing must be thoroughly stirred using a 1000 rpm high shear mixer prior to use.

(5) Most drilling mud samples may be stored for periods of time longer than 2 weeks prior to toxicity testing provided that proper containers are used and proper condition are maintained.

II. Suspended Particulate Phase Sample Preparation

(1) Mud samples that have been stored under specified conditions in this protocol shall be prepared for tests within three months after collection. The SPP shall be prepared as detailed below.

II–-A Apparatus

(1) The following items are required:

a. Magnetic stir plates and bars.

b. Several graduated cylinders, ranging in volume from 10 mL to 1 L

c. Large (15 cm) powder funnels.

d. Several 2-liter graduated cylinders.

e. Several 2-liter large mouth graduated Erlenmeyer flasks.

(2) Prior to use, all glassware shall be thoroughly cleaned. Wash all glassware with detergent, rinse five times with tap water, rinse once with acetone, rinse several times with distilled or deionized water, place in a clean 10-percent (or stronger) HCl acid bath for a minimum of 4 hours, rinse five times with tap water, and then rinse five times with distilled or deionized water. For test samples containing mineral oil or diesel oil, glassware should be washed with petroleum ether to assure removal of all residual oil.

NOTE: If the glassware with nytex cups soaks in the acid solution longer than 24 hours, then an equally long deionized water soak should be performed.

II–B Test Seawater Sample Preparation

(1) Diluent seawater and exposure seawater samples are prepared by filtration through a 1.0 micrometer filter prior to analysis.

(2) Artificial seawater may be used as long as the seawater has been prepared by standard methods or ASTM methods, has been properly ''seasoned,'' filtered, and has been diluted with distilled water to the same specified 20±2 ppt salinity and 20±2° C temperature as the ''natural'' seawater.

II–C Sample Preparation

(1) The pH of the mud shall be tested prior to its use. If the pH is less than 9, if black

spots have appeared on the walls of the sample container, or if the mud sample has a foul odor, that sample shall be discarded. Subsample a manageable aliquot of mud from the well-mixed original sample. Mix the mud and filtered test seawater in a volumetric mud-to-water ratio of 1 to 9. This is best done by the method of volumetric displacement in a 2–L, large mouth, graduated Erlenmeyer flask. Place 1000 mL of seawater into the graduated Erlenmeyer flask. The mud subsample is then carefully added via a powder funnel to obtain a total volume of 1200 mL. (A 200 mL volume of the mud will now be in the flask).

The 2–L, large mouth, graduated Erlenmeyer flask is then filled to the 2000 mL mark with 800 mL of seawater, which produces a slurry with a final ratio of one volume drilling mud to nine volumes water. If the volume of SPP required for testing or analysis exceeds 1500 to 1600 mL, the initial volumes should be proportionately increased. Alternatively, several 2–L drill mud/water slurries may be prepared as outlined above and combined to provide sufficient SPP.

(2) Mix this mud/water slurry with magnetic stirrers for 5 minutes. Measure the pH and, if necessary, adjust (decrease) the pH of the slurry to within 0.2 units of the seawater by adding 6N HCl while stirring the slurry. Then, allow the slurry to settle for 1 hour. Record the amount of HCl added.

(3) At the end of the settling period, carefully decant (do not siphon) the Suspended Particulate Phase (SPP) into an appropriate container. Decanting the SPP is one continuous action. In some cases no clear interface will be present; that is, there will be no solid phase that has settled to the bottom. For those samples the entire SPP solution should be used when preparing test concentrations. However, in those cases when no clear interface is present, the sample must be remixed for five minutes. This insures the homogeneity of the mixture prior to the preparation of the test concentrations. In other cases, there will be samples with two or more phases, including a solid phase. For those samples, carefully and continuously decant the supernatant until the solid phase on the bottom of the flask is reached. The decanted solution is defined to be 100 percent SPP. Any other concentration of SPP refers to a percentage of SPP that is obtained by volumetrically mixing 100 percent SPP with seawater.

(4) SPP samples to be used in toxicity tests shall be mixed for 5 minutes and must not be preserved or stored.

(5) Measure the filterable and unfilterable residue of each SPP prepared for testing. Measure the dissolved oxygen (DO) and pH of the SPP. If the DO is less than 4.9 ppm, aerate the SPP to at least 4.9 ppm which is 65 percent of saturation. Maximum allowable aeration time is 5 minutes using a generic commercial air pump and air stone. Neutralize the pH of the SPP to a pH 7.8±.1 using a dilute HCl solution. If too much acid is added to lower the pH saturated NaOH may be used to raise the pH to 7.8±.1 units. Record the amount of acid or NaOH needed to lower/raise to the appropriate pH. Three repeated DO and pH measurements are needed to insure homogeneity and stability of the SPP. Preparation of test concentrations may begin after this step is complete.

(6) Add the appropriate volume of 100 percent SPP to the appropriate volume of seawater to obtain the desired SPP concentration. The control is seawater only. Mix all concentrations and the control for 5 minutes by using magnetic stirrers. Record the time; and, measure DO and pH for Day 0. Then, the animals shall be randomly selected and placed in the dishes in order to begin the 96-hour toxicity test.

III. Guidance for Performing Suspended Particulate Phase Toxicity Tests Using Mysidopsis bahia

III–A Apparatus

(1) Items listed by Borthwick [1] are required for each test series, which consists of one set of control and test containers, with three replicates of each.

III–B Sample Collection Preservation

(1) Drilling muds and water samples are collected and stored, and the suspended particulate phase prepared as described in section 1–C.

III–C Species Selection

(1) The Suspended Particulate Phase (SPP) tests on drilling muds shall utilize the test species *Mysidopsis bahia.* Test animals shall be 3 to 6 days old on the first day of exposure. Whatever the source of the animals, collection and handling should be as gentle as possible. Transportation to the laboratory should be in well-aerated water from the animal culture site at the temperature and salinity from which they were cultured. Methods for handling, acclimating, and sizing bioassay organisms given by Borthwick [1] and Nimmo [2] shall be followed in matters for which no guidance is given here.

III–D Experimental Conditions

(1) Suspended particulate phase (SPP) tests should be conducted at a salinity of 20±2 ppt. Experimental temperature should be 20±2°C. Dissolved oxygen in the SPP shall be raised to or maintained above 65 percent of saturation prior to preparation of the test concentrations. Under these conditions of temperature and salinity, 65 percent saturation is a DO of 5.3 ppm. Beginning at Day 0-before the animals are placed in the test containers

DO, temperature, salinity, and pH shall be measured every 24 hours. DO should be reported in milligrams per liter.

(2) Aeration of test media is required during the entire test with a rate estimated to be 50–140 cubic centimeters/minute. This air flow to each test dish may be achieved through polyethylene tubing (0.045-inch inner diameter and 0.062-inch outer diameter) by a small generic aquarium pump. The delivery method, surface area of the aeration stone, and flow characteristics shall be documented. All treatments, including control, shall be the same.

(3) Light intensity shall be 1200 microwatts/cm^2 using cool white fluorescent bulbs with a 14-hr light and 10-hr dark cycle. This light/dark cycle shall also be maintained during the acclimation period and the test.

III–E Experimental Procedure

(1) Wash all glassware with detergent, rinse five times with tap water, rinse once with acetone, rinse several times with distilled or deionized water, place in a clean 10 percent HCl acid bath for a minimum of 4 hours, rinse five times with tap water, and then rinse five times with distilled water.

(2) Establish the definitive test concentration based on results of a range finding test. A minimum of five test concentrations plus a negative and positive (reference toxicant) control is required for the definitive test. To estimate the LC–50, two concentrations shall be chosen that give (other than zero and 100 percent) mortality above and below 50 percent.

(3) Twenty organisms are exposed in each test dish. Nytex® cups shall be inserted into every test dish prior to adding the animals. These ''nylon mesh screen'' nytex holding cups are fabricated by gluing a collar of 363-micrometer mesh nylon screen to a 15-centimeter wide Petri dish with silicone sealant. The nylon screen collar is approximately 5 centimeters high. The animals are then placed into the test concentration within the confines of the Nytex cups.

(4) Individual organisms shall be randomly assigned to treatment. A randomization procedure is presented in section V of this protocol. Make every attempt to expose animals of approximately equal size. The technique described by Borthwick [1], or other suitable substitutes, should be used for transferring specimens. Throughout the test period, mysids shall be fed daily with approximately 50 *Artemia* (brine shrimp) nauplii per mysid. This will reduce stress and decrease cannibalism.

(5) Cover the dishes, aerate, and incubate the test containers in an appropriate test chamber. Positioning of the test containers holding various concentrations of test solution should be randomized if incubator arrangement indicates potential position difference. The test medium is not replaced during the 96-hour test.

(6) Observations may be attempted at 4, 6 and 8 hours; they must be attempted at 0, 24, 48, and 72 hours and must be made at 96 hours. Attempts at observations refers to placing a test dish on a light table and visually counting the animals. Do not lift the ''nylon mesh screen'' cup out of the test dish to make the observation. No unnecessary handling of the animals should occur during the 96 hour test period. DO and pH measurements must also be made at 0, 24, 48, 72, and 96 hours. Take and replace the test medium necessary for the DO and pH measurements outside of the nytex cups to minimize stresses on the animals.

(7) At the end of 96 hours, all live animals must be counted. Death is the end point, so the number of living organisms is recorded. Death is determined by lack of spontaneous movement. All crustaceans molt at regular intervals, shedding a complete exoskeleton. Care should be taken not to count an exoskeleton. Dead animals might decompose or be eaten between observations. Therefore, always count living, not dead animals. If daily observations are made, remove dead organisms and molted exoskeletons with a pipette or forceps. Care must be taken not to disturb living organisms and to minimize the amount of liquid withdrawn.

IV. Methods for Positive Control Tests (Reference Toxicant)

(1) Sodium lauryl sulfate (dodecyl sodium sulfate) is used as a reference toxicant for the positive control. The chemical used should be approximately 95 percent pure. The source, lot number, and percent purity shall be reported.

(2) Test methods are those used for the drilling fluid tests, except that the test material was prepared by weighing one gram sodium lauryl sulfate on an analytical balance, adding the chemical to a 100-milliliter volumetric flask, and bringing the flask to volume with deionized water. After mixing this stock solution, the test mixtures are prepared by adding 0.1 milliliter of the stock solution for each part per million desired to one liter of seawater.

(3) The mixtures are stirred briefly, water quality is measured, animals are added to holding cups, and the test begins. Incubation and monitoring procedures are the same as those for the drilling fluids.

V. Randomization Procedure

V–A Purpose and Procedure

(1) The purpose of this procedure is to assure that mysids are impartially selected and randomly assigned to six test treatments (five drilling fluid or reference toxicant concentrations and a control) and impartially counted at the end of the 96-hour

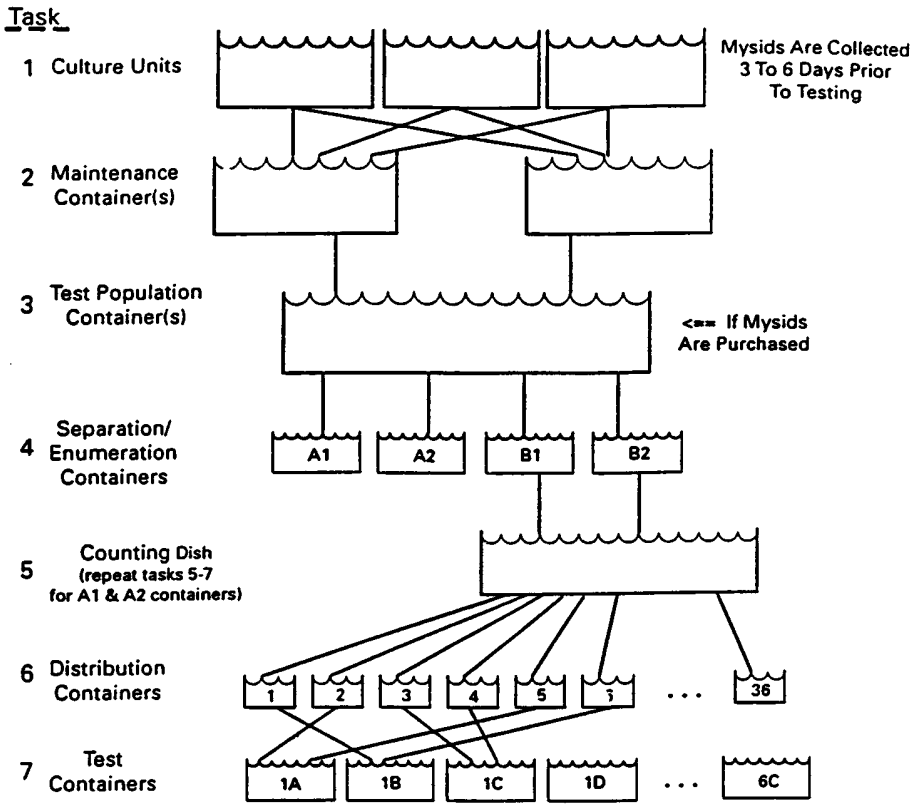
test. Thus, each test setup, as specified in the randomization procedure, consists of 3 replicates of 20 animals for each of the six treatments, i.e., 360 animals per test. Figure 1 is a flow diagram that depicts the procedure schematically and should be reviewed to understand the over-all operation. The following tasks shall be performed in the order listed.

(2) Mysids are cultured in the laboratory in appropriate units. If mysids are purchased, go to Task 3.

(3) Remove mysids from culture tanks (6, 5, 4, and 3 days before the test will begin, i.e. Tuesday, Wednesday, Thursday, and Friday if the test will begin on Monday) and place them in suitably large maintenance containers so that they can swim about freely and be fed.

NOTE: Not every detail (the definition of suitably large containers, for example) is provided here. Training and experience in aquatic animal culture and testing will be required to successfully complete these tests.

Figure 1
Mysid Randomization Procedure



(4) Remove mysids from maintenance containers and place all animals in a single container. The intent is to have homogeneous test population of mysids of a known age (3–6 days old).

(5) For each toxicity test, assign two suitable containers (500-milliliter (mL) beakers are recommended) for mysid separation/enumeration. Label each container (A1, A2, B1, B2, and C1, C2, for example, if two drilling fluid tests and a reference toxicant test are to be set up on one day). The purpose of this task is to allow the investigator to obtain a close estimate of the number of animals available for testing and to prevent unnecessary crowding of the mysids while they are being counted and assigned to test containers. Transfer the mysids from the large test population container to the labeled separation and enumeration containers but do not place more than 200 mysids in a 500-mL beaker. Be impartial in transferring the mysids; place approximately equal numbers of animals (10–15 mysids is convenient) in each container in a cyclic manner rather than placing the maximum number each container at one time.

NOTE: It is important that the animals not be unduly stressed during this selection and assignment procedure. Therefore, it will probably be necessary to place all animals (except the batch immediately being assigned to test containers) in mesh cups with flowing seawater or in large volume containers with aeration. The idea is to provide the animals with near optimal conditions to avoid additional stress.

(6) Place the mysids from the two labeled enumeration containers assigned to a specific test into one or more suitable containers to be used as counting dishes (2-liter Carolina dishes are suggested). Because of the time required to separate, count, and assign mysids, two or more people may be involved in completing this task. If this is done, two or more counting dishes may be used, but the investigator must make sure that approximately equal numbers of mysids from each labeled container are placed in each counting dish.

(7) By using a large-bore, smooth-tip glass pipette, select mysids from the counting dish(es) and place them in the 36 individually numbered distribution containers (10-ml beakers are suggested). The mysids are assigned two at a time to the 36 containers by using a randomization schedule similar to the one presented below. At the end of selection/assignment round 1, each container will contain two mysids; at the end of round 2, they will contain four mysids; and so on until each contains ten mysids.

EXAMPLE OF A RANDOMIZATION SCHEDULE

Selection/assignment round (2 mysids each)	Place mysid in the numbered distribution containers in the random order shown
1	8, 21, 6, 28, 33, 32, 1, 3, 10, 9, 4, 14, 23, 2, 34, 22, 36, 27, 5, 30, 35, 24, 12, 25, 11, 17, 19, 26, 31, 7, 20, 15, 18, 13, 16, 29.
2	35, 18, 5, 12, 32, 34, 22, 3, 9, 16, 26, 13, 20, 28, 6, 21, 24, 30, 8, 31, 7, 23, 2, 15, 25, 17, 1, 11, 27, 4, 19, 36, 10, 33, 14, 29.
3	7, 19, 14, 11, 34, 21, 25, 27, 17, 18, 6, 16, 29, 2, 32, 10, 4, 20, 3, 9, 1, 5, 28, 24, 31, 15, 22, 13, 33, 26, 36, 12, 8, 30, 35, 23.
4	30, 2, 18, 5, 8, 27, 10, 25, 4, 20, 26, 15, 31, 36, 35, 23, 11, 29, 16, 17, 28, 1, 33, 14, 9, 34, 7, 3, 12, 22, 21, 6, 19, 24, 32, 13.
5	34, 28, 16, 17, 10, 12, 1, 36, 20, 18, 15, 22, 2, 4, 19, 23, 27, 29, 25, 21, 30, 3, 9, 33, 32, 6, 14, 11, 35, 24, 26, 7, 31, 5, 13, 8.

(8) Transfer mysids from the 36 distribution containers to 18 labeled test containers in random order. A label is assigned to each of the three replicates (A, B, C) of the six test concentrations. Count and record the 96 hour response in an impartial order.

(9) Repeat tasks 5–7 for each toxicity test. A new random schedule should be followed in Tasks 6 and 7 for each test.

NOTE: If a partial toxicity test is conducted, the procedures described above are appropriate and should be used to prepare the single test concentration and control, along with the reference toxicant test.

V–B. Data Analysis and Interpretation

(1) Complete survival data in all test containers at each observation time shall be presented in tabular form. If greater than 10 percent mortality occurs in the controls, all data shall be discarded and the experiment repeated. Unacceptably high control mortality indicates the presence of important stresses on the organisms other than the material being tested, such as injury or disease, stressful physical or chemical conditions in the containers, or improper handling, acclimation, or feeding. If 10 percent mortality or less occurs in the controls, the data may be evaluated and reported.

(2) A definitive, full bioassay conducted according to the EPA protocol is used to estimate the concentration that is lethal to 50 percent of the test organisms that do not die naturally. This toxicity measure is known as the median lethal concentration, or LC–50. The LC–50 is adjusted for natural mortality or natural responsiveness. The maximum likelihood estimation procedure with the adjustments for natural responsiveness as given by D.J. Finney, in *Probit Analysis* 3rd edition, 1971, Cambridge University Press, chapter 7, can be used to obtain the probit model estimate of the LC–50 and the 95 percent fiducial (confidence) limits for the LC–50. These estimates are obtained using the logarithmic transform of the concentration. The heterogeneity factor (Finney 1971, pages 70–72) is not used. For a test material to pass the toxicity test, according to the requirements stated in the offshore oil and gas extraction industry BAT effluent limitations and NSPS, the LC–50, adjusted for natural responsiveness, must be greater than 3 percent suspended particulate phase (SPP) concentration by volume unadjusted for the 1 to 9 dilution. Other toxicity test models may be used to obtain toxicity estimates provided the modeled mathematical expression for the lethality rate must increase continuously with concentration. The lethality rate is modeled to increase with concentration to reflect an assumed increase in toxicity with concentration even though the observed lethality may not increase uniformly because of the unpredictable animal response fluctuations.

(3) The range finding test is used to establish a reasonable set of test concentrations in order to run the definitive test. However, if the lethality rate changes rapidly over a narrow range of concentrations, the range finding assay may be too coarse to establish an adequate set of test concentrations for a definitive test.

(4) The EPA Environmental Research Laboratory in Gulf Breeze, Florida prepared a Research and Development Report entitled Acute Toxicity of Eight Drilling Fluids to Mysid Shrimp (*Mysidopsis bahia*), May 1984 EPA–600/3–84–067. The Gulf Breeze data for drilling fluid number 1 are displayed in Table 1 for purposes of an example of the probit analysis described above. The SAS Probit Procedure (SAS Institute, Statistical Analysis System, Cary, North Carolina, 1982) was used to analyze these data. The 96-hour LC50 adjusted for the estimated spontaneous mortality rate is 3.3 percent SPP with 95 percent limits of 3.0 and 3.5 percent SPP with the 1 to 9 dilution. The estimated spontaneous mortality rate based on all of the data is 9.6 percent.

TABLE 1.—LISTING OF ACUTE TOXICITY TEST DATA (AUGUST 1983 TO SEPTEMBER 1983) WITH EIGHT GENERIC DRILLING FLUIDS AND MYSID SHRIMP

[fluid N2=1]

Percent concentration	Number exposed	Number dead (96 hours)	Number alive (96 hours)
0	60	3	57
1	60	11	49
2	60	11	49
3	60	25	35
4	60	48	12
5	60	60	0

V–C. The Partial Toxicity Test for Evaluation of Test Material

(1) A partial test conducted according to EPA protocol can be used economically to demonstrate that a test material passes the toxicity test. The partial test cannot be used to estimate the LC–50 adjusted for natural response.

(2) To conduct a partial test follow the test protocol for preparation of the test material and organisms. Prepare the control (zero concentration), one test concentration (3 percent suspended particulate phase) and the reference toxicant according to the methods of the full test. A range finding test is not used for the partial test.

(3) Sixty test organisms are used for each test concentration. Find the number of test organisms killed in the control (zero percent SPP) concentration in the column labeled X_0 of Table 2. If the number of organisms in the control (zero percent SPP) exceeds the table values, then the test is unacceptable and must be repeated. If the number of organisms killed in the 3 percent test concentration is less than or equal to corresponding number in the column labeled X_1 then the test material passes the partial toxicity test. Otherwise the test material fails the toxicity test.

(4) Data shall be reported as percent suspended particulate phase.

TABLE 2

X_0	X_1
0	22
1	22
2	23
3	23
4	24
5	24
6	25

VI. References

1. Borthwick, Patrick W. 1978. Methods for acute static toxicity tests with mysid

shrimp (*Mysidopsis bahia*). Bioassay Procedures for the Ocean Disposal Permit Program, [EPA–600/9–78–010:] March.

2. Nimmo, D.R., T.L. Hamaker, and C.A. Somers. 1978. Culturing the mysid (*Mysidopsis bahia*) in flowing seawater or a static system. Bioassay Procedures for the Ocean Disposal Permit Program, [EPA–600/9–78–010]: March.

3. American Public Health Association et al. 1980. Standard Methods for the Examination of Water and Wastewater. Washington, DC, 15th Edition: 90–99.

4. U.S. Environmental Protection Agency, September 1991. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4–90/027. Washington, DC, 4th Edition.

5. Finney, D.J. Probit Analysis. Cambridge University Press; 1971.

6. U.S. Environmental Protection Agency, May 1984. Acute Toxicity of Eight Drilling Fluids to Mysid Shrimp (*Mysidopsis bahia*). EPA–600/3–84–067.

Subpart B—[Reserved]

Subpart C—Onshore Subcategory

§ 435.30 Applicability; description of the onshore subcategory.

The provisions of this subpart are applicable to those facilities engaged in the production, field exploration, drilling, well completion and well treatment in the oil and gas extraction industry which are located landward of the inner boundary of the territorial seas as defined in 40 CFR 125.1(gg) and which are not included within subpart D, E, or F, *Provided, however,* That the applicability of this subpart to (a) facilities in existence on April 13, 1979 or thereafter engaged in the production, field exploration, drilling, well completion and well treatment in the oil and gas extraction industry which are located on land and which would have been considered ''coastal'' as defined under the interim final regulations for this industry (40 CFR 435.41, 41 FR 44942, October 13, 1976) or which are (b) located in the Santa Maria Basin of California is suspended.

(Secs. 301, 304(b) and 501 of the Clean Water Act as amended, 33 U.S.C. 1251 *et seq.)*

[44 FR 22075, Apr. 13, 1979, as amended at 47 FR 31555, July 21, 1982]

§ 435.31 Specialized definitions.

For the purpose of this subpart:

(a) The general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 shall apply to this subpart.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of waste water pollutants into navigable waters from any source associated with production, field exploration, drilling, well completion, or well treatment (i.e., produced water, drilling muds, drill cuttings, and produced sand).

[60 FR 33966, June 29, 1995]

Subpart D—Coastal Subcategory

SOURCE: 61 FR 66125, Dec. 16, 1996, unless otherwise noted.

§ 435.40 Applicability; description of the coastal subcategory.

The provisions of this subpart are applicable to those facilities engaged in field exploration, drilling, well production, and well treatment in the oil and gas industry in areas defined as ''coastal.'' The term ''coastal'' shall mean:

(a) Any location in or on a water of the United States landward of the inner boundary of the territorial seas; or

(b)(1) Any location landward from the inner boundary of the territorial seas and bounded on the inland side by the line defined by the inner boundary of the territorial seas eastward of the point defined by 89°45′ West Longitude and 29°46′ North Latitude and continuing as follows west of that point:

Direction to west longitude	Direction to north latitude
West, 89°48′	North, 29°50′.

Direction to west longitude	Direction to north latitude
West, 90°12′	North, 30°06′.
West, 90°20′	South, 29°35′.
West, 90°35′	South, 29°30′.
West, 90°43′	South, 29°25′.
West, 90°57′	North, 29°32′.
West, 91°02′	North, 29°40′.
West, 91°14′	South, 29°32′.
West, 91°27′	North, 29°37′.
West, 91°33′	North, 29°46′.
West, 91°46′	North, 29°50′.
West, 91°50′	North, 29°55′.
West, 91°56′	South, 29°50′.
West, 92°10′	South, 29°44′.
West, 92°55′	North, 29°46′.
West, 93°15′	North, 30°14′.
West, 93°49′	South, 30°07′.
West, 94°03′	South, 30°03′.
West, 94°10′	South, 30°00′.
West, 94°20′	South, 29°53′.
West, 95°00′	South, 29°35′.
West, 95°13′	South, 29°28′.
East, 95°08′	South, 29°15′.
West, 95°11′	South, 29°08′.
West, 95°22′	South, 28°56′.
West, 95°30′	South, 28°55′.
West, 95°33′	South, 28°49′.
West, 95°40′	South, 28°47′.
West, 96°42′	South, 28°41′.
East, 96°40′	South, 28°28′.
West, 96°54′	South, 28°20′.
West, 97°03′	South, 28°13′.
West, 97°15′	South, 27°58′.
West, 97°40′	South, 27°45′.
West, 97°46′	South, 27°28′.
West, 97°51′	South, 27°22′.
East, 97°46′	South, 27°14′.
East, 97°30′	South, 26°30′.
East, 97°26′	South, 26°11′.

(2) East to 97°19′ West Longitude and Southward to the U.S.-Mexican border.

§ 435.41 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) The term *average of daily values for 30 consecutive days* shall be the average of the daily values obtained during any 30 consecutive day period.

(c) The term *Cook Inlet* refers to coastal locations north of the line between Cape Douglas on the West and Port Chatham on the east.

(d) The term *daily values* as applied to produced water effluent limitations and NSPS shall refer to the daily measurements used to assess compliance with the maximum for any one day.

(e) The term *deck drainage* shall refer to any waste resulting from deck washings, spillage, rainwater, and runoff from gutters and drains including drip pans and work areas within facilities subject to this subpart.

(f) The term *development facility* shall mean any fixed or mobile structure subject to this subpart that is engaged in the drilling of productive wells.

(g) The term *dewatering effluent* means wastewater from drilling fluids and drill cuttings dewatering activities (including but not limited to reserve pits or other tanks or vessels, and chemical or mechanical treatment occurring during the drilling solids separation/recycle/disposal process).

(h) The term *diesel oil* shall refer to the grade of distillate fuel oil, as specified in the American Society for Testing and Materials Standard Specification for Diesel Fuel Oils D975–91, that is typically used as the continuous phase in conventional oil-based drilling fluids. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103. Copies may be inspected at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. A copy may also be inspected at EPA's Water Docket; Room M2616, 401 M Street SW., Washington, DC 20460.

(i) The term *domestic waste* shall refer to materials discharged from sinks, showers, laundries, safety showers, eye-wash stations, hand-wash stations, fish cleaning stations, and galleys located within facilities subject to this subpart.

(j) The term *drill cuttings* shall refer to the particles generated by drilling into subsurface geologic formations and carried to the surface with the drilling fluid.

(k) The term *drilling fluid* refers to the circulating fluid (mud) used in the rotary drilling of wells to clean and condition the hole and to counterbalance formation pressure. The four classes of drilling fluids are:

(1) A water-based drilling fluid has water as the continuous phase and the suspending medium for solids, whether or not oil is present.

(2) An oil-based drilling fluid has diesel oil, mineral oil, or some other oil,

but neither a synthetic material nor enhanced mineral oil, as its continuous phase with water as the dispersed phase.

(3) An enhanced mineral oil-based drilling fluid has an enhanced mineral oil as its continuous phase with water as the dispersed phase.

(4) A synthetic-based drilling fluid has a synthetic material as its continuous phase with water as the dispersed phase.

(l) The term *enhanced mineral oil* as applied to enhanced mineral oil-based drilling fluid means a petroleum distillate which has been highly purified and is distinguished from diesel oil and conventional mineral oil in having a lower polycyclic aromatic hydrocarbon (PAH) content. Typically, conventional mineral oils have a PAH content on the order of 0.35 weight percent expressed as phenanthrene, whereas enhanced mineral oils typically have a PAH content of 0.001 or lower weight percent PAH expressed as phenanthrene.

(m) The term *exploratory facility* shall mean any fixed or mobile structure subject to this subpart that is engaged in the drilling of wells to determine the nature of potential hydrocarbon reservoirs.

(n) The term *garbage* means all kinds of victual, domestic, and operational waste, excluding fresh fish and parts thereof, generated during the normal operation of coastal oil and gas facility and liable to be disposed of continuously or periodically, except dishwater, graywater, and those substances that are defined or listed in other Annexes to MARPOL 73/78. A copy of MARPOL may be inspected at EPA's Water Docket; Room M2616, 401 M Street SW, Washington, DC 20460.

(o) The term *maximum* as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings shall mean the maximum concentration allowed as measured in any single sample of the barite.

(p) The term *maximum for any one day* as applied to BPT, BCT and BAT effluent limitations and NSPS for oil and grease in produced water shall mean the maximum concentration allowed as measured by the average of four grab samples collected over a 24-hour period that are analyzed separately. Alternatively, for BAT and NSPS, the maximum concentration allowed may be determined on the basis of physical composition of the four grab samples prior to a single analysis.

(q) The term *minimum* as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings shall mean the minimum 96-hour LC50 value allowed as measured in any single sample of the discharged waste stream. The term minimum as applied to BPT and BCT effluent limitations and NSPS for sanitary wastes shall mean the minimum concentration value allowed as measured in any single sample of the discharged waste stream.

(r) The term *M9IM* shall mean those coastal facilities continuously manned by nine (9) or fewer persons or only intermittently manned by any number of persons.

(s) The term *M10* shall mean those coastal facilities continuously manned by ten (10) or more persons.

(t)(1) The term *new source* means any facility or activity of this subcategory that meets the definition of ''new source'' under 40 CFR 122.2 and meets the criteria for determination of new sources under 40 CFR 122.29(b) applied consistently with all of the following definitions:

(i) The term *water area* as used in the term ''site'' in 40 CFR 122.29 and 122.2 shall mean the water area and water body floor beneath any exploratory, development, or production facility where such facility is conducting its exploratory, development or production activities.

(ii) The term *significant site preparation work* as used in 40 CFR 122.29 shall mean the process of surveying, clearing or preparing an area of the water body floor for the purpose of constructing or placing a development or production facility on or over the site.

(2) ''New Source'' does not include facilities covered by an existing NPDES permit immediately prior to the effective date of these guidelines pending EPA issuance of a new source NPDES permit.

(u) The term *no discharge of free oil* shall mean that waste streams may not be discharged when they would cause a film or sheen upon or a discoloration of the surface of the receiving water or

fail the static sheen test defined in appendix 1 to 40 CFR part 435, subpart A.

(v) The term *produced sand* shall refer to slurried particles used in hydraulic fracturing, the accumulated formation sands and scales particles generated during production. Produced sand also includes desander discharge from the produced water waste stream, and blowdown of the water phase from the produced water treating system.

(w) The term *produced water* shall refer to the water (brine) brought up from the hydrocarbon-bearing strata during the extraction of oil and gas, and can include formation water, injection water, and any chemicals added downhole or during the oil/water separation process.

(x) The term *production facility* shall mean any fixed or mobile structure subject to this subpart that is either engaged in well completion or used for active recovery of hydrocarbons from producing formations. It includes facilities that are engaged in hydrocarbon fluids separation even if located separately from wellheads.

(y) The term *sanitary waste* shall refer to human body waste discharged from toilets and urinals located within facilities subject to this subpart.

(z) The term *static sheen test* shall refer to the standard test procedure that has been developed for this industrial subcategory for the purpose of demonstrating compliance with the requirement of no discharge of free oil. The methodology for performing the static sheen test is presented in appendix 1 to 40 CFR part 435, subpart A.

(aa) The term *synthetic material* as applied to synthetic-based drilling fluid means material produced by the reaction of specific purified chemical feedstock, as opposed to the traditional base fluids such as diesel and mineral oil which are derived from crude oil solely through physical separation processes. Physical separation processes include fractionation and distillation and/or minor chemical reactions such as cracking and hydro processing. Since they are synthesized by the reaction of purified compounds, synthetic materials suitable for use in drilling fluids are typically free of polycyclic aromatic hydrocarbons (PAH's) but are sometimes found to contain levels of PAH up to 0.001 weight percent PAH expressed as phenanthrene. Poly(alpha olefins) and vegetable esters are two examples of synthetic used by the oil and gas extraction industry in formulating drilling fluids. Poly(alpha olefins) are synthesized from the polymerization (dimerization, trimerization, tetramerization, and higher oligomerization) of purified straight-chain hydrocarbons such as C_6–C_{14} alpha olefins. Vegetable esters are synthesized from the acid-catalyzed esterification of vegetable fatty acids with various alcohols. The mention of these two branches of synthetic fluid base materials is to provide examples, and is not meant to exclude other synthetic materials that are either in current use or may be used in the future. A synthetic-based drilling fluid may include a combination of synthetic materials.

(bb) The term *toxicity* as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings shall refer to the bioassay test procedure presented in appendix 2 of 40 CFR part 435, subpart A.

(cc) The term *well completion fluids* shall refer to salt solutions, weighted brines, polymers, and various additives used to prevent damage to the well bore during operations which prepare the drilled well for hydrocarbon production.

(dd) The term *well treatment fluids* shall refer to any fluid used to restore or improve productivity by chemically or physically altering hydrocarbon-bearing strata after a well has been drilled.

(ee) The term *workover fluids* shall refer to salt solutions, weighted brines, polymers, or other specialty additives used in a producing well to allow for maintenance, repair or abandonment procedures.

(ff) The term *96-hour LC50* shall refer to the concentration (parts per million) or percent of the suspended particulate phase (SPP) from a sample that is lethal to 50 percent of the test organisms exposed to that concentration of the SPP after 96 hours of constant exposure.

[61 FR 66125, Dec. 16, 1996; 62 FR 1681, Jan. 13, 1997]

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

Except as provided in 40 CFR 125.30–125.32, any existing point source subject to this Subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

BPT EFFLUENT LIMITATIONS—OIL AND GREASE

[In milligrams per liter]

Pollutant parameter waste source	Maximum for any 1 day	Average of values for 30 consecutive days shall not exceed	Residual chlorine minimum for any 1 day
Produced water	72	48	NA
Deck drainage	(1)	(1)	NA
Drilling fluid	(1)	(1)	NA
Drill cuttings	(1)	(1)	NA
Well treatment, workover, and completion fluids	(1)	(1)	NA
Sanitary:			
M10	NA	NA	[2] 1
M9IM [3]	NA	NA	NA
Domestic [3]	NA	NA	NA
Produced sand	Zero discharge	Zero discharge	NA

[1] No discharge of free oil.
[2] Minimum of 1 mg/l and maintained as close to this concentration as possible.
[3] There shall be no floating solids as a result of the discharge of these wastes.

§ 435.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30–125.32, any existing point source subject to this Subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

BAT EFFLUENT LIMITATIONS

Stream	Pollutant parameter	BAT effluent limitations
Produced Water:		
(A) All coastal areas except Cook Inlet		No discharge.
(B) Cook Inlet	Oil & Grease	The maximum for any one day shall not exceed 42 mg/l, and the 30-day average shall not exceed 29 mg/l.
Drilling Fluids, Drill Cuttings, and Dewatering Effluent: [1]		
(A) All coastal areas except Cook Inlet		No discharge.
(B) Cook Inlet	Free Oil [2]	No discharge.
	Diesel Oil	No discharge.
	Mercury	1 mg/kg dry weight maximum in the stock barite.
	Cadmium	3 mg/kg dry weight maximum in the stock barite.
	Toxicity	Minimum 96-hour LC50 of the SPP shall be 3 percent by volume.[4]
Well Treatment, Workover and Completion Fluids:		
(A) All coastal areas except Cook Inlet		No discharge.
(B) Cook Inlet	Oil & Grease	The maximum for any one day shall not exceed 42 mg/l, and the 30-day average shall not exceed 29 mg/l.
Produced Sand		No discharge.
Deck Drainage	Free Oil [3]	No discharge.

BAT EFFLUENT LIMITATIONS—Continued

Stream	Pollutant parameter	BAT effluent limitations
Domestic Waste	Foam	No discharge.

[1] BAT limitations for dewatering effluent are applicable prospectively, BAT limitations in this rule are not applicable to discharges of dewatering effluent from reserve pits which as of the effective date of this rule no longer receive drilling fluids and drill cuttings. Limitations on such discharges shall be determined by the NPDES permit issuing authority.
[2] As determined by the static sheen test (see appendix 1 to 40 CFR Part 435, subpart A).
[3] As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).
[4] As determined by the toxicity test (see appendix 2 of 40 CFR Part 435, subpart A).

[61 FR 66125, Dec. 16, 1996; 62 FR 1681, Jan. 13, 1997]

§ 435.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30–125.32, any existing point source subject to this Subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT):

BCT EFFLUENT LIMITATIONS

Stream	Pollutant parameter	BCT effluent limitations
Produced Water (all facilities)	Oil & Grease	The maximum for any one day shall not exceed 72 mg/l and the 30-day average shall not exceed 48 mg/l.
Drilling Fluids and Drill Cuttings and Dewatering Effluent:[1]		
All facilities except Cook Inlet		No discharge.
Cook Inlet	Free Oil	No discharge.[2]
Well Treatment, Workover and Completion Fluids.	Free Oil	No discharge.[2]
Produced Sand		No discharge.
Deck Drainage	Free Oil	No discharge.[3]
Sanitary Waste:		
Sanitary M10	Residual Chlorine	Minimum of 1 mg/l maintained as close to this concentration as possible.
Sanitary M91M	Floating Solids	No discharge.
Domestic Waste	Floating Solids and garbage	No discharge of Floating Solids or garbage.

[1] BCT limitations for dewatering effluent are applicable prospectively. BCT limitations in this rule are not applicable to discharges of dewatering effluent from reserve pits which as of the effective date of this rule no longer receive drilling fluids and drill cuttings. Limitations on such discharges shall be determined by the NPDES permit issuing authority.
[2] As determined by the static sheen test (see appendix 1 to 40 CFR part 435, subpart A).
[3] As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).

[61 FR 66125, Dec. 16, 1996; 62 FR 1682, Jan. 13, 1997]

§ 435.45 Standards of performance for new sources (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

NSPS EFFLUENT LIMITATIONS

Stream	Pollutant parameter	NSPS effluent limitations
Produced Water:		
(A) All coastal areas except Cook Inlet		No discharge.
(B) Cook Inlet	Oil & Grease	The maximum for any one day shall not exceed 42 mg/l, and the 30-day average shall not exceed 29 mg/l.
Drilling Fluids, Drill Cuttings, and Dewatering Effluent:[1]		
(A) All coastal areas except Cook Inlet		No discharge.
(B) Cook Inlet	Free Oil[2]	No discharge.

NSPS EFFLUENT LIMITATIONS—Continued

Stream	Pollutant parameter	NSPS effluent limitations
	Diesel Oil	No discharge.
	Mercury	1 mg/kg dry weight maximum in the stock barite.
	Cadmium	3 mg/kg dry weight maximum in the stock barite.
	Toxicity	Minimum 96-hour LC50 of the SPP shall be 3 percent by volume.[4]
Well Treatment, Workover and Completion Fluids:		
(A) All coastal areas except Cook Inlet		No discharge.
(B) Cook Inlet	Oil & Grease	The maximum for any one day shall not exceed 42 mg/l, and the 30-day average shall not exceed 29 mg/l.
Produced Sand		No discharge.
Deck Drainage	Free Oil[3]	No discharge.
Sanitary Waste		
Sanitary M10	Residual Chlorine	Minimum of 1 mg/l and maintained as close to this concentration as possible.
Sanitary M9IM	Floating Solids	No discharge.
Domestic Waste	Floating Solids, Garbage and Foam.	No discharge of floating solids or garbage or foam.

[1] NSPS limitations for dewatering effluent are applicable prospectively. NSPS limitations in this rule are not applicable to discharges of dewatering effluent from reserve pits which as of the effective date of this rule no longer receive drilling fluids and drill cuttings. Limitations on such discharges shall be determined by the NPDES permit issuing authority.
[2] As determined by the static sheen test (see appendix 1 to 40 CFR Part 435, subpart A).
[3] As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).
[4] As determined by the toxicity test (see appendix 2 of 40 CFR Part 435, subpart A).

[61 FR 66125, Dec. 16, 1996; 62 FR 1682, Jan. 13, 1997]

§ 435.46 Pretreatment standards of performance for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source with discharges subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES).

PSES EFFLUENT LIMITATIONS

Stream	Pollutant parameter	PSES effluent limitations
Produced Water		No discharge.
Drilling Fluids and Drill Cuttings Well Treatment.		
Workover and Completion Fluids.		No discharge.
Produced Sand		No discharge.
Deck Drainage		No discharge.

§ 435.47 Pretreatment standards of performance for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 403.13, any new source with discharges subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS).

PSNS EFFLUENT LIMITATIONS

Stream	Pollutant parameter	PSNS effluent limitations
Produced Water (all facilities).		No discharge.
Drilling fluids and Drill Cuttings.		No discharge.
Well Treatment, Workover and Completion Fluids.		No discharge.
Produced Sand		No discharge.
Deck Drainage		No discharge.

Subpart E—Agricultural and Wildlife Water Use Subcategory

§ 435.50 Applicability; description of the beneficial use subcategory.

The provisions of this subpart are applicable to those onshore facilities located in the continental United States and west of the 98th meridian for which the produced water has a use in agriculture or wildlife propagation when discharged into navigable waters. These facilities are engaged in the production, drilling, well completion, and

well treatment in the oil and gas extraction industry.

§ 435.51 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) The term ''onshore'' shall mean all land areas landward of the territorial seas as defined in 40 CFR 125.1(gg).

(c) The term ''use in agricultural or wildlife propagation'' means that the produced water is of good enough quality to be used for wildlife or livestock watering or other agricultural uses and that the produced water is actually put to such use during periods of discharge.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) There shall be no discharge of waste pollutants into navigable waters from any source (other than produced water) associated with production, field exploration, drilling, well completion, or well treatment (i.e., drilling muds, drill cuttings, and produced sands).

(b) Produced water discharges shall not exceed the following daily maximum limitation:

Effluent characteristics: Effluent limitation (mg/l).

Oil and Grease: 35.

[44 FR 22075, Apr. 13, 1979, as amended at 60 FR 33967, June 29, 1995]

Subpart F—Stripper Subcategory

§ 435.60 Applicability; description of the stripper subcategory.

The provisions of this subpart are applicable to those onshore facilities which produce 10 barrels per well per calendar day or less of crude oil and which are operating at the maximum feasible rate of production and in accordance with recognized conservation practices. These facilities are engaged in production, and well treatment in the oil and gas extraction industry.

§ 435.61 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.

(b) The term ''onshore'' shall mean all land areas landward of the inner boundary of the territorial seas as defined in 40 CFR 125.1(gg).

(c) The term ''well'' shall means crude oil producing wells and shall not include gas wells or wells injecting water for disposal or for enchanced recovery of oil or gas.

(d) The term ''gas well'' shall mean any well which produces natural gas in a ratio to the petroleum liquids produced greater than 15,000 cubic feet of gas per 1 barrel (42 gallons) of petroleum liquids.

Subpart G—General Provisions

SOURCE: 61 FR 66129, Dec. 16, 1996, unless otherwise noted.

§ 435.70 Applicability.

(a) *Purpose.* This subpart is intended to prevent oil and gas facilities, for which effluent limitations guidelines and standards, new source performance standards, or pretreatment standards have been promulgated under this part, from circumventing the effluent limitations guidelines and standards applicable to those facilities by moving effluent produced in one subcategory to another subcategory for disposal under less stringent requirements than intended by this part.

(b) *Applicability.* The effluent limitations and standards applicable to an oil and gas facility shall be determined as follows:

(1) An Oil and Gas facility, operator, or its agent or contractor may move its wastewaters from a facility located in one subcategory to another subcategory for treatment and return it to

a location covered by the original subcategory for disposal. In such case, the effluent limitations guidelines, new source performance standards, or pretreatment standards for the original subcategory apply.

(2) An Oil and Gas facility, operator, or its agent or contractor may move its wastewaters from a facility located in one subcategory to another subcategory for disposal or treatment and disposal, provided:

(i) If an Oil and Gas facility, operator or its agent or contractor moves wastewaters from a wellhead located in one subcategory to another subcategory where oil and gas facilities are governed by less stringent effluent limitations guidelines, new source performance standards, or pretreatment standards, the more stringent effluent limitations guidelines, new source performance standards, or pretreatment standards applicable to the subcategory where the wellhead is located shall apply.

(ii) If an Oil and Gas facility, operator or its agent moves effluent from a wellhead located in one subcategory to another subcategory where oil and gas facilities are governed by more stringent effluent limitations guidelines, new source performance standards, or pretreatment standards, the more stringent effluent limitations guidelines, new source performance standards, or pretreatment standards applicable at the point of discharge shall apply.

PART 436—MINERAL MINING AND PROCESSING POINT SOURCE CATEGORY

Subpart A—Dimension Stone Subcategory [Reserved]

Subpart B—Crushed Stone Subcategory

Sec.

436.20 Applicability; description of the crushed stone subcategory.
436.21 Specialized definitions.
436.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart C—Construction Sand and Gravel Subcategory

436.30 Applicability; description of the construction sand and gravel subcategory.
436.31 Specialized definitions.
436.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart D—Industrial Sand Subcategory

436.40 Applicability; description of the industrial sand subcategory.
436.41 Specialized definitions.
436.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart E—Gypsum Subcategory

436.50 Applicability; description of the gypsum subcategory.
436.51 Specialized definitions.
436.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart F—Asphaltic Mineral Subcategory

436.60 Applicability; description of the asphaltic mineral subcategory.
436.61 Specialized definitions.
436.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart G—Asbestos and Wollastonite Subcategory

436.70 Applicability; description of the asbestos and wollastonite subcategory.
436.71 Specialized definitions.
436.72 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart H—Lightweight Aggregates Subcategory [Reserved]

Subpart I—Mica and Sericite Subcategory [Reserved]

Subpart J—Barite Subcategory

436.100 Applicability; description of the barite subcategory.

436.101 Specialized definitions.
436.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart K—Fluorspar Subcategory

436.110 Applicability; description of the fluorspar subcategory.
436.111 Specialized definitions.
436.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart L—Salines From Brine Lakes Subcategory

436.120 Applicability; description of the salines from brine lakes subcategory.
436.121 Specialized definitions.
436.122 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart M—Borax Subcategory

436.130 Applicability; description of the borax subcategory.
436.131 Specialized definitions.
436.132 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart N—Potash Subcategory

436.140 Applicability: description of the potash subcategory.
436.141 Specialized definitions.
436.142 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best praticable control technology currently available.

Subpart O—Sodium Sulfate Subcategory

436.150 Applicability; description of the sodium sulfate subcategory.
436.151 Specialized definitions.
436.152 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart P—Trona Subcategory [Reserved]

Subpart Q—Rock Salt Subcategory [Reserved]

Subpart R—Phosphate Rock Subcategory

436.180 Applicability; description of the phosphate rock subcategory.
436.181 Specialized definitions.
436.182 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
436.183–436.184 [Reserved]
436.185 Standards of performance for new sources.

Subpart S—Frasch Sulfur Subcategory

436.190 Applicability; description of the Frasch sulfur subcategory.
436.191 Specialized definitions.
436.192 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart T—Mineral Pigments Subcategory [Reserved]

Subpart U—Lithium Subcategory [Reserved]

Subpart V—Bentonite Subcategory

436.220 Applicability; description of the bentonite subcategory.
436.221 Specialized definitions.
436.222 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart W—Magnesite Subcategory

436.230 Applicability; description of the magnesite subcategory.
436.231 Specialized definitions.
436.232 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart X—Diatomite Subcategory

436.240 Applicability; description of the diatomite subcategory.
436.241 Specialized definitions.

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

Subpart Y—Jade Subcategory

436.250 Applicability; description of the jade subcategory.
436.251 Specialized definitions.
436.252 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart Z—Novaculite Subcategory

436.260 Applicability; description of the novaculite subcategory.
436.261 Specialized definitions.
436.262 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart AA—Fire Clay Subcategory [Reserved]

Subpart AB—Attapulgite and Montmorillonite Subcategory [Reserved]

Subpart AC—Kyanite Subcategory [Reserved]

Subpart AD—Shale and Common Clay Subcategory [Reserved]

Subpart AE—Aplite Subcategory [Reserved]

Subpart AF—Tripoli Subcategory

436.310 Applicability; description of the tripoli subcategory.
436.321 Specialized definitions.
436.322 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart AG—Kaolin Subcategory [Reserved]

Subpart AH—Ball Clay Subcategory [Reserved]

Subpart AI—Feldspar Subcategory [Reserved]

Subpart AJ—Talc, Steatite, Soapstone and Pyrophyllite Subcategory [Reserved]

Subpart AK—Garnet Subcategory [Reserved]

Subpart AL—Graphite Subcategory

436.380 Applicability; description of the graphite subcategory.
436.381 Specialized definitions.
436.382 Effluent limitations 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), 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).

SOURCE: 40 FR 48657, Oct. 16, 1975, unless otherwise noted.

Subpart A—Dimension Stone Subcategory [Reserved]

Subpart B—Crushed Stone Subcategory

SOURCE: 42 FR 35849, July 12, 1977, unless otherwise noted.

§ 436.20 Applicability; description of the crushed stone subcategory.

The provisions of this subpart are applicable to the mining or quarrying and the processing of crushed and broken stone and riprap. This subpart includes all types of rock and stone. Rock and stone that is crushed or broken prior to the extraction of a mineral are elsewhere covered. The processing of calcite, however, in conjunction with the processing of crushed and broken limestone or dolomite is included in this subpart.

§ 436.21 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''mine dewatering'' shall mean any water that is impounded or that collects in the mine

and is pumped, drained or otherwise removed from the mine through the efforts of the mine operator. However, if a mine is also used for treatment of process generated waste water, discharges of commingled water from the facilities shall be deemed discharges of process generated waste water.

(c) The term ''10-year 24-hour precipitation event'' shall mean the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in ''Weather Bureau Technical Paper No. 40,'' May 1961 and ''NOAA Atlas 2,'' 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

(d) The term ''mine'' shall mean an area of land, surface or underground, actively mined for the production of crushed and broken stone from natural deposits.

(e) The term ''process generated waste water'' shall mean any waste water used in the slurry transport of mined material, air emissions control, or processing exclusive of mining. The term shall also include any other water which becomes commingled with such waste water in a pit, pond, lagoon, mine, or other facility used for treatment of such waste water.

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraphs (b) and (c) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(1) Discharges of process generated waste water pollutants from facilities that recycle waste water for use in processing shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(2) Mine dewatering discharges shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any overflow from facilities governed by this subpart shall not be subject to the limitations of paragraph (a) of this section if the facilities are designed, constructed and maintained to contain or treat the volume of waste water which would result from a 10-year 24-hour precipitation event.

(c) In the case of a discharge into receiving waters for which the pH, if unaltered by man's activities, is or would be less than 6.0 and water quality criteria in water quality standards approved under the Act authorize such lower pH, the pH limitations for such discharge may be adjusted downward to the pH water quality criterion for the receiving waters. In no case shall a pH limitation outside the range 5.0 to 9.0 be permitted.

[42 FR 35849, July 12, 1977, as amended at 44 FR 76793, Dec. 28, 1979; 60 FR 33967, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart C—Construction Sand and Gravel Subcategory

SOURCE: 42 FR 35850, July 12, 1977, unless otherwise noted.

§ 436.30 Applicability; description of the construction sand and gravel subcategory.

The provisions of this subpart are applicable to the mining and the processing of sand and gravel for construction or fill uses, except that on-board processing of dredged sand and gravel which is subject to the provisions of 33 CFR part 230 of this chapter will not be

governed by the provisions of this subpart.

§ 436.31 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''mine dewatering'' shall mean any water that is impounded or that collects in the mine and is pumped, drained or otherwise removed from the mine through the efforts of the mine operator. This term shall also include wet pit overflows caused solely by direct rainfall and ground water seepage. However, if a mine is also used for treatment of process generated waste water, discharges of commingled water from the mine shall be deemed discharges of process generated waste water.

(c) The term ''10-year 24-hour precipitation event'' shall mean the maximum 24 hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in ''Weather Bureau Technical Paper No. 40,'' May 1961 and ''NOAA Atlas 2,'' 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

(d) The term ''mine'' shall mean an area of land, surface or underground, actively mined for the production of sand and gravel from natural deposits.

(e) The term ''process generated waste water'' shall mean any waste water used in the slurry transport of mined material, air emissions control, or processing exclusive of mining. The term shall also include any other water which becomes commingled with such waste water in a pit, pond, lagoon, mine or other facility used for treatment of such waste water. The term does not include waste water used for the suction dredging of deposits in a body of water and returned directly to the body of waste without being used for other purposes or combined with other waste water.

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraphs (b) and (c) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(1) Discharges of process generated waste water pollutants from facilities that recycle waste water for use in processing shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(2) Mine dewatering discharges shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any overflow from facilities governed by this subpart shall not be subject to the limitations of paragraph (a) of this section if the facilities are designed, constructed and maintained to contain or treat the volume of waste water which would result from a 10-year 24-hour precipitation event.

(c) In the case of a discharge into receiving waters for which the pH, if unaltered by man's activities, is or would be less than 6.0 and water quality criteria in water quality standards approved under the Act authorize such lower pH, the pH limitation for such discharge may be adjusted downward to the pH water quality criterion for the receiving waters. In no case shall a

pH limitation outside the range 5.0 to 9.0 be permitted.

[42 FR 35850, July 12, 1977, as amended at 44 FR 76793, Dec. 28, 1979; 60 FR 33967, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart D—Industrial Sand Subcategory

SOURCE: 42 FR 35851, July 12, 1977, unless otherwise noted.

§ 436.40 Applicability; description of the industrial sand subcategory.

The provisions of this subpart are applicable to the mining and the processing of sand and gravel for uses other than construction and fill. These uses include, but are not limited to glass-making, molding, abrasives, filtration, refractories, and refractory bonding.

§ 436.41 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''mine dewatering'' shall mean any water that is impounded or that collects in the mine and is pumped, drained, or otherwise removed from the mine through the efforts of the mine operator. This term shall also include wet pit overflows caused solely by direct rainfall and ground water seepage. However, if a mine is also used for the treatment of process generated waste water, discharges of commingled water from the mine shall be deemed discharges of process generated waste water.

(c) The term ''10-year 24-hour precipitation event'' shall mean the maximum 24 hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in ''Weather Bureau Technical Paper No. 40,'' May 1961 and ''NOAA Atlas 2,'' 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

(d) The term ''mine'' shall mean an area of land actively mined for the production of sand and gravel from natural deposits.

(e) The term ''process generated waste water'' shall mean any waste water used in the slurry transport of mined material, air emissions control, or processing exclusive of mining. The term shall also include any other water which becomes commingled with such waste water in a pit, pond, lagoon, mine or other facility used for treatment of such waste water. The terms does not include waste water used for the suction dredging of deposits in a body of water and returned directly to the body of water without being used for other purposes or combined with other waste water.

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraphs (b) and (c) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(1) With the exception of operation using HF flotation, discharges of process waste water pollutants from facilities that recycle waste water, for use in the processing shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
TSS	45 mg/l	25 mg/l.
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(2) Except as provided in paragraphs (a) (1) and (3) of this section, there shall be no discharge of process generated waste water pollutants into navigable waters.

(3) Process generated waste water from facilities employing HF flotation shall not exceed the following limitations:

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

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
TSS	0.046	0.023
Total fluoride	.006	.003
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(4) Mine dewatering discharges shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
TSS	45 mg/l	25 mg/l.
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any overflow from facilities governed by this subpart shall not be subject to the limitations of paragraph (a) of this section if the facilities are designed, constructed and maintained to contain or treat the volume of waste water which would result from a 10-year 24-hour precipitation event.

(c) In the case of a discharge into receiving waters for which the pH, if unaltered by man's activities, is or would be less than 6.0 and water quality criteria in water quality standards approved under the Act authorize such lower pH, the pH limitation for such discharge may be adjusted downward to the pH water quality criterion for the receiving waters. In no case shall a pH limitation outside the range 5.0 to 9.0 be permitted.

[42 FR 35851, July 12, 1977, as amended at 60 FR 33967, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart E—Gypsum Subcategory

§ 436.50 Applicability; description of the gypsum subcategory.

The provisions of this subpart are applicable to the processing of gypsum.

§ 436.51 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) For operations not employing wet air emissions control scrubbers there shall be no discharge of process generated waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33967, June 29, 1995]

Subpart F—Asphaltic Mineral Subcategory

§ 436.60 Applicability; description of the asphaltic mineral subcategory.

The provisions of this subpart are applicable to the processing of bituminous limestone, oil-impregnated diatomite and oilsonite not primarily as an energy source.

§ 436.61 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

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

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33967, June 29, 1995]

Subpart G—Asbestos and Wollastonite Subcategory

§ 436.70 Applicability; description of the asbestos and wollastonite subcategory.

The provisions of this supbart are applicable to the processing of asbestos and wollastonite.

§ 436.71 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

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

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33967, June 29, 1995]

Subpart H—Lightweight Aggregates Subcategory [Reserved]

Subpart I—Mica and Sericite Subcategory [Reserved]

Subpart J—Barite Subcategory

§ 436.100 Applicability; description of the barite subcategory.

The provisions of this subpart are applicable to the processing of barite.

§ 436.101 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): For operations not employing wet processes or flotation processes there shall be no discharge of process generated waste water pollutants into navigable waters.

[60 FR 33967, June 29, 1995]

Subpart K—Fluorspar Subcategory

§ 436.110 Applicability; description of the fluorspar subcategory.

The provisions of this subpart are applicable to the processing of fluorspar.

§ 436.111 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): For operations not employing heavy media separation or flotation processes there shall be no discharge of process generated waste water pollutants into navigable waters.

[60 FR 33967, June 29, 1995]

Subpart L—Salines From Brine Lakes Subcategory

§ 436.120 Applicability; description of the salines from brine lakes subcategory.

The provisions of this subpart are applicable to the processing of salines from brine lakes.

§ 436.121 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of process waste water pollutants into navigable waters.

(b) The limitations specified in paragraph (a) of this section shall be applied on a net basis if the discharge is in compliance with § 125.28 of this chapter ''the source of the applicant's water supply is the same body of water into which the discharge is made * * *''.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart M—Borax Subcategory

§ 436.130 Applicability; description of the borax subcategory.

The provisions of this subpart are applicable to the processing of borate minerals. Borax obtained from brine

lakes is regulated in the salines from brine lakes subcategory (subpart L of this part).

§ 436.131 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of process waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart N—Potash Subcategory

AUTHORITY: Sec. 306, Federal Water Pollution Control Act, as amended.

§ 436.140 Applicability; description of the potash subcategory.

The provisions of this subpart are applicable to the processing of potash. Potash obtained from brine lakes is regulated in the saline from brine lakes subcategory (subpart L of this part).

§ 436.141 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of process waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart O—Sodium Sulfate Subcategory

§ 436.150 Applicability; description of the sodium sulfate subcategory.

The provisions of this subpart are applicable to the processing of sodium sulfate. Sodium sulfate obtained from brine lakes is regulated in the salines from brine lakes subcategory (subpart L of this part).

§ 436.151 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of process waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart P—Trona Subcategory [Reserved]

Subpart Q—Rock Salt Subcategory [Reserved]

Subpart R—Phosphate Rock Subcategory

AUTHORITY: Sec. 306, Federal Water Pollution Control Act, as amended.

§ 436.180 Applicability; description of the phosphate rock subcategory.

The provisions of this subpart are applicable to the mining and the processing of phosphate bearing rock, ore or earth for the phosphate content.

[43 FR 9809, Mar. 10, 1978]

§ 436.181 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 ''mine dewatering'' shall mean any water that is impounded or that collects in the mine and is pumped, drained or otherwise removed from the mine through the efforts of the mine operator.

(c) The term ''10-year 24-hour precipitation event'' shall mean the maximum 24 hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in ''Weather Bureau Technical Paper No. 40,'' May 1961 and ''NOAA Atlas 2,'' 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

(d) The term ''mine'' shall mean an area of land, surface or underground, actively used for or resulting from the extraction of a mineral from natural deposits.

(e) The term ''process generated waste water'' shall mean any waste water used in the slurry transport of mined material, air emissions control, or processing exclusive of mining. The term shall also include any other water which becomes commingled with such waste water in a pit, pond lagoon,

mine, or other facility used for settling or treatment of such waste water.

[43 FR 9809, Mar. 10, 1978]

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(1) Discharges of process generated waste water and mine dewatering discharges, shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
TSS	60 mg/l	30 mg./l.
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any overflow from facilities governed by this subpart shall not be subject to the limitations of paragraph (a) of this section if the facilities are designed, constructed and maintained to contain or treat the volume of waste water which would result from a 10-year 24-hour precipitation event.

[42 FR 35852, July 12, 1977, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

§§ 436.183–436.184 [Reserved]

§ 436.185 Standards of performance for new sources.

(a) Subject to the provisions of paragraph (b) of this section, 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 demonstrated control technology.

(1) Discharges of process generated waste water and mine dewatering discharges, shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
TSS	60 mg/l	30 mg/l.
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Any overflow from facilities governed by this subpart shall not be subject to the limitations of paragraph (a) of this section if the facilities are designed, constructed and maintained to contain or treat the volume of waste water which would result from a 10-year 24-hour precipitation event.

[43 FR 9810, Mar. 10, 1978]

Subpart S—Frasch Sulfur Subcategory

§ 436.190 Applicability; description of the Frasch sulfur subcategory.

The provisions of this subpart are applicable to the processing of sulfur on shore and in marshes and estuaries by the Frasch process. Not covered are sulfur refining operations that are not performed at the mining and collection site.

§ 436.191 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section for operations mining anhydrite deposits, any existing point source subject

to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of process waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart T—Mineral Pigments Subcategory [Reserved]

Subpart U—Lithium Subcategory [Reserved]

Subpart V—Bentonite Subcategory

§ 436.220 Applicability; description of the bentonite subcategory.

The provisions of this subpart are applicable to the processing of bentonite.

§ 436.221 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process generated waste water pollutants into navigable waters.

[60 FR 33968, June 29, 1995]

Subpart W—Magnesite Subcategory

§ 436.230 Applicability; description of the magnesite subcategory.

The provisions of this subpart are applicable to the processing of naturally occurring magnesite ore.

§ 436.231 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process generated waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic

Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart X—Diatomite Subcategory

§ 436.240 Applicability; description of the diatomite subcategory.

The provisions of this subpart are applicable to the processing of diatomite.

§ 436.241 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of process generated waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33968, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart Y—Jade Subcategory

§ 436.250 Applicability; description of the jade subcategory.

The provisions of this subpart are applicable to the processing of jade.

§ 436.251 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): there shall be no discharge of process generated waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33969, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart Z—Novaculite Subcategory

§ 436.260 Applicability; description of the novaculite subcategory.

The provisions of this subpart are applicable to the processing of novaculite.

§ 436.261 Specialized definitions.

For the purpose of this subpart:

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

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process generated waste water pollutants into navigable waters.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33969, June 29, 1995; 60 FR 35796, July 11, 1995]

Subpart AA—Fire Clay Subcategory [Reserved]

Subpart AB—Attapulgite and Montmorillonite Subcategory [Reserved]

Subpart AC—Kyanite Subcategory [Reserved]

Subpart AD—Shale and Common Clay Subcategory [Reserved]

Subpart AE—Aplite Subcategory [Reserved]

Subpart AF—Tripoli Subcategory

§ 436.310 Applicability; description of the tripoli subcategory.

The provisions of this subpart are applicable to the processing of tripoli.

§ 436.321 Specialized definitions.

For the purpose of this subpart:

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

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): For operations not employing wet processes there shall be no discharge of process generated waste water pollutants into navigable waters.

[60 FR 33969, June 29, 1995]

Subpart AG—Kaolin Subcategory [Reserved]

Subpart AH—Ball Clay Subcategory [Reserved]

Subpart AI—Feldspar Subcategory [Reserved]

Subpart AJ—Talc, Steatite, Soapstone and Pyrophyllite Subcategory [Reserved]

Subpart AK—Garnet Subcategory [Reserved]

Subpart AL—Graphite Subcategory

§ 436.380 Applicability; description of the graphite subcategory.

The provisions of this subpart are applicable to the mining and processing of naturally occurring graphite.

§ 436.381 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''mine drainage'' shall mean any water drained, pumped or siphoned from a mine.

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

(a) Except as provided in §§ 125.30 through 125.32, and subject to the provisions of paragraph (b) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
TSS	20 mg/l	10 mg/l.
Total Fe	2 mg/l	1 mg/l.
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Only that volume of water resulting from precipitation that exceeds the maximum safe surge capacity of a process waste water impoundment may be discharged from that impoundment. The height difference between the maximum safe surge capacity level and the normal operating level must be greater than the inches of rain representing the 10-year, 24-hour rainfall event as established by the National Climatic Center, National Oceanic and Atmospheric Administration for the locality in which such impoundment is located.

[40 FR 48657, Oct. 16, 1975, as amended at 60 FR 33969, June 29, 1995; 60 FR 35796, July 11, 1995]

PART 439—PHARMACEUTICAL MANUFACTURING POINT SOURCE CATEGORY

GENERAL PROVISIONS

Sec.
439.0 Applicability.
439.1 General definitions.
439.2 Monitoring requirements.

Subpart A—Fermentation Products Subcategory

439.10 Applicability; description of the fermentation products subcategory.
439.11 Specialized definitions.
439.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
439.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
439.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
439.15 New source performance standards (NSPS).
439.16 Pretreatment standards for existing sources (PSES).
439.17 Pretreatment standards for new sources (PSNS).

Subpart B—Extraction Products Subcategory

439.20 Applicability; description of the extraction products subcategory.
439.21 Specialized definitions.
439.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

439.23 Effluent limitations representing the degree of effluent reducton attainable by the application of the best conventional pollutant control technology (BCT).
439.24 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
439.25 New source performance standards (NSPS).
439.26 Pretreatment standards for existing sources (PSES).
439.27 Pretreatment standards for new sources (PSNS).

Subpart C—Chemical Synthesis Products Subcategory

439.30 Applicability; description of the chemical synthesis products subcategory.
439.31 Specialized definitions.
439.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
439.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
439.34 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
439.35 New source performance standards (NSPS).
439.36 Pretreatment standards for existing sources (PSES).
439.37 Pretreatment standards for new sources (PSNS).

Subpart D—Mixing/Compounding and Formulation Subcategory

439.40 Applicability; description of the mixing/compounding and formulation subcategory.
439.41 Specialized definitions.
439.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
439.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
439.44 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
439.45 New source performance standards (NSPS).
439.46 Pretreatment standards for existing sources (PSES).
439.47 Pretreatment standards for new sources (PSNS).

Subpart E—Research Subcategory

439.50 Applicability; description of the research subcategory.
439.51 Specialized definitions.
439.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
439.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
439.54 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
439.55 New source performance standards (NSPS). [Reserved]
439.56 Pretreatment standards for existing sources (PSES). [Reserved]
439.57 Pretreatment standards for new sources (PSNS). [Reserved]

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 48 FR 49821, Oct. 27, 1983, unless otherwise noted.

GENERAL PROVISIONS

§ 439.0 Applicability.

This part applies to any pharmaceutical manufacturing facility which discharges or may discharge process wastewater pollutants to the waters of the United States, or which introduces or may introduce process wastewater pollutants into a publicly owned treatment works.

[48 FR 49821, Oct. 27, 1983; 48 FR 50322, Nov. 1, 1983]

§ 439.1 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) The term ''maximum 30-day average'' shall mean the maximum average of daily values for 30 consecutive days.

(b) The term ''cyanide destruction unit'' shall mean a treatment system designed specifically to remove cyanide.

§ 439.2 Monitoring requirements.

Unless otherwise noted, self-monitoring will be conducted at the final effluent discharge point.

Subpart A—Fermentation Products Subcategory

§ 439.10 Applicability; description of the fermentation products subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of pharmaceuticals by fermentation.

§ 439.11 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 and § 439.01 shall apply to this subpart.

(b) The term ''product'' shall mean pharmaceutical products derived from fermentation processes.

§ 439.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

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

(1) The allowable effluent discharge limitation for the daily average mass of BOD5 in any calendar month shall be expressed in mass per unit time and shall specifically reflect not less than 90% reduction in the long term daily average raw waste content of BOD5 multiplied by a variability factor of 3.0.

(2) The allowable effluent discharge limitation for the daily average mass of COD in any calendar month shall be expressed in mass per unit time and shall specifically reflect not less than 74 percent reduction in the long term daily average raw waste content of COD multiplied by a variability factor of 2.2.

(3) The long term daily average raw waste load for the pollutants BOD5 and COD is defined as the average daily mass of each pollutant discharged in the influent to the wastewater treatment system over a 12 consecutive month period within the most recent 36 months, which shall include the greatest production effort.

(4) To assure equity in regulating discharges from the point sources covered by this subpart of the point source category, calculation of raw waste loads of BOD5 and COD for the purpose of determining NPDES permit limitations (i.e., the base numbers to which the percent reductions are applied) shall exclude any waste load associated with separable mycelia and solvents in those raw waste loads, except that residual amounts of mycelia and solvents remaining after the practice of recovery and/or separate disposal or reuse may be included in the calculation of the raw waste loads. These practices of removal, disposal, or reuse include physical separation and removal of separable mycelia, recovery of solvents from waste streams, incineration of concentrated solvent waste streams (including tar still bottoms), and broth concentration for disposal other than to the treatment system. This regulation does not prohibit inclusion of such waste in the raw waste loads in fact, nor does it mandate any specific practice, but rather describes the rationale for determining the permit conditions. These limits may be achieved by any of several or a combination thereof of programs and practices.

(5) The pH shall be within the range of 6.0–9.0 standard units.

(6) The allowable effluent discharge limitation for the daily average mass of TSS in any calendar month shall be 1.7 times the BOD5 limitation determined in paragraph (a)(1) of this section.

(7) For those plants using or generating cyanide in the manufacturing process, the allowable effluent discharge for cyanide is shown below.

(i) See table below:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(ii) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30 day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30 day average cyanide limitation must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983; 49 FR 1190, Jan. 10, 1984, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 439.12 of this subpart for best practicable control technology currently available (BPT).

[51 FR 45098, Dec. 16, 1986]

§ 439.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where cyanide is used or generated in the manufacturing process must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(1)

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
COD	(1)	(1)

[1] Reserved.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from

the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30 day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30 day average cyanide limitation must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.15 New source performance standards (NSPS).

(a) 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.

(1)

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
BOD5	(1)	(1)
TSS	(1)	(1)
COD	(1)	(1)
pH	(2)	(2)

[1] Reserved.
[2] Within the range of 6.0 to 9.0 at all times.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide standard is multiplied by 0.18, the maximum 30 day average cyanide standard is multiplied by 0.35, and both standards are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide standard must be multiplied by 0.18, the maximum 30 day average cyanide standard must be multiplied by 0.35, and both standards must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Only facilities where cyanide is used or generated in the manufacturing process are subject to cyanide standards. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 18486, May 1, 1985]

§ 439.16 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by October 27, 1986, where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for existing sources (PSES).

(1)

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.17 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for new sources (PSNS).

(1)

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

Subpart B—Extraction Products Subcategory

§ 439.20 Applicability; description of the extraction products subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of pharmaceuticals by extraction.

§ 439.21 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 and § 439.01 shall apply to this subpart.

(b) The term ''product'' shall mean biological and natural extraction products. This subcategory shall include blood fractions, vaccines, serums, animal bile derivatives, endocrine products, and isolation of medicinal products, such as alkaloids, from botanical drugs and herbs.

§ 439.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

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

(1) The allowable discharge for the pollutant parameters BOD5 and COD shall be expressed in mass per unit time and shall represent the specified wastewater treatment efficiency in terms of a residual discharge associated with an influent to the wastewater treatment plant corresponding to the maximum production period for a given pharmaceutical plant as defined in paragraph (a)(4) of this section.

(2) The allowable effluent discharge limitation for the daily average mass of BOD5 in any calendar month shall specifically reflect not less than 90 percent reduction in the long term daily average raw waste content of BOD5 multiplied by a variability factor of 3.0. However, a plant shall not be required to attain a maximum 30-day average BOD5 effluent limitation of less than the equivalent of 45 mg/l.

(3) The allowable effluent discharge limitation for the daily average mass of COD in any calendar month shall specifically reflect not less than 74 percent reduction in the long term daily average raw waste content of COD multiplied by a variability factor of 2.2. However, a plant shall not be required to attain a maximum 30-day average COD effluent limitation of less than the equivalent of 220 mg/l.

(4) The long term daily average raw waste load for the pollutants BOD5 and COD is defined as the average daily mass of each pollutant discharged in the influent to the wastewater treatment system over a 12 consecutive month period within the most recent 36 months, which shall include the greatest production effort.

(5) To assure equity in regulating discharges from the point sources covered by this subpart of the point source category, calculation of raw waste loads of BOD5 and COD for the purpose of determining NPDES permit limitations (i.e., the base numbers to which the percent reductions are applied) shall exclude any waste load associated with solvents in those raw waste loads, except that residual amounts of solvents remaining after the practice of recovery and/or separate disposal or reuse may be included in the calculation of the

raw waste loads. Those practices of removal, disposal, or reuse include recovery of solvents from waste streams and incineration of concentrated solvent waste streams (including tar still bottoms). This regulation does not prohibit inclusion of such wastes in the raw waste loads in fact, nor does it mandate any specific practice, but rather describes the rationale for determining the permit conditions. These limits may be achieved by any one of several or a combination thereof of programs and practices.

(6) The allowable effluent discharge limitation for the daily mass of TSS in any calendar month shall be 1.7 times the BOD5 limitation determined in paragraph (a)(2) of this section.

(7) The pH shall be within the range of 6.0–9.0 standard units.

(8) For those plants using or generating cyanide in the manufacturing process, the allowable effluent discharge for cyanide is shown below.

(i)

Pollutant of pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(ii) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30-day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30-day average cyanide limitation must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 439.22 of this subpart for best practicable control technology currently available (BPT).

[51 FR 45099, Dec. 16, 1986]

§ 439.24 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where cyanide is used or generated in the manufacturing process must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(1)

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
COD	(1)	(1)

[1] Reserved.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30-day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30-day average cyanide limitations must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.25 New source performance standards (NSPS).

(a) 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.

(1)

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
BOD_5	(1)	(1)
TSS	(1)	(1)
COD	(1)	(1)
pH	(2)	(2)

[1] Reserved.
[2] Within the range of 6.0 to 9.0 at all times.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide standard is multiplied by 0.18, the maximum 30-day average cyanide standard is multiplied by 0.35, and both standards are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide standard must be multiplied by 0.18, the maximum 30-day average cyanide standard must be multiplied by 0.35, and both standards must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow

to the total process wastewater discharge flow. Only facilities where cyanide is used or generated in the manufacturing process are subject to cyanide standards. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.26 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by October 27, 1986, where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for existing sources (PSES).

(1)

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.27 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for new sources (PSNS).

(1)

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment

works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

Subpart C—Chemical Synthesis Products Subcategory

§ 439.30 Applicability; description of the chemical synthesis products subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of pharmaceuticals by chemical synthesis.

§ 439.31 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 part 401 and § 439.01 of this chapter shall apply to this subpart.

(b) The term ''product'' shall mean pharmaceutical products derived from chemical synthesis processes.

§ 439.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

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

(1) The allowable discharge for the pollutant parameters BOD5 and COD shall be expressed in mass per unit time and shall represent the specified wastewater treatment efficiency in terms of a residual discharge associated with an influent to the wastewater treatment plant corresponding to the maximum production period for a given pharmaceutical plant as defined in paragraph (a)(4) of this section.

(2) The allowable effluent discharge limitation for the daily average mass of BOD5 in any calendar month shall specifically reflect not less than 90 percent reduction in the long term daily average raw waste content of BOD5 multiplied by a variability factor of 3.0.

(3) The allowable effluent discharge limitation for the daily average mass of COD in any calendar month shall specifically reflect not less than 74 percent reduction in the long term daily average raw waste content of COD multiplied by a variability factor of 2.2.

(4) The long term daily average raw waste load for the pollutant parameters BOD5 and COD is defined as the average daily mass of each pollutant discharged in the influent to the wastewater treatment system over a 12 consecutive month period within the most recent 36 months, which shall include the greatest production effort.

(5) To assure equity in regulating discharges from the point sources covered by this subpart of the point source category, calculation of raw waste loads of BOD5 and COD for the purpose of determining NPDES permit limitations (i.e., the base numbers to which the percent reductions are applied) shall exclude any waste load associated with solvents in those raw waste loads, except that residual amounts of solvents remaining after the practice of recovery and/or separate disposal or reuse may be included in the calculation of the raw waste loads. These practices of removal, disposal, or reuse include recovery of solvents from waste streams and incineration of concentrated solvent waste streams (including tar still bottoms). This regulation does not prohibit inclusion of such wastes in the raw waste loads in fact, nor does it mandate any specific practice, but rather describes the rationale for determining the permit conditions. These limits may be achieved by any one of several or a combination thereof of programs and practices.

(6) The pH shall be within the range of 6.0 to 9.0 standard units.

(7) The allowable effluent discharge limitation for the daily average mass of TSS in any calendar month shall be 1.7 times the BOD5 limitation determined in paragraph (a)(2) of this section.

(8) For those plants using or generating cyanide in the manufacturing process, the allowable effluent discharge for cyanide is shown below.

(i)

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(ii) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30-day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30-day average cyanide limitation must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 439.32 of this subpart for best practicable control technology currently available (BPT.

[51 FR 45099, Dec. 16, 1986]

§ 439.34 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where cyanide is used or generated in the manufacturing process must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(1)

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
COD	(1)	(1)

[1] Reserved.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30-day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30-day average cyanide limitation must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.35 New source performance standards (NSPS).

(a) 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.

(1)

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
BOD5	(1)	(1)
TSS	(1)	(1)
COD	(1)	(1)
pH	(2)	(2)

[1] Reserved.
[2] Within the range of 6.0 to 9.0 at all times.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide standard is multiplied by 0.18, the maximum 30-day average cyanide standard is multiplied by 0.35, and both standards are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide standard must be multiplied by 0.18, the maximum 30-day average cyanide standard must be multiplied by 0.35, and both standards must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Only facilities where cyanide is used or generated in the manufacturing process are subject to cyanide standards. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.36 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by October 27, 1986, where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for existing sources (PSES).

(1)

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.37 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for new sources (PSNS).

(1)

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

Subpart D—Mixing/Compounding and Formulation Subcategory

§ 439.40 Applicability; description of the mixing/compounding and formulation subcategory.

The provisions of this subpart are applicable to discharges resulting from mixing/compounding and formulaton operations of pharmaceutical products.

§ 439.41 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 and § 439.01 of this chapter shall apply to this subpart.

(b) The term ''product'' shall mean products from plants which blend, mix, compound, and formulate pharmaceutical ingredients. Pharmaceutical preparations for human and veterinary use such as ampules, tablets, capsules, vials, ointments, medicinal powders, solutions, and suspensions are included.

§ 439.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged by a mixing/compounding and formulation plant from a point source subject to the provisions of this paragraph after application of the best practicable control technology currently available:

(1) The allowable discharge for the pollutant parameters BOD5 and COD shall be expressed in mass per unit time and shall represent the specified wastewater treatment efficiency in terms of a residual discharge associated with an influent to the wastewater treatment plant corresponding to the maximum production period for a given pharmaceutical plant as defined in paragraph (a)(4) of this section.

(2) The allowable effluent discharge limitation for the daily average mass of BOD5 in any calendar month shall specifically reflect not less than 90 percent reduction in the long term daily average raw waste content of BOD5 multiplied by a variability factor 3.0. However, a plant shall not be required to attain a maximum 30-day average BOD5 effluent limitation of less than the equivalent of 45 mg/l.

(3) The allowable effluent discharge limitation for the daily average mass of COD in any calendar month shall specifically reflect not less than 74 percent reduction in the long term daily average raw waste content of COD multiplied by a variability factor of 2.2. However, a plant shall not be required to attain a maximum 30-day average COD effluent limitation of less than the equivalent of 220 mg/l.

(4) The long term daily average raw waste load for the pollutant parameters BOD5 and COD is defined as the average daily mass of each pollutant discharged in the influent to the wastewater treatment system over a 12 consecutive month period within the most recent 36 months, which shall include the greatest production effort.

(5) To assure equity in regulating discharges from the point sources covered by this subpart of the point source category, calculation of raw waste loads of BOD5 and COD for the purpose of determining NPDES per limitations (i.e., the base numbers to which the percent reductions are applied) shall exclude any waste load associated with solvents in those raw waste loads except that residual amounts of solvents remaining after the practice of recovery and/or separate disposal or reuse may be included in the calculation of the

raw waste loads. These practices of removal, disposal, or reuse include recovery of solvents from waste streams and incineration of concentrated solvent waste streams (including tar still bottoms). This regulation does not prohibit inclusion of such wastes in the raw waste loads in fact, nor does it mandate any specific practice, but rather describes the rationale for determining the permit conditions. These limits may be achieved by any one of several or a combination thereof of programs and practices.

(6) The allowable effluent discharge limitation for the daily average mass of TSS in any calendar month shall be 1.7 times the BOD5 limitation determined in paragraph (a)(2) of this section.

(7) The pH shall be within the range of 6.0–9.0 standard units.

(8) For those plants using or generating cyanide in the manufacturing process, the allowable effluent discharge for cyanide is shown below.

(i)

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(ii) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30-day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30-day average cyanide limitation must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in § 401.16) in § 439.42 of this subpart for best practicable control technology currently available (BPT).

[51 FR 45099, Dec. 16, 1986]

§ 439.44 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart where cyanide is used or generated in the manufacturing process must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of

the best available technology economically achievable (BAT).

(1)

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
COD	(1)	(1)

[1] Reserved.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide limitation is multiplied by 0.18, the maximum 30-day average cyanide limitation is multiplied by 0.35, and both limitations are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide limitation must be multiplied by 0.18, the maximum 30-day average cyanide limitation must be multiplied by 0.35, and both limitations must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above effluent limitations may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.45 New source performance standards (NSPS).

(a) 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.

(1)

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4
BOD_5	(1)	(1)
TSS	(1)	(1)
COD	(1)	(1)
pH	(2)	(2)

[1] Reserved.
[2] Within the range of 6.0 to 9.0 at all times.

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit and the effluent from the cyanide destruction unit is discharged to a biological treatment system, self-monitoring must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the daily maximum cyanide standard is multiplied by 0.18, the maximum 30-day average cyanide standard is multiplied by 0.35, and both standards are adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams

are not treated in a cyanide destruction unit or if the effluent from the cyanide destruction unit is not discharged to a biological treatment system, self-monitoring must be conducted at the final effluent discharge point and the daily maximum cyanide standard must be multiplied by 0.18, the maximum 30-day average cyanide standard must be multiplied by 0.35, and both standards must be adjusted based on the dilution ratio of the cyanide-contaminated waste stream flow to the total process wastewater discharge flow. Only facilities where cyanide is used or generated in the manufacturing process are subject to cyanide standards. Permittees not using or generating cyanide must certify to the permit-issuing authority that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.46 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by October 27, 1986, where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for existing sources (PSES).

(1)

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 439.47 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and where cyanide is used or generated in the manufacturing process, must achieve the following pretreatment standards for new sources (PSNS).

(1)

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
Total cyanide	33.5	9.4

(2) If all cyanide-containing waste streams are diverted to a cyanide destruction unit, self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, self-monitoring may be conducted at the final effluent discharge point, if the cyanide standard is adjusted based on the dilution ratio of contaminated waste

stream flow to the total process wastewater discharge flow. However, if all cyanide-containing waste streams are not treated, self-monitoring must be conducted at the final effluent discharge point and the cyanide standard must be adjusted based on the dilution ratio of contaminated waste stream flow to the total process wastewater discharge flow. Indirect dischargers not using or generating cyanide must certify to the publicly owned treatment works that they are not using or generating this compound.

(b) Dilution in order to meet the above standards may not be practiced.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49821, Oct. 27, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

Subpart E—Research Subcategory

§ 439.50 Applicability; description of the research subcategory.

The provisions of this subpart are applicable to discharges resulting from pharmaceutical research.

§ 439.51 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations, and methods of analysis set forth in in 40 CFR part 401 and § 439.01 shall apply to this subpart.

(b) The term ''product'' shall mean products or services resulting from pharmaceutical research, which includes microbiological, biological, and chemical operations.

§ 439.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

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

(1) The allowable discharge for the pollutant parameters BOD5 and COD shall be expressed in mass per unit time and shall represent the specified wastewater treatment efficiency in terms of a residual discharge associated with an influent to the wastewater treatment plant corresponding to the maximum production period for a given pharmaceutical plant as defined in paragraph (a)(4) of this section.

(2) The allowable effluent discharge limitation for the daily average mass of BOD5 in any calendar month shall specifically reflect not less than 90 percent reduction in the long term daily average raw waste content of BOD5 multiplied by a variability factor of 3.0. However, a plant shall not be required to attain a maximum 30-day average BOD5 effluent limitation of less than the equivalent of 45 mg/l.

(3) The allowable effluent discharge limitation for the daily average mass of COD in any calendar month shall specifically reflect not less than 74 percent reduction in the long term daily average raw waste content of COD multiplied by a variability factor of 2.2. However, a plant shall not be required to attain a maximum 30-day average COD effluent limitation of less than the equivalent of 220 mg/l.

(4) The long term daily average raw waste load for the pollutant parameters BOD5 and COD is defined as the average daily mass of each pollutant influent to the wastewater treatment system over a 12 consecutive month period within the most recent 36 months, which shall include the greatest production effort.

(5) To assure equity in regulation discharges from the point sources covered by this subpart of the point source category, calculation of raw waste loads of BOD5 and COD for the purpose of determining NPDES permit limitations (i.e., the base numbers to which the percent reductions are applied) shall exclude

any waste load associated with solvents in those raw waste loads, except that residual amounts of solvents remaining after the practice of recovery and/or separate disposal or reuse may be included in the calculation of the raw waste loads. These practices of removal, disposal, or reuse include recovery of solvents from waste streams and incineration of concentrated solvent waste streams (including tar still bottoms). This regulation does not prohibit inclusion of such wastes in the raw waste loads in fact, nor does it mandate any specific practice, but rather describes the rationale for determining the permit conditions. These limits may be achieved by any one of several or a combination thereof of programs and practices.

(6) The allowable effluent discharge limitation for the daily average mass of TSS in any calendar month shall be 1.7 times the BOD5 limitation determined in paragraph (a)(2) of this section.

(7) The pH shall be within the range of 6.0–9.0 standard units.

(b) Dilution to meet the above effluent limitations may not be practiced.

§ 439.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 439.54 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 439.55 New source performance standards (NSPS). [Reserved]

§ 439.56 Pretreatment standards for existing sources (PSES). [Reserved]

§ 439.57 Pretreatment standards for new sources (PSNS). [Reserved]

PART 440—ORE MINING AND DRESSING POINT SOURCE CATEGORY

Subpart A—Iron Ore Subcategory

Sec.
440.10 Applicability; description of the iron ore subcategory.
440.11 [Reserved]
440.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.14 New source performance standards (NSPS).
440.15 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart B—Aluminum Ore Subcategory

440.20 Applicability; description of the aluminum ore subcategory.
440.21 [Reserved]
440.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.24 New source performance standards (NSPS).
440.25 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart C—Uranium, Radium, and Vanadium Ores Subcategory

440.30 Applicability; description of the uranium, radium and vanadium ores subcategory.
440.31 [Reserved]
440.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.34 New source performance standards (NSPS).
440.35 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart D—Mercury Ore Subcategory

440.40 Applicability; description of the mercury ore subcategory.
440.41 [Reserved]
440.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.44 New source performance standards (NSPS).
440.45 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart E—Titanium Ore Subcategory

440.50 Applicability; description of the titanium ore subcategory.
440.51 [Reserved]
440.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.54 New source performance standards (NSPS).
440.55 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart F—Tungsten Ore Subcategory

440.60 Applicability; description of the tungsten ore subcategory.
440.61 [Reserved]
440.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.64 New source performance standards (NSPS).
440.65 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart G—Nickel Ore Subcategory

440.70 Applicability; description of the nickel ore subcategory.
440.71 [Reserved]
440.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
440.74 New source performance standards (NSPS). [Reserved]
440.75 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart H—Vanadium Ore Subcategory (Mined Alone and Not as a Byproduct)

440.80 Applicability; description of the vanadium ore subcategory.
440.81 [Reserved]
440.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
440.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
440.84 New source performance standards (NSPS). [Reserved]
440.85 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart I—Antimony Ore Subcategory

440.90 Applicability; description of the antimony ore subcategory.
440.91 [Reserved]
440.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). [Reserved]

440.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
440.94 New source performance standards (NSPS). [Reserved]
440.95 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart J—Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory

440.100 Applicability; description of the copper, lead, zinc, gold, silver, and molybdenum ores subcategory.
440.101 [Reserved]
440.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT).
440.103 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.104 New source performance standards (NSPS).
440.105 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart K—Platinum Ores Subcategory

440.110 Applicability; description of the platinum ore subcategory.
440.111 [Reserved]
440.112 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). [Reserved]
440.113 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
440.114 New source performance standards (NSPS). [Reserved]
440.115 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

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440.144 New Source Performance Standards (NSPS).
440.145—440.147 [Reserved]
440.148 Best Management Practices (BMP).

AUTHORITY: Secs. 301, 304(b), (c) and (e), 306, 307, and 501 of the Clean Water Act (The Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977 and the Water Quality Act of 1987), (the Act), 33 U.S.C. 1311, 1314(b), (c) and (e), 1316, 1317, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217; 101 Stat. 7, Pub. L. 100–4.

SOURCE: 47 FR 54609, Dec. 3, 1982, unless otherwise noted.

Subpart A—Iron Ore Subcategory

§ 440.10 Applicability; description of the iron ore subcategory.

The provisions of this subpart A are applicable to discharges from (a) mines operated to obtain iron ore, regardless of the type of ore or its mode of occurrence; (b) mills beneficiating iron ores by physical (magnetic and nonmagnetic) and/or chemical separation; and (c) mills beneficiating iron ores by magnetic and physical separation in the Mesabi Range.

§ 440.11 [Reserved]

§ 440.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable after application of the

best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines operated to obtain iron ore shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Fe (dissolved)	2.0	1.0
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) Except as provided in paragraph (c) of this section, the concentration of pollutants discharged from mills that employ physical (magnetic and nonmagnetic) and/or chemical methods to beneficiate iron ore shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
TSS	30	20
Fe (dissolved)	2.0	1.0
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(c)(1) Except as provided in paragraph (c) of this section, there shall be no discharge of process wastewater to navigable waters from mills that employ magnetic and physical methods to beneficiate iron ore in the Mesabi Range. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equivalent to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

§ 440.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) The concentration of pollutants discharged in mine drainage from mines operated to obtain iron ore shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe (dissolved)	2.0	1.0

(b) Except as provided in paragraph (c) of this section the concentration of pollutants discharged from mills that employ physical (magnetic and nonmagnetic) and/or chemical methods to beneficiate iron ore shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe (dissolved)	2.0	1.0

(c)(1) Except as provided in paragraph (c) of this section, there shall be no discharge of process wastewater to navigable waters from mills that employ magnetic and physical methods to beneficiate iron ore in the Mesabi Range. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed

them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

§ 440.14 New source performance standards (NSPS).

Except as provided in subpart L of this part, any new source subject to this subpart must achieve the following NSPS representing the degree of effluent reduction attainable by applying the best available demonstrated technology (BADT):

(a) The concentration of pollutants discharged in mine drainage from mines operated to obtain iron ore shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe (dissolved)	2.0	1.0
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range of 6.0, to 9.0.

(b) Except as provided in paragraph (c) of this section, the concentration of pollutants discharged from mills that employ physical (magnetic and nonmagnetic) and/or chemical methods to beneficiate iron ore shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe (dissolved)	2.0	1.0
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.0.

(c)(1) Except as provided in paragraph (c) of this section, there shall be no discharge of process wastewater to navigable waters from mills that employ magnetic and physical methods to beneficiate iron ore in the Mesabi Range. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

§ 440.15 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart B—Aluminum Ore Subcategory

§ 440.20 Applicability; description of the aluminum ore subcategory.

The provisions of this subpart B are applicable to discharges from facilities engaged in the mining of bauxite as an aluminum ore.

§ 440.21 [Reserved]

§ 440.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best

practicable control technology currently available (BPT). The concentration of pollutants discharged in mine drainage from mines producing bauxite ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Fe	1.0	.5
A1	2.0	1.0
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

§ 440.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). The concentration of pollutants discharged in mine drainage from mines producing bauxite ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe (total)	1.0	0.5
Al	2.0	1.0

§ 440.24 New Source performance standards (NSPS).

Except as provided in subpart L of this part, any new source subject to this subpart must achieve the following NSPS representing the degree of effluent reduction attainable by the application of the best available demonstrated technology (BADT). The concentration of pollutants discharged in mine drainage from mines producting bauxite ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe (total)	1.0	0.5
Al	2.0	1.0
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.0.

§ 440.25 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart C—Uranium, Radium and Vanadium Ores Subcategory

§ 440.30 Applicability; description of the uranium, radium and vanadium ores subcategory.

The provisions of this subpart C are applicable to discharges from (a) mines either open-pit or underground, from which uranium, radium and vanadium ores are produced; and (b) mills using the acid leach, alkaline leach, or combined acid and alkaline leach process for the extraction of uranium, radium and vanadium. Only vanadium byproduct production from uranium ores is covered under this subpart.

§ 440.31 [Reserved]

§ 440.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable after application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines, either open-pit or underground, from which uranium, radium and vanadium ores are produced excluding

mines using in-situ leach methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
COD	200	100
Zn	1.0	0.5
Ra226 [1] (dissolved)	10	3
Ra226 [1] (total)	30	10
U	4	2
pH	([2])	([2])

[1] Values in picocuries per liter (pCi/l).
[2] Within the range 6.0 to 9.0.

(b) The concentrations of pollutants discharged from mills using the acid leach, alkaline leach or combined acid and alkaline leach process for the extraction of uranium, radium and vanadium including mill-mine facilities and mines using in-situ leach methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
COD	.....	500
As	1.0	.5
Zn	1.00	.5
Ra226 [1] (dissolved)	10	3
Ra226 [1] (total)	30	10
NH [3]	.....	100
pH	([2])	([2])

[1] Values in picocuries per liter (pCi/l).
[2] Within the range 6.0 to 9.0.

§ 440.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) The concentration of pollutants discharged in mine drainage from mines, either open-pit or underground, that produce uranium ore, including mines using in-situ leach methods, shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
COD	200	100
Zn	1.00	.5
Ra226 [1] (dissolved)	10.0	3.0
Ra226 [1] (total)	30.0	10.0
U	4.0	2.0

[1] Values in picocuries per liter (pCi/l).

§ 440.34 New source performance standards (NSPS).

Except as provided in subpart L of this part any new source subject to this subpart must achieve the following NSPS representing the degree of effluent reduction attainable by the application of the best available demonstrated technology (BADT):

(a) The concentration of pollutants discharged in mine drainage from mines, either open-pit or underground, that produce uranium ore, excluding mines using in situ leach methods, shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
COD	200	100
Zn	1.0	0.5
Ra [1] 226 (dissolved)	10.0	3.0
Ra [1] 226 (total)	30.0	10.0
U	4.0	2.0
pH	([2])	([2])
TSS	30.0	20.0

[1] Values in picocuries per liter (pCi/l).
[2] Within the range 6.0 to 9.0.

(b)(1) Except as provided in paragraph (b) of this section, there shall be no discharge of process wastewater to navigable waters from mills using the acid leach, alkaline leach or combined acid and alkaline leach process for the extraction of uranium or from mines and mills using in situ leach methods. The Agency recognizes that the elimination of the discharge of pollutants to

navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equivalent to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

§ 440.35 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart D—Mercury Ore Subcategory

§ 440.40 Applicability; description of the mercury ore subcategory.

The provisions of subpart D are applicable to discharges from (a) mines, either open-pit or underground, that produce mercury ores; and (b) mills beneficiating mercury ores by gravity separation methods or by froth-flotation methods.

§ 440.41 [Reserved]

§ 440.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable after application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines, either open-pit or underground, operated for the production of mercury ores shall not exceed the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Hg	.002	.001
Ni	.2	.1
pH	([1])	([1])

[1] Within the range 6.0 to 9.0.

(b)(1) Except as provided in paragraph (b) of this section, there shall be no discharge of process wastewater to navigable waters from mills beneficiating mercury ores by gravity separation methods or by froth flotation methods. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equivalent to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a)(1) of this section.

§ 440.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) The concentration of pollutants discharged in mine drainage from mines, either open pit or underground,

that produce mercury ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Hg	0.002	0.001

(b)(1) Except as provided in paragraph (b) of this section, there shall be no discharge of process wastewater to navigable waters from mills beneficiating mercury ores by gravity separation methods or by froth-flotation methods. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

§ 440.44 New source performance standards (NSPS).

Except as provided in subpart L of this part any new source subject to this subpart must achieve the following NSPS representing the degree of effluent reduction attainable by the application of the best available demonstrated technology (BADT):

(a) The concentration of pollutants discharged in mine drainage from mines, either open pit or underground, that produce mercury ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Hg	0.002	0.001
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.0.

(b)(1) Except as provided in paragraph (b) of this section, there shall be no discharge of process wastewater to navigable waters from mills beneficiating mercury ores by gravity separation methods or by froth-flotation methods. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

§ 440.45 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart E—Titanium Ore Subcategory

§ 440.50 Applicability; description of the titanium ore subcategory.

The provisions of this subpart E are applicable to discharges from (a) mines obtaining titanium ores from lode deposits; (b) mills beneficiating titanium

ores by electrostatic methods, magnetic and physical methods, or flotation methods; and (c) mines engaged in the dredge mining of placer deposits of sands containing rutile, ilmenite, leucoxene, monazite, zircon, and other heavy metals, and the milling techniques employed in conjunction with the dredge mining activity (milling techniques employed include the use of wet gravity methods in conjunction with electrostatic or magnetic methods).

§ 440.51 [Reserved]

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

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable after application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines obtaining titanium ores from lode deposits shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Fe	2.0	1.0
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The concentration of pollutants discharged from mills beneficiating titanium ores by electrostatic methods, magnetic and physical methods, or flotation methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Zn	1.0	.5
Ni	.2	.1
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(c) The concentration of pollutants discharged in mine drainage from mines engaged in the dredge mining of placer deposits of sands containing rutile, ilmenite, leucoxene, monazite, zircon, or other heavy metals, and the milling techniques employed in conjunction with the dredge mining activity (milling techniques employed include the use of wet gravity methods in conjunction with electrostatic or magnetic methods) shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Fe	2	1
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 440.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) The concentration of pollutants discharged in mine drainage from

mines obtaining titanium ores from lode deposits shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe	2.0	1.0

(b) The concentration of pollutants discharged from mills beneficiating titanium ores by electrostatic methods, magnetic and physical methods, or flotation methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Zn	1.0	0.5

(c) The concentration of pollutants discharged in mine drainage from mines engaged in the dredge mining of placer deposits of sands containing rutile, ilmenite, leucoxene, monazite, or zircon and the milling techniques employed in conjunction with the dredge mining activity (milling techniques employed include the use of wet gravity methods in conjunction with electrostatic or magnetic methods) shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe	2.0	1.0

§ 440.54 New source performance standards (NSPS).

Except as provided in subpart L of this part any new source subject to this subpart must achieve the following NSPS representing the degree of effluent reduction attainable by the applications of the best available demonstrated technology (BADT):

(a) The concentration of pollutants discharged in mine drainage from mines obtaining titanium ores from lode deposits shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe	2.0	1.0
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.1.

(b) The concentration of pollutants discharged from mills beneficiating titanium ores by electrostatic methods, magnetic and physical methods, or flotation methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Zn	1.0	0.5
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.1.

(c) The concentration of pollutants discharged in mine drainage from mines engaged in the dredge mining of placer deposits of sands containing rutile, ilmenite, leucoxene, monazite, zircon and the milling techniques employed in conjunction with the dredge mining activity (milling techniques employed include the use of wet gravity methods in conjunction wth electrostatic or magnetic methods) shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Fe	2.0	1.0
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.1.

§ 440.55 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart F—Tungsten Ore Subcategory

§ 440.60 Applicability; description of the tungsten ore subcategory.

The provisions of this subpart F are applicable to discharges from (a) mines that produce tungsten ore and (b) mills that process tungsten ore by either the gravity separation or froth-flotation methods.

§ 440.61 [Reserved]

§ 440.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines producing 5000 metric tons (5512 short tons) or more of tungsten bearing ores per year shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.3	.15
Zn	1.0	.5
Pb	.6	.3
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The concentration of pollutants discharged in mine drainage from mines producing less than 5000 metric tons (5512 short tons) or discharged from mills processing less than 5000 metric tons (5512 short tons) of tungsten ores per year by methods other than ore leaching shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	50	30
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(c) The concentration of pollutants discharged from mills processing 5000 metric tons (5512 short tons) or more of tungsten ores per year by purely physical methods including ore crushing, washing, jigging, heavy media separation, and magnetic and electrostatic separation shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(d) The concentration of pollutants discharged from mills processing 5000 metric tons (5512 short tons) or more of tungsten ores per year by froth flotation methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 440.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) The concentration of pollutants discharged in mine drainage from tungsten mines shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cd	0.10	0.05
Cu	0.30	0.15
Zn	1.0	0.5

(b) The concentration of pollutants discharged from mills shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cd	0.10	0.05
Cu	0.3	0.15
Zn	1.0	0.5

§ 440.64 New source performance standards (NSPS).

Except as provided in subpart L of this part any new source subject to this subpart must achieve the following NSPS representing the degree of effluent reduction attainable by the application of the best available demonstrated technology (BADT):

(a) The concentration of pollutants discharged in mine drainage from tungsten mines shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cd	0.10	0.05
Cu	0.30	0.15
Zn	1.0	0.5
pH	[1]	[1]
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.0.

(b) The concentration of pollutants discharged from mills shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cd	0.10	0.05
Cu	0.3	0.15
Zn	1.0	0.5
pH	[1]	[1]
TSS	30.0	20.0

[1] Within the range of 6.0 to 9.0.

§ 440.65 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart G—Nickel Ore Subcategory

§ 440.70 Applicability; description of the nickel ore subcategory.

The provisions of this subpart G are applicable to discharges from (a) mines that produce nickel ore and (b) mills that process nickel ore.

§ 440.71 [Reserved]

§ 440.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines producing 5000 metric tons (5512 short tons) or more of nickel bearing ores per year shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.3	.15
Zn	1.0	.5
Pb	.6	.3
As	1.0	.5
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

(b) The concentration of pollutants discharged in mine drainage from mines producing less than 5,000 metric tons (5,512 short tons) or discharged from mills processing less than 5,000 metric tons (5,512 short tons) of nickel ores per year by methods other than ore leaching shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	50	30
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

(c) The concentration of pollutants discharged from mills processing 5,000 metric tons (5,512 short tons) or more of nickel ores per year by purely physical methods including ore crushing, washing, jigging, heavy media separation and magnetic and electrostatic separation shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

1 Within the range 6.0 to 9.0

(d) The concentration of pollutants discharged from mills processing 5,000 metric tons (5,512 short tons) or more of nickel ore per year by froth flotation methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

§ 440.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 440.74 New source performance standards (NSPS). [Reserved]

§ 440.75 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart H—Vanadium Ore Subcategory (Mined Alone and Not as a Byproduct)

§ 440.80 Applicability; description of the vanadium ore subcategory.

The provisions of this subpart H are applicable to discharges from (a) mines that produce vanadium ore (recovered alone and not as a by-product of uranium mining and mills) and (b) mills that process vanadium ore (recovered

alone, not as a byproduct of uranium mining and mills).

§ 440.81 [Reserved]

§ 440.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines producing 5,000 metric tons (5,512 short tons) or more of vanadium bearing ores per year shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.3	.15
Zn	1.0	.5
Pb	.6	.3
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The concentration of pollutants discharged in mine drainage from mines producing less than 5,000 metric tons (5,512 short tons) or discharged from mills processing less than 5,000 metric tons (5,512 short tons) of vanadium ore per year by methods other than ore leaching shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	50	30
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(c) The concentration of pollutants discharged from mills processing 5,000 metric tons (5,512 short tons) or more of vanadium ores per year by purely physical methods including ore crushing, washing, jigging, heavy media separation, and magnetic and electrostatic separation shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(d) The concentration of pollutants discharged from mills processing 5,000 metric tons (5,512 short tons) or more of vanadium ores per year by froth flotation methods shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 440.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 440.84 New source performance standards (NSPS). [Reserved]

§ 440.85 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart I—Antimony Ore Subcategory

§ 440.90 Applicability; description of the antimony ore subcategory.

The provisions of this subpart I are applicable to discharges from (a) mines that produce antimony ore and (b) mills that process antimony ore.

§ 440.91 [Reserved]

§ 440.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). [Reserved]

§ 440.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]

§ 440.94 New source performance standards (NSPS). [Reserved]

§ 440.95 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart J—Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory

§ 440.100 Applicability; description of the copper, lead, zinc, gold, silver, and molybdenum ores subcategory.

(a) The provisions of this subpart J are applicable to discharges from—

(1) Mines that produce copper, lead, zinc, gold, silver, or molybdenum bearing ores, or any combination of these ores from open-pit or underground operations other than placer deposits;

(2) Mills that use the froth-flotation process alone or in conjunction with other processes, for the beneficiation of copper, lead, zinc, gold, silver, or molybdenum ores, or any combination of these ores;

(3) Mines and mills that use dump, heap, in-situ leach, or vat-leach processes to extract copper from ores or ore waste materials; and

(4) Mills that use the cyanidation process to extract gold or silver.

(b) Discharge from mines or mines and mills that use gravity separation methods (including placer or dredge mining or concentrating operations, and hydraulic mining operations) to extract gold ores are regulated under subpart M.

(c) Discharge from mines (including placer or dredge mining, and hydraulic mining operations) or mines and mills that use gravity separation methods to extract silver from placer ores are not covered under this part.

(d) The provisions of this subpart shall not apply to discharges from the Quartz Hill Molybdenum Project in the Tongass National Forest, Alaska.

[47 FR 54609, Dec. 3, 1982, as amended at 53 FR 18788, May 24, 1988]

§ 440.101 [Reserved]

§ 440.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology (BPT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in mine drainage from mines operated to obtain copper bearing ores, lead bearing ores, zinc bearing ores, gold bearing ores, or silver bearing ores, or any combination of these ores open-pit or underground operations other than placer deposits shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cu	.30	.15
Zn	1.5	.75
Pb	.6	.3
Hg	.002	.001
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(b) The concentration of pollutants discharged from mills which employ the froth flotation process alone or in conjunction with other processes, for the beneficiation of copper ores, lead ores, zinc ores, gold ores, or silver ores, or any combination of these ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cu	.30	.15
Zn	1.0	.5
Pb	.6	.3
Hg	.002	.001
Cd	.10	.05
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(c)(1) Except as provided in paragraph (c) of this section, there shall be no discharge of process wastewater to navigable water from mines and mills which employ dump, heap, in situ leach or vat leach processes for the extraction of copper from ores or ore waste materials. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equivalent to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

(d)(1) Except as provided in paragraph (d) of this section, there shall be no discharge of process wastewater to navigable waters from mills which extract gold or silver by use of the cyanidation process. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equivalent to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

(e) The concentration of pollutants discharged in mine drainage from mines producing 5,000 metric tons (5,512 short tons) or more of molybdenum bearing ores per year shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.3	.15
Zn	1.0	.5
Pb	.6	.3
As	1.0	.5
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0

(f) The concentration of pollutants discharged in mine drainage from mines producing less than 5,000 metric tons (5,512 short tons) or discharged from mills processing less than 5,000 metric tons (5,512 short tons) of molybdenum ores per year by methods other than ore leaching shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	50	30
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

(g) The concentration of pollutants discharged from mills processing 5,000 metric tons (5,512 short tons) or more of molybdenum ores per year by purely physical methods including ore crushing, washing, jigging, heavy media separation shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily value for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0

(h) The concentration of pollutants discharged from mills processing 5,000 metric tons (5,512 short tons) or more of molybdenum ores per year by froth flotation methods shall not exceed:

Effluent characteristics	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
TSS	30	20
Cd	.10	.05
Cu	.30	.15
Zn	1.0	.5
As	1.0	.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[47 FR 54609, Dec. 3, 1982, as amended at 53 FR 18788, May 24, 1988]

§ 440.103 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) The concentration of pollutants discharged in mine drainage from mines that produce copper, lead, zinc, gold, silver, or molybdenum bearing ores or any combination of these ores from open-pit or underground operations other than placer deposits shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cu	0.30	0.15
Zn	1.5	0.75
Pb	0.6	0.3
Hg	0.002	0.001
Cd	0.10	0.05

(b) The concentration of pollutants discharged from mills that use the froth-flotation process alone, or in conjunction with other processes, for the beneficiation of copper, lead, zinc, gold, silver, or molybdenum ores or any combination of these ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cu	0.30	0.15
Zn	1.0	0.5
Pb	0.6	0.3
Hg	0.002	0.001
Cd	0.10	0.05

(c)(1) Except as provided in paragraph (c) of this section, there shall be no discharge of process wastewater to navigable waters from mine areas and mills

processes and areas that use dump, heap, in situ leach or vat-leach processes to extract copper from ores or ore waste materials. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

(d)(1) Except as provided in paragraph (d) of this section, there shall be no discharge of process wastewater to navigable waters from mills that use the cyanidation process to extract gold or silver. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

[47 FR 54609, Dec. 3, 1982, as amended at 53 FR 18788, May 24, 1988]

§ 440.104 New source performance standards (NSPS).

Except as provided in subpart L of this part any new source subject to this subsection must achieve the following NSPS representing the degree of effluent reduction attainable by the application of the best available demonstrated technology (BADT):

(a) The concentration of pollutants discharged in mine drainage from mines that produce copper, lead, zinc, gold, silver, or molybdenum bearing ores or any combination of these ores from open-pit or underground operations other than placer deposits shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cu	0.30	0.15
Zn	1.5	0.75
Pb	0.6	0.3
Hg	0.002	0.001
Cd	0.10	0.05
pH	(1)	(1)
TSS	30.0	20.0

[1] Within the range 6.0 to 9.0.

(b)(1) Except as provided in paragraph (b) of this section, there shall be no discharge of process wastewater to navigable waters from mills that use the froth-flotation process alone, or in conjunction with other processes, for the beneficiation of copper, lead, zinc, gold, silver, or molybdenum ores or any combination of these ores. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2)(i) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

(ii) In the event there is a build up of contaminants in the recycle water which significantly interferes with the

ore recovery process and this interference can not be eliminated through appropriate treatment of the recycle water, the permitting authority may allow a discharge of process wastewater in an amount necessary to correct the interference problem after installation of appropriate treatment. This discharge shall be subject to the limitations of paragraph (a) of this section. The facility shall have the burden of demonstrating to the permitting authority that the discharge is necessary to eliminate interference in the ore recovery process and that the interference could not be eliminated through appropriate treatment of the recycle water.

(c)(1) Except as provided in paragraph (c) of this section, there shall be no discharge of process wastewater to navigable waters from mine areas and mills processes and areas that use dump, heap, in-situ leach or vat-leach processes to extract copper from ores or ore waste materials. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

(d)(1) Except as provided in paragraph (d) of this section, there shall be no discharge of process wastewater to navigable waters from mills that use the cyanidation process to extract gold or silver. The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982.

(2) In the event that the annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility exceeds the annual evaporation, a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation may be discharged subject to the limitations set forth in paragraph (a) of this section.

[47 FR 54609, Dec. 3, 1982, as amended at 53 FR 18788, May 24, 1988]

EFFECTIVE DATE NOTE: Paragraph (b)(2)(ii) of § 440.104 published at 47 FR 54609, Dec. 3, 1982, contains information collection requirements which will not become effective until Office of Management and Budget approval has been obtained.

§ 440.105 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart K—Platinum Ores Subcategory

§ 440.110 Applicability; description of the platinum ore subcategory.

The provisions of this subpart K are applicable to discharges from (a) mines that produce platinum ore and (b) mills that process platinum ore.

§ 440.111 [Reserved]

§ 440.112 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). [Reserved]

§ 440.113 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in subpart L of this part and 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the

following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) The concentration of pollutants discharged in mine drainage from mines that produce platinum bearing ores from open-pit or underground operations other than placer deposits shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cu	0.30	0.15
Zn	1.5	0.75
Pb	0.6	0.3
Hg	0.002	0.001
Cd	0.10	0.05

(b) The concentration of pollutants discharged from mills that use the froth-flotation process alone, or in conjunction with other processes, for the beneficiation of platinum ores shall not exceed:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter	
Cu	0.30	0.15
Zn	1.0	0.5
Pb	0.6	0.3
Hg	0.002	0.001
Cd	0.10	0.05

§ 440.114 New source performance standards (NSPS). [Reserved]

§ 440.115 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BTC). [Reserved]

Subpart L—General Provisions and Definitions

§ 440.130 Applicability.

Abbreviations and methods of analysis set forth in 40 CFR part 401 shall apply to part 440 except as provided in these general provisions and definitions. The general provisions and definitions in this subpart apply to all subparts of part 440 unless otherwise noted.

§ 440.131 General provisions.

(a) *Combined waste streams.* In the event that waste streams from various subparts or segments of subparts in part 440 are combined for treatment and discharge, the quantity and concentration of each pollutant or pollutant property in the combined discharge that is subject to effluent limitations shall not exceed the quantity and concentration of each pollutant or pollutant property that could have been discharged had each waste stream been treated separately. In addition, the discharge flow from the combined discharge shall not exceed the volume that could have been discharged had each waste stream been treated separately.

(b) *Storm exemption for facilities permitted to discharge.* If, as a result of precipitation or snowmelt, a source with an allowable discharge under 40 CFR part 440 has an overflow or excess discharge of effluent which does not meet the limitations of 40 CFR part 440, the source may qualify for an exemption from such limitations with respect to such discharge if the following conditions are met:

(1) The facility is designed, constructed and maintained to contain the maximum volume of wastewater which would be generated by the facility during a 24-hour period without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event or treat the maximum flow associated with these volumes. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the active mining area and runoff which is not diverted from the mill area.

(2) The facility takes all reasonable steps to maintain treatment of the

wastewater and minimize the amount of overflow.

(3) The facility complies with the notification requirements of § 122.60 (g) and (h). The storm exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the operator has the burden of demonstrating to the appropriate authority that the above conditions have been met.

(c) *Storm exemption for facilities not permitted to discharge.* If, as a result of precipitation (rainfall or snowmelt), a source which is not permitted to discharge under 40 CFR part 440, has an overflow or discharge which violates the limitations of 40 CFR part 440, the source may qualify for an exemption from such limitations with respect to such discharge if the following conditions are met:

(1) The facility is designed, constructed, and maintained to contain the maximum volume of wastewater stored and contained by the facility during normal operating conditions without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the facility must include the volume which would result from all areas contributing runoff to the individual treatment facility, i.e., all runoff that is not diverted from the area or process subject to zero discharge, and other runoff that is allowed to commingle with the influent to the treatment system.

(2) The facility takes all reasonable steps to minimize the overflow or excess discharge.

(3) The facility complies with the notification requirements of § 122.60(g) and (h). The storm exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the operator has the burden of demonstrating to the appropriate authority that the above conditions have been met.

(d) *pH adjustment.* (1) Where the application of neutralization and sedimentation technology to comply with relevant metal limitations results in an inability to comply with the pH range of 6 to 9, the permit issuer may allow the pH level in the final effluent to slightly exceed 9.0 so that the copper, lead, zinc, mercury, and cadmium limitations will be achieved.

(2) In the case of a discharge into natural receiving waters for which the pH, if unaltered by human activities, is or would be less than 6.0 and approved water quality standards authorize such lower pH, the pH limitations for the discharge may be adjusted downward to the pH water quality criterion for the receiving waters provided the other effluent limitations for the discharge are met. In no case shall a pH limitation below 5.0 be permitted.

(e) *Groundwater infiltration provision.* In the event a new source subject to a no discharge requirement can demonstrate that groundwater infiltration contributes a substantial amount of water to the tailing impoundment or wastewater holding facility, the permitting authority may allow the discharge of a volume of water equivalent to the amount of groundwater infiltration. This discharge shall be subject to the limitations for mine drainage applicable to the new source subcategory.

§ 440.132 General definitions.

(a) ''Active mining area'' is a place where work or other activity related to the extraction, removal, or recovery of metal ore is being conducted, except, with respect to surface mines, any area of land on or in which grading has been completed to return the earth to desired contour and reclamation work has begun.

(b) ''Annual precipitation'' and ''annual evaporation'' are the mean annual precipitation and mean annual lake evaporation, respectively, as established by the U.S. Department of Commerce, Environmental Science Services Administration, Environmental Data Services, or equivalent regional rainfall and evaporation data.

(c) ''Appropriate treatment of the recycle water'' in subpart J, § 440.104 includes, but is not limited to pH adjustment, settling and pH adjustment, settling, and mixed media filtration.

(d) ''Groundwater infiltration'' in § 440.131 means that water which enters the treatment facility as a result of the

interception of natural springs, aquifers, or run-off which percolates into the ground and seeps into the treatment facility's tailings pond or wastewater holding facility and that cannot be diverted by ditching or grouting the tailings pond or wastewater holding facility.

(e) ''In-situ leach methods'' means the processes involving the purposeful introduction of suitable leaching solutions into a uranium ore body to dissolve the valuable minerals in place and the purposeful leaching of uranium ore in a static or semistatic condition either by gravity through an open pile, or by flooding a confined ore pile. It does not include the natural dissolution of uranium by ground waters, the incidental leaching of uranium by mine drainage, nor the rehabilitation of aquifiers and the monitoring of these aquifiers.

(f) ''Mill'' is a preparation facility within which the metal ore is cleaned, concentrated, or otherwise processed before it is shipped to the customer, refiner, smelter, or manufacturer. A mill includes all ancillary operations and structures necessary to clean, concentrate, or otherwise process metal ore, such as ore and gangue storage areas and loading facilities.

(g) ''Mine'' is an active mining area, including all land and property placed under, or above the surface of such land, used in or resulting from the work of extracting metal ore or minerals from their natural deposits by any means or method, including secondary recovery of metal ore from refuse or other storage piles, wastes, or rock dumps and mill tailings derived from the mining, cleaning, or concentration of metal ores.

(h) ''Mine drainage'' means any water drained, pumped, or siphoned from a mine.

(i) ''Ten (10)-year, 24-hour precipitation event'' is the maximum 24-hour precipitation event with a probable recurrence interval of once in 10 years as established by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, or equivalent regional or rainfall probability information.

(j) ''U'' (Uranium) is measured by the procedure discussed in 40 CFR 141.25(b)(2), or an equivalent method.

Subpart M—Gold Placer Mine Subcategory

SOURCE: 53 FR 18788, May 24, 1988, unless otherwise noted.

§ 440.140 Applicability; description of the gold placer mine subcategory.

(a) The provisions of this subpart M are applicable to discharges from—

(1) Mines and dredges that produce gold or gold bearing ores from placer deposits; and

(2) The beneficiation processes which use gravity separation methods for recovering gold from placer deposits.

(b) The provisions of this subpart M are not applicable to any mines or beneficiation processes which process less than 1500 cubic yards (cu yd) of ore per year, or to dredges which process less than 50,000 cu yd of ore per year, or to dredges located in open waters (i.e., open bays, marine waters, or major rivers).

§ 440.141 Specialized definitions and provisions.

For the purpose of this subpart M, the general definitions, abbreviations, methods of analysis, and general provisions set forth in 40 CFR part 401 shall apply except as superseded by those below. The general provisions and definitions set forth in 40 CFR part 440, subpart L, shall not apply to this subpart.

(a) *Specialized definitions.* The following specialized definitions apply to this subpart only.

(1) ''Beneficiation area'' means the area of land used to stockpile ore immediately before the beneficiation process, the area of land used for the beneficiation process, the area of land used to stockpile the tailings immediately after the beneficiation process, and the area of land from the stockpiled tailings to the treatment system (e.g., holding pond or settling pond, and the area of the treatment system).

(2) ''Beneficiation process'' means the dressing or processing of gold bearing ores for the purpose of—

(i) Regulating the size of, or recovering, the ore or product,

(ii) Removing unwanted constituents from the ore, and

(iii) Improving the quality, purity, or assay grade of a desired product.

(3) ''Drainage water'' means incidental surface waters from diverse sources such as rainfall, snow melt or permafrost melt.

(4) ''Dredge'' means a self-contained combination of an elevating excavator (e.g., bucket line dredge), the beneficiation or gold-concentrating plant, and a tailings disposal plant, all mounted on a floating barge.

(5) ''Five (5) year, 6-hour precipitation event'' means the maximum 6-hour precipitation event with a probable recurrence interval of once in 5 years as established by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, or equivalent regional or rainfall probability information.

(6) ''Gravity separation methods'' means the treatment of mineral particles which exploits differences between their specific gravities. The separation is usually performed by means of sluices, jigs, classifiers, spirals, hydrocyclones, or shaking tables.

(7) ''Infiltration water'' means that water which permeates through the earth into the plant site.

(8) ''Mine'' means a place where work or other activity related to the extraction or recovery of ore is performed.

(9) ''Mine area'' means the land area from which overburden is stripped and ore is removed prior to moving the ore to the beneficiation area.

(10) ''Mine drainage'' means any water drained, pumped or siphoned from a mine.

(11) ''New water'' means water from any discrete source such as a river, creek, lake or well which is deliberately allowed or brought into the plant site.

(12) ''Open cut mine'' means any form of recovery of ore from the earth except by a dredge.

(13) ''Ore'' means gold placer deposit consisting of metallic gold-bearing gravels, which may be: residual, from weathering of rocks in-situ; river gravels in active streams; river gravels in abandoned and often buried channels; alluvial fans; sea-beaches; and sea-beaches now elevated and inland. Ore is the raw ''bank run'' material measured in place, before being moved by mechanical or hydraulic means to a beneficiation process.

(14) ''Permit area'' means the area of land specified or referred to in an NPDES permit in which active mining and related activities may occur that result in the discharge regulated under the terms of the permit. Usually this is specifically delineated in an NPDES permit or permit application, but in other cases may be ascertainable from an Alaska Tri-agency permit application or similar document specifying the mine location, mining plan and similar data.

(15) ''Plant site'' means the area occupied by the mine, necessary haulage ways from the mine to the beneficiation process, the beneficiation area, the area occupied by the wastewater treatment facilities and the storage areas for waste materials and solids removed from the wastewaters during treatment.

(16) ''Process wastewater'' means all water used in and resulting from the beneficiation process, including but not limited to the water used to move the ore to and through the beneficiation process, the water used to aid in classification, and the water used in gravity separation, mine drainage, and infiltration and drainage waters which commingle with mine drainage or waters resulting from the beneficiation process.

(17) ''Settleable solids'' means the particulate material (both organic or inorganic) which will settle in one hour expressed in milliliters per liter (ml/l) as determined using an Imhoff cone and the method described for Residue—Settleable in 40 CFR part 136.

(b) *Specialized provisions—storm exemption.* This specialized provision applies to this subpart M only. If, as a result of precipitation (rainfall or snowmelt), a source subject to this subpart has an overflow or discharge of effluent which does not meet the limitations or standards of this subpart, the source may qualify for an exemption from such limitations and standards with respect

to such discharge if the following conditions are met:

(1) The treatment system is designed, constructed, and maintained to contain the maximum volume of untreated process wastewater which would be discharged, stored, contained and used or recycled by the beneficiation process into the treatment system during a 4-hour operating period without an increase in volume from precipitation or infiltration, plus the maximum volume of water runoff resulting from a 5-year, 6-hour precipitation event. In computing the maximum volume of water which would result from a 5-year, 6-hour precipitation event, the operator must include the volume which would result from the plant site contributing runoff to the individual treatment facility.

(2) The operator takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow.

(3) The source is in compliance with the BMP in § 140.148 and related provisions of its NPDES permit.

(4) The operator complies with the notification requirements of § 122.41 (m) and (n) of this title. The storm exemption is designed to provide an affirmative defense to an enforcement action. Therefore, the operator has the burden of demonstrating to the appropriate authority that the above conditions have been met.

§ 440.142 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30—125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The concentration of pollutants discharged in process wastewater from an open-cut mine plant site shall not exceed:

Effluent limitations	
Effluent characteristics	Instantaneous maximum
Settleable solids	0.2 ml/l

(b) The concentration of pollutants discharged in process wastewater from a dredge plant site shall not exceed:

Effluent characteristics	Effluent limitations—Instantaneous maximum
Settleable solids	0.2 ml/l

§ 440.143 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) The volume of process wastewater which may be discharged from an open-cut mine plant site shall not exceed the volume of infiltration, drainage and mine drainage waters which is in excess of the make up water required for operation of the beneficiation process. The concentration of pollutants in process wastewaters discharged from an open-cut mine plant site shall not exceed:

Effluent characteristics	Effluent limitations—Instantaneous maximum
Settleable solids	0.2 ml/l

(b) The volume of process wastewater which may be discharged from a dredge plant site shall not exceed the volume of infiltration, drainage and mine drainage waters which is in excess of the make up water required for operation of the beneficiation process. The concentration of pollutants in process wastewater discharged from a dredge plant site shall not exceed:

Effluent characteristics	Effluent limitations—Instantaneous maximum
Settleable solids	0.2 ml/l

§ 440.144 New Source Performance Standards (NSPS).

Any new source subject to this subpart must achieve the following NSPS representing the degree of effluent reduction attainable by the application of the best available demonstrated technology:

(a) The volume of process wastewater which may be discharged from an open-cut mine plant site shall not exceed the volume of infiltration, drainage and mine drainage waters which is in excess of the make up water required for operation of the beneficiation process. The concentration of pollutants in process wastewaters discharged from an open-cut mine plant site shall not exceed:

Effluent characteristics	Effluent limitations—Instantaneous maximum
Settleable solids	0.2 ml/l

(b) The volume of process wastewater which may be discharged from a dredge plant site shall not exceed the volume of infiltration, drainage and mine drainage waters which is in excess of the make up water required for operation of the beneficiation process. The concentration of pollutants in process wastewater discharged from a dredge plant site shall not exceed:

Effluent characteristics	Effluent limitations—Instantaneous maximum
Settleable solids	0.2 ml/l

(c) Notwithstanding any other provision of this chapter, the Regional Administrator or Director of a State agency with authority to administer the NPDES program shall in designating new source gold placer mines, take into account and base the decision on whether one or more of the following factors has occurred after May 24, 1988.

(1) The mine will operate outside of the permit area which is covered by a currently valid NPDES Permit.

(2) The mine significantly alters the nature or quantity of pollutants discharged.

(3) The mine discharges into a stream into which it has not discharged under its currently valid NPDES permit.

(4) The mine will operate in a permit area that has not been mined during the term of the currently valid NPDES permit.

(5) Such other factors as the Regional Administrator or state Director deems relevant.

§§ 440.145—440.147 [Reserved]

§ 440.148 Best Management Practices (BMP).

The following best management practices are specific requirements which shall be included in each NPDES permit for all mining operations regulated under this subpart to the greatest extent applicable in each such mining operation.

(a) *Surface water diversion:* The flow of surface waters into the plant site shall be interrupted and these waters diverted around and away from incursion into the plant site.

(b) *Berm construction:* Berms, including any pond walls, dikes, low dams and similar water retention structures shall be constructed in a manner such that they are reasonably expected to reject the passage of water.

(c) *Pollutant materials storage:* Measures shall be taken to assure that pollutant materials removed from the process water and wastewater streams will be retained in storge areas and not discharged or released to the waters of the United States.

(d) *New water control:* The amount of new water allowed to enter the plant site for use in ore processing shall be limited to the minimum amount required as make-up water for processing operations.

(e) *Maintenance of water control and solids retention devices:* All water control devices such as diversion structures and berms and all solids retention structures such as berms, dikes, pond structures and dams shall be maintained to continue their effectiveness and to protect from unexpected and catastrophic failure.

PART 443—EFFLUENT LIMITATIONS GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR THE PAVING AND ROOFING MATERIALS (TARS AND ASPHALT) POINT SOURCE CATEGORY

Subpart A—Asphalt Emulsion Subcategory

Sec.
443.10 Applicability; description of the asphalt emulsion subcategory.
443.11 Specialized definitions.
443.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
443.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
443.14 [Reserved]
443.15 Standards of performance for new sources.
443.16 Pretreatment standards for new sources.

Subpart B—Asphalt Concrete Subcategory

443.20 Applicability; description of the asphalt concrete subcategory.
443.21 Specialized definitions.
443.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
443.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
443.24 [Reserved]
443.25 Standards of performance for new sources.
443.26 Pretreatment standard for new sources.

Subpart C—Asphalt Roofing Subcategory

443.30 Applicability; description of the asphalt roofing subcategory.
443.31 Specialized definitions.
443.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
443.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
443.34 [Reserved]
443.35 Standards of performance for new sources.
443.36 Pretreatment standard for new sources.

Subpart D—Linoleum and Printed Asphalt Felt Subcategory

443.40 Applicability; description of the linoleum and printed asphalt felt subcategory.
443.41 Specialized definitions.
443.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
443.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
443.44 [Reserved]
443.45 Standards of performance for new sources.
443.46 Pretreatment standards for new sources.

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

SOURCE: 40 FR 31191, July 24, 1975, unless otherwise noted.

Subpart A—Asphalt Emulsion Subcategory

§ 443.10 Applicability; description of the asphalt emulsion subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of asphalt paving and roofing emulsions.

§ 443.11 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''production area size'' shall mean that area in which the oxidation towers, loading facilities, and all buildings that house product processes are located.

(c) The term ''process wastewater pollutants'' shall mean any pollutants present in the process wastewaters and rainwater runoff.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/cu m of runoff)	
Oil and grease	0.020	0.015
pH	(1)	(1)
	English units (lb/1,000 gal of runoff)	
Oil and grease	0.167	0.125
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 31191, July 24, 1975, as amended at 60 FR 33969, June 29, 1995]

§ 443.13 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, 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/cu m of runoff)	
TSS	0.023	0.015
Oil and grease	0.015	0.010
pH	(1)	(1)
	English units (lb/1,000 gal of runoff)	
TSS	0.188	0.125
Oil and grease	0.125	0.083
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 443.14 [Reserved]

§ 443.15 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/cu m of runoff)	
TSS	0.023	0.015
Oil and grease	0.015	0.010
pH	(1)	(1)
	English units (lb/1,000 gal of runoff)	
TSS	0.188	0.125
Oil and grease	0.125	0.083
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 443.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
pH	Do.
Oil and grease	100 mg/l.

[40 FR 31191, July 24, 1975, as amended at 60 FR 33969, June 29, 1995]

Subpart B—Asphalt Concrete Subcategory

§ 443.20 Applicability; description of the asphalt concrete subcategory.

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

§ 443.21 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''process wastewater'' shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product, or product used in or resulting from the production of paving asphalt concrete.

(c) The term ''process wastewater pollutants'' shall mean any pollutants present in the process wastewater.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants to navigable waters.

[60 FR 33969, June 29, 1995]

§ 443.23 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 wastewater pollutants to navigable waters.

§ 443.24 [Reserved]

§ 443.25 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 wastewater pollutants to navigable waters.

§ 443.26 Pretreatment standard for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
pH	Do.
Oil and grease	100 mg/l.

[40 FR 31191, July 24, 1975, as amended at 60 FR 33969, June 29, 1995]

Subpart C—Asphalt Roofing Subcategory

§ 443.30 Applicability; description of the asphalt roofing subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of asphalt roofing materials.

§ 443.31 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''process wastewater'' shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product, or product used in or resulting from the production of asphalt roofing materials.

(c) The term ''process wastewater pollutants'' shall mean any pollutants present in the process wastewater.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.056	0.038
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.056	0.038
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 31191, July 24, 1975, as amended at 60 FR 33969, June 29, 1995]

§ 443.33 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.028	0.019
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.028	0.019
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 443.34 [Reserved]

§ 443.35 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.028	0.019
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.028	0.019
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 443.36 Pretreatment standard for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD*5*	No limitation.
TSS	Do.
pH	Do.
Oil and grease	100 mg/l.

[40 FR 31191, July 24, 1975, as amended at 60 FR 33969, June 29, 1995]

Subpart D—Linoleum and Printed Asphalt Felt Subcategory

§ 443.40 Applicability; description of the linoleum and printed asphalt felt subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of Linoleum and Printed Asphalt Felt floor coverings.

§ 443.41 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''process wastewater'' shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product, or product used in or resulting from the production of linoleum and printed asphalt felt floor coverings.

(c) The term ''process wastewater pollutants'' shall mean any pollutants present in the process wastewater.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.038	0.025
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.038	0.025
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[40 FR 31191, July 24, 1975, as amended at 60 FR 33970, June 29, 1995]

§ 443.43 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, 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 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
TSS	0.019	0.013
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.019	0.013
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 443.44 [Reserved]

§ 443.45 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:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/kkg of product)	
pH	(1)	(1)
	English units (lb/1,000 lb of product)	
TSS	0.019	0.013
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

§ 443.46 Pretreatment standard for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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 standard
BOD5	No limitation.
TSS	Do.
pH	Do.
Oil and grease	100 mg/l.

[40 FR 31191, July 24, 1975, as amended at 60 FR 33970, June 29, 1995]

PART 446—PAINT FORMULATING POINT SOURCE CATEGORY

Subpart A—Oil-Base Solvent Wash Paint Subcategory

Sec.
446.10 Applicability; description of the oil-base solvent wash paint subcategory.
446.11 Specialized definitions.
446.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
446.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
446.14 [Reserved]
446.15 Standards of performance for new sources.
446.16 Pretreatment standards for new sources.

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

SOURCE: 40 FR 31725, July 28, 1975, unless otherwise noted.

Subpart A—Oil-Base Solvent Wash Paint Subcategory

§ 446.10 Applicability; description of the oil-base solvent wash paint subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of oil-base paint where the tank cleaning is performed using solvents. When a plant is subject to effluent limitations covering more than

one subcategory the discharge limitation shall be the aggregate of the limitations applicable to the total production covered in each subcategory.

§ 446.11 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants to navigable waters.

[60 FR 33970, June 29, 1995]

§ 446.13 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.

§ 446.14 [Reserved]

§ 446.15 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.

§ 446.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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: There shall be no discharge of process water pollutants to a publicly owned treatment works.

[60 FR 33970, June 29, 1995]

PART 447—INK FORMULATING POINT SOURCE CATEGORY

Subpart A—Oil-Base Solvent Wash Ink Subcategory

Sec.
447.10 Applicability; description of the oil-base solvent wash ink subcategory.
447.11 Specialized definitions.
447.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
447.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
447.14 [Reserved]
447.15 Standards of performance for new sources.
447.16 Pretreatment standards for new sources.

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

SOURCE: 40 FR 31727, July 28, 1975, unless otherwise noted.

Subpart A—Oil-Base Solvent Wash Ink Subcategory

§ 447.10 Applicability; description of the oil-base solvent wash ink subcategory.

The provisions of this subpart are applicable to discharges resulting from

the production of oil-base ink where the tank washing system uses solvents. When a plant is subject to effluent limitations covering more than one subcategory the discharge limitation shall be the aggregate of the limitations applicable to the total production covered in each subcategory.

§ 447.11 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.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants to navigable waters.

[60 FR 33970, June 29, 1995]

§ 447.13 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.

§ 447.14 [Reserved]

§ 447.15 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.

§ 447.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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: There shall be no discharge of process water pollutants to a publicly owned treatment works.

[60 FR 33970, June 29, 1995]

PART 454—GUM AND WOOD CHEMICALS MANUFACTURING POINT SOURCE CATEGORY

Subpart A—Char and Charcoal Briquets Subcategory

Sec.
454.10 Applicability; description of the manufacture of char and charcoal briquets subcategory.
454.11 Specialized definitions.
454.12 Effluent limitations and guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart B—Gum Rosin and Turpentine Subcategory

454.20 Applicability; description of the manufacture of gum rosin and turpentine subcategory.
454.21 Specialized definitions.
454.22 Effluent limitations and guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart C—Wood Rosin, Turpentine and Pine Oil Subcategory

454.30 Applicability; description of the manufacture of wood rosin, turpentine and pine oil subcategory.
454.31 Specialized definitions.

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

Subpart D—Tall Oil Rosin, Pitch and Fatty Acids Subcategory

454.40 Applicability; description of the manufacture of tall oil rosin, pitch and fatty acids subcategory.
454.41 Specialized definitions.
454.42 Effluent limitations and guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart E—Essential Oils Subcategory

454.50 Applicability; description of the essential oils subcategory.
454.51 Specialized definitions.
454.52 Effluent limitations and guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Subpart F—Rosin-Based Derivatives Subcategory

454.60 Applicability; description of manufacture of rosin-based derivatives subcategory.
454.61 Specialized definitions.
454.62 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 Act, 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).

SOURCE: 41 FR 20511, May 18, 1976, unless otherwise noted.

Subpart A—Char and Charcoal Briquets Subcategory

§ 454.10 Applicability; description of the manufacture of char and charcoal briquets subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of char and charcoal briquets.

§ 454.11 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''product'' shall mean char and charcoal briquets.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 char and charcoal briquets by a point source subject to the provisions of this paragraph after application of the best practicable control technology currently available: There shall be no discharge of process wastewater pollutants to navigable waters.

[41 FR 20511, May 18, 1976, as amended at 60 FR 33970, June 29, 1995]

Subpart B—Gum Rosin and Turpentine Subcategory

§ 454.20 Applicability; description of the manufacture of gum rosin and turpentine subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of gum rosin and turpentine.

§ 454.21 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 ''product'' shall mean gum rosin and turpentine.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 gum rosin and turpentine by a point source subject to the provisions of this paragraph after application of the best practicable 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—
BOD5	1.42	0.755
TSS	0.077	0.026
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[41 FR 20511, May 18, 1976, as amended at 60 FR 33970, June 29, 1995]

Subpart C—Wood Rosin, Turpentine and Pine Oil Subcategory

§ 454.30 Applicability; description of the manufacture of wood rosin, turpentine and pine oil subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of wood rosin, turpentine and pine oil subcategory.

§ 454.31 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 part 401 shall apply to this subpart.

(b) The term ''product'' shall mean products from wood rosin, turpentine and pine oil.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 wood rosin, turpentine and pine oil by a point source subject to the provisions of this paragraph after application of the best practicable 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—
BOD5	2.08	1.10
TSS	1.38	0.475
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[41 FR 20511, May 18, 1976, as amended at 60 FR 33970, June 29, 1995]

Subpart D—Tall Oil Rosin, Pitch and Fatty Acids Subcategory

§ 454.40 Applicability; description of manufacture of tall oil rosin, pitch and fatty acids subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of tall oil rosin, pitch and fatty acids.

§ 454.41 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) The term ''product'' shall mean tall oil rosin, pitch and fatty acids.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 tall oil rosin, pitch and fatty acids by a point source subject to the provisions of this paragraph after application of the best practicable 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—
BOD5	0.995	0.529
TSS	0.705	0.243
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

[41 FR 20511, May 18, 1976, as amended at 60 FR 33971, June 29, 1995]

Subpart E—Essential Oils Subcategory

§ 454.50 Applicability; description of the essential oils subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of essential oils.

§ 454.51 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) The term ''product'' shall mean essential oils.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 essential oils by a point source subject to the provisions of this paragraph after application of the best practicable 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—
BOD5	22.7	12.0
TSS	9.01	3.11
pH	(1)	(1)

1 Within the range 6.0 to 9.0.

[41 FR 20511, May 18, 1976, as amended at 60 FR 33971, June 29, 1995]

Subpart F—Rosin-Based Derivatives Subcategory

§ 454.60 Applicability; description of manufacture of rosin-based derivatives subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of rosin-based derivatives.

§ 454.61 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.

(b) The term ''product'' shall mean rosin-based derivatives.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 rosin-based derivatives by a point source subject to the provisions of this paragraph after application of the best practicable 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—
BOD5	1.41	0.748
TSS	0.045	0.015
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[41 FR 20511, May 18, 1976, as amended at 60 FR 33971, June 29, 1995]

PART 455—PESTICIDE CHEMICALS

Sec.
455.10 General definitions.

Subpart A—Organic Pesticide Chemicals Manufacturing Subcategory

455.11 Compliance date for pretreatment standards for existing sources (PSES).
455.20 Applicability; description of the organic pesticide chemicals manufacturing subcategory.
455.21 Specialized definitions.
455.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
455.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
455.24 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).
455.25 New source performance standards (NSPS).
455.26 Pretreatment standards for existing sources (PSES).
455.27 Pretreatment standards for new sources (PSNS).

Subpart B—Metallo-Organic Pesticide Chemicals Manufacturing Subcategory

455.30 Applicability; description of the metallo-organic pesticide chemicals manufacturing subcategory.
455.31 Specialized definitions.
455.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
455.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
455.34 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT). [Reserved]
455.35 New source performance standards (NSPS). [Reserved]
455.36 Pretreatment standards for existing sources (PSES). [Reserved]
455.37 Pretreatment standards for new sources (PSNS). [Reserved]

Subpart C—Pesticide Chemicals Formulating and Packaging Subcategory

455.40 Applicability; description of the pesticide formulating, packaging and repackaging subcategory.
455.41 Special definitions.
455.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, (BPT).
455.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

455.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).
455.45 New source performance standards (NSPS).
455.46 Pretreatment standards for existing sources (PSES).
455.47 Pretreatment standards for new sources (PSNS).

Subpart D—Test Methods for Pesticide Pollutants

455.50 Identification of test procedures.

Subpart E—Repackaging of Agricultural Pesticides Performed at Refilling Establishments

455.60 Applicability; description of the repackaging of agricultural pesticides performed by refilling establishments subcategory.
455.61 Special definitions.
455.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable pollutant control technology (BPT).
455.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
455.64 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
455.65 New source performance standards (NSPS).
455.66 Pretreatment standards for existing sources (PSES).
455.67 Pretreatment standards for new sources (PSNS).
TABLE 1 TO PART 455—LIST OF ORGANIC PESTICIDE ACTIVE INGREDIENTS
TABLE 2 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT EFFLUENT LIMITATIONS BEST AVAILABLE TECHNOLOGY ECONOMICALLY ACHIEVABLE (BAT) AND PRETREATMENT STANDARDS FOR EXISTING SOURCES (PSES)
TABLE 3 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS)
TABLE 4 TO PART 455—BAT AND NSPS EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANTS FOR DIRECT DISCHARGE POINT SOURCES THAT USE END-OF-PIPE BIOLOGICAL TREATMENT
TABLE 5 TO PART 455, SUBPART A—BAT AND NSPS EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANTS FOR DIRECT DISCHARGE POINT SOURCES THAT DO NOT USE END-OF-PIPE BIOLOGICAL TREATMENT
TABLE 6 TO PART 455—PSES AND PSNS FOR PRIORITY POLLUTANTS
TABLE 7 TO PART 455—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS
TABLE 8 TO PART 455—LIST OF POLLUTION PREVENTION ALTERNATIVE PRACTICES
TABLE 9 TO PART455—GROUP 2MIXTURES
TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES

AUTHORITY: Secs. 301, 304, 306, 307, and 501, Pub. L. 92–500, 86 Stat. 816, Pub. L. 95–217, 91 Stat. 156, and Pub. L. 100–4 (33 U.S.C. 1311, 1314, 1316, 1317, and 1361).

SOURCE: 43 FR 17776, Apr. 25, 1978, unless otherwise noted.

§ 455.10 General definitions.

As used in this part:

(a)(1) *Pesticide* means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.

(b) *Active ingredient* means an ingredient of a pesticide which is intended to prevent, destroy, repel, or mitigate any pest.

(c) *Pesticide chemicals* means the sum of all active ingredients manufactured at each facility covered by this part.

(d) *Pest* means: (1) Any insect, rodent, nematode, fungus, weed, or (2) any other form of terrestrial or aquatic plant or animal life or virus, bacteria, or other micro-organism (except virusus, bacteria, or other micro-organisms on or in living man or other living animals) which the Administrator declares to be a pest under section 25(c)(1) of Pub. L. 94–140, Federal Insecticide, Fungicide and Rodenticide Act.

(e) Except as provided in this regulation, the general definitions, abbreviations and methods of analysis set forth in part 401 of this chapter shall apply to this part.

(f) *Priority Pollutants* means the toxic pollutants listed in 40 CFR part 423, appendix A.

(g) *Appropriate pollution control technology* means the wastewater treatment technology listed in Table 10 to this part 455 for a particular PAI(s) including an emulsion breaking step prior to the listed technology when emulsions are present in the wastewater to be treated.

(h) *Equivalent system* means a wastewater treatment system that is demonstrated in literature, treatability tests or self-monitoring data to remove a similar level of pesticide active ingredient (PAI) or priority pollutants as the applicable appropriate pollution control technology listed in Table 10 to this part 455.

(i) *Formulation* of pesticide products means the process of mixing, blending or diluting one or more pesticide active ingredients (PAIs) with one or more active or inert ingredients, without an intended chemical reaction to obtain a manufacturing use product or an end use product.

(j) *Group 1 mixtures* means any product whose only pesticidal active ingredient(s) is: a common food/food constituent or non-toxic household item; or is a substance that is generally recognized as safe (GRAS) by the Food and Drug Administration (21 CFR 170.30, 182, 184, and 186) in accordance with good manufacturing practices, as defined by 21 CFR part 182; or is exempt from FIFRA under 40 CFR 152.25.

(k) *Group 2 mixtures* means those chemicals listed in Table 9 to this part 455.

(l) *Inorganic wastewater treatment chemicals* means inorganic chemicals that are commonly used in wastewater treatment systems to aid in the removal of pollutants through physical/chemical technologies such as chemical precipitation, flocculation, neutralization, chemical oxidation, hydrolysis and/or adsorption.

(m) *Interior wastewater sources* means wastewater that is generated from cleaning or rinsing the interior of pesticide formulating, packaging or repackaging equipment; or from rinsing the interior of raw material drums, shipping containers or bulk storage tanks; or cooling water that comes in direct contact with pesticide active ingredients (PAIs) during the formulating, packaging or repackaging process.

(n) *Microorganisms* means registered pesticide active ingredients that are biological control agents listed in 40 CFR 152.20(a)(3) including Eucaryotes (protozoa, algae, fungi), Procaryotes (bacteria), and Viruses.

(o) *Packaging* of pesticide products means enclosing or placing a formulated pesticide product into a marketable container.

(p) *PFPR/Manufacturer* means a pesticide formulating, packaging and repackaging facility that also performs pesticide manufacturing on-site and commingles their PFPR process wastewaters and pesticide manufacturing process wastewaters.

(q) *Pool chemicals* means pesticide products that are intended to disinfect or sanitize, reducing or mitigating growth or development of microbiological organisms including bacteria, algae, fungi or viruses in the water of swimming pools, hot tubs, spas or other such areas, in the household and/or institutional environment, as provided in the directions for use on the product label.

(r) *Refilling establishment* means an establishment where the activity of repackaging pesticide product into refillable containers occurs.

(s) *Repackaging of pesticide products* means the transfer of a pesticide formulation (or PAI) from one container to another without a change in composition of the formulation or the labeling content, for sale or distribution.

(t) *Sanitizer products* means pesticide products that are intended to disinfect or sanitize, reducing or mitigating growth or development of microbiological organisms including bacteria, fungi or viruses on inanimate surfaces in the household, institutional, and/or commercial environment and whose labeled directions for use result in the product being discharged to Publicly Owned Treatment Works (POTWs). This definition shall also include sanitizer solutions as defined by 21 CFR 178.1010 and pool chemicals as defined in this section (455.10(q)). This definition does not include liquid chemical sterilants (including sporicidals) exempted by § 455.40(f) or otherwise, industrial preservatives, and water treatment microbiocides other than pool chemicals.

(u) *Stand-alone PFPR facility* means a PFPR facility where either: No pesticide manufacturing occurs; or where pesticide manufacturing process wastewaters are not commingled with PFPR process wastewaters. Such facilities may formulate, package or repackage or manufacture other non-pesticide

chemical products and be considered a ''stand-alone'' PFPR facility.

[43 FR 17776, Apr. 25, 1978, as amended at 50 FR 40701, Oct. 4, 1985; 51 FR 44911, Dec. 15, 1986; 58 FR 50689, Sept. 28, 1993; 61 FR 57548, Nov. 6, 1996]

Subpart A—Organic Pesticide Chemicals Manufacturing Subcategory

SOURCE: 43 FR 44846, Sept. 29, 1978, unless otherwise noted.

§ 455.11 Compliance date for pretreatment standards for existing sources (PSES).

All discharges subject to pretreatment standards for existing sources (PSES) in subparts A and B of this part must comply with the standards no later than September 28, 1993.

[61 FR 57549, Nov. 6, 1996]

§ 455.20 Applicability; description of the organic pesticide chemicals manufacturing subcategory.

(a) For the purpose of calculating and applying effluent limitations for COD, BOD5, and TSS, and applying pH limits under BPT (§ 455.22), BCT (§ 455.23), and NSPS (§ 455.25), the provisions of this subpart are applicable to discharges resulting from the manufacture of organic pesticide active ingredients and organo-tin pesticide active ingredients, excluding the following: Allethrin; Benzyl Benzoate; Bisethylxanthogen; Chlorophacinone; Coumafuryl; Dimethyl Phthalate; Diphacinone; Endothall Acid; EXD (Herbisan); Gibberellic Acid; Glyphosate; Naphthalene Acetic Acid; Propargite; 1,8 Naphthalic Anhydride; Quinmethionate; Rotenone; Sulfoxide; Triazine compounds (both symmetrical and asymmetrical); and Warfarin and similar anticoagulants. Provided, however, that the effluent limitations of this subpart for BOD5 and TSS, but not COD, apply to manufacturers of Ametryn, Prometon, Prometryn, Terbutryn, Cyanazine, Atrazine, Propazine, Simazine, Terbuthylazine, Hexazinone, and Glyphosate.

(b) For the purpose of calculating BPT effluent limitations for organic Pesticide chemicals, the provisions of this subpart are applicable to discharges resulting from the manufacture of the following organic active ingredients: Aldrin, BHC, Captan, Chlordane, DDD, DDE, DDT, Dichloran, Dieldrin, Endosulfan, Endrin, Heptachlor, Lindane, Methoxychlor, Mirex, PCNB, Toxaphene, Trifluralin, Azinphos Methyl, Demeton-O, Demeton-S, Diazinon, Disulfoton, Malathion, Parathion Methyl, Parathion Ethyl, Aminocarb, Carbaryl, Methiocarb, Mexacarbate, Propoxur, Barban, Chlorpropham, Diuron, Fenuron, Fenuron-TCA, Linuron, Monuron, Monuron-TCA, Neubron, Propham, Swep, 2,4-D, Dicamba, Silvex, 2,4,5-T, Siduron, Perthane, and Dicofol.

(c) The intermediates used to manufacture the active ingredients and active ingredients used solely in experimental pesticides are excluded from coverage in this subpart. Insecticidal pathogenic organisms such as Bacillus thuringiensis, insect growth hormones, plant extracts such as pyrethrins; sex attractants and botanicals such as Rotenone are also excluded from BPT coverage in this subpart.

(d) A plant that manufactures a pesticide active ingredient listed in Table 1 of this part must comply with the BAT effluent limitations and new source performance and pretreatment standards for that pesticide active ingredient listed in table 2 (BAT and PSES) or Table 3 of this part (NSPS and PSNS). A plant that manufactures a pesticide active ingredient listed in Table 1 of this part must also comply with the BAT effluent limitations and new source performance and pretreatment standards for priority pollutants listed in Tables 4, 5 and 6 of this part. The limitations in Table 4 of this part (BAT and NSPS) are applicable to existing and new direct discharge point sources that use End-of-Pipe biological treatment. The limitations in Table 5 of this part (BAT and NSPS) are applicable to existing and new direct discharge point sources that do not use end-of-pipe biological treatment. The limitations in Table 6 of this part (PSES and PSNS) are applicable to existing and new sources that discharge to Publicly Owned Treatment Works.

(e) In the case of lead and total cyanide, the discharge quantity (mass) shall be determined by multiplying the concentrations listed in the applicable tables in this subpart times the flow from non-complexed lead-bearing waste streams for lead and times the flow from non-complexed cyanide-bearing waste streams for total cyanide. Discharges of cyanide in cyanide-bearing waste streams are not subject to the cyanide limitation and standards of this subpart if the permit writer or control authority determines that the cyanide limitations and standards are not achievable due to elevated levels of non-amenable cyanide (i.e., cyanide that is not oxidized by chlorine treatment) that result from the unavoidable complexing of cyanide at the process source of the cyanide-bearing waste stream and establishes an alternative total cyanide or amenable cyanide limitation that reflects the best available technology economically achievable. The determination must be based upon a review of relevant engineering, production, and sampling and analysis information, including measurements of both total and amenable cyanide in the waste stream. An analysis of the extent of complexing in the waste stream, based on the foregoing information, and its impact on cyanide treatability shall be set forth in writing and, for direct dischargers, be contained in the fact sheet required by 40 CFR 124.8.

[43 FR 44846, Sept. 29, 1978, as amended at 50 FR 40702, Oct. 4, 1985; 51 FR 44911, Dec. 15, 1986; 58 FR 50689, Sept. 28, 1993]

§ 455.21 Specialized definitions.

(a) *Organic active ingredients* means carbon-containing active ingredients used in pesticides, excluding metalloorganic active ingredients.

(b) *Total organic active ingredients* means the sum of all organic active ingredients covered by § 455.20(a) which are manufactured at a facility subject to this subpart.

(c) *Organic pesticide chemicals* means the sum of all organic active ingredients listed in § 455.20(b) which are manufactured at a facility subject to this subpart.

(d) *Process wastewater flow* means the sum of the average daily flows from the following wastewater streams: Process stream and product washes, equipment and floor washes, water used as solvent for raw materials, water used as reaction medium, spent acids, spent bases, contact cooling water, water of reaction, air pollution control blowdown, steam jet blowdown, vacuum pump water, pump seal water, safety equipment cleaning water, shipping container cleanout, safety shower water, contaminated storm water, and product/process laboratory quality control wastewater. Notwithstanding any other regulation, process wastewater flow for the purposes of this subpart does not include wastewaters from the production of intermediate chemicals.

(e) *Process wastewater pollutants* means those pollutants present in process wastewater flow.

[43 FR 44846, Sept. 29, 1978, as amended at 58 FR 50689, Sept. 28, 1993]

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). 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 organic active ingredient:

Effluent characteristics	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
COD	13.000	9.0000
BOD*5*	7.400	1.6000
TSS	6.100	1.8000
Organic pesticide chemicals	.010	.0018
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0.

NOTE: For COD, BOD*5*, and TSS, metric units: Kilogram/1,000 kg of total organic active ingredients. English units: Pound/1,000 lb of total organic active ingredients. For organic pesticide chemicals—metric units: Kilogram/1,000 kg of organic pesticide chemicals. English units: Pound/1,000 lb of organic pesticide chemicals.

[43 FR 44846, Sept. 29, 1978, as amended at 60 FR 33971, June 29, 1995]

§ 455.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology: The limitations for BOD, TSS and pH are the same as those specified in 40 CFR 455.22.

BCT EFFLUENT LIMITATIONS

Effluent Limitations

Pollutant or pollutant property	Maximum for any one day**	Average of daily values shall not exceed**
BOD5	7.400	1.6000
TSS	6.100	1.8000
pH	*	*

*Within the range 6.0 to 9.0

**Metric units: Kilogram pollutant/1,000 kg of total organic active ingredients.

English units: Pound pollutant/1,000 lb of total organic active ingredients

[58 FR 50689, Sept. 28, 1993]

§ 455.24 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology as specified in 40 CFR 455.20(d). For the priority pollutants, such sources must achieve discharges not exceeding the quantity (mass) determined by multipying the process wastewater flow subject to this subpart as defined in 40 CFR 455.21 (d) times the concentrations listed in table 4 or table 5 of this part, as appropriate, of this subpart.

[58 FR 50690, Sept. 28, 1993]

§ 455.25 New source performance standards (NSPS).

(a) Any new source subject to this subpart which discharges process wastewater pollutants must achieve the new source performance standards specified in 40 CFR 455.20(d), and subject to 455.20(a), must meet the following standards for BOD5, TSS, COD and pH:

NEW SOURCE PERFORMANCE STANDARDS

Standards

Pollutant or pollutant property	Maximum for any one day**	Average of daily values shall not exceed**
COD	9.360	6.480
BOD5	5.328	1.1520
TSS	4.392	1.2960
pH	*	*

*Within the range 6.0 to 9.0

**Metric units: Kilogram pollutant /1,000 kg of total organic active ingredients.

English units: Pound pollutant/1,000 lb of total organic active ingredients

(b) For the priority pollutants, such sources must achieve discharges not exceeding the quantity (mass) determined by multiplying the process wastewater flow subject to this subpart as defined in 40 CFR 455.21(d) times the concentrations listed in table 4 or table 5 of this part, as appropriate, of this subpart.

[58 FR 50690, Sept. 28, 1993]

§ 455.26 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for existing sources (PSES) as specified in 40 CFR 455.20(d). For the priority pollutants, such sources must achieve discharges not exceeding the quantity (mass) determined by multiplying the process wastewater flow subject to this subpart as defined in 40 CFR 455.21(d) times the concentrations listed in Table 6 of this part. If mass limitations have not been developed as required, the source shall achieve discharges not

exceeding the concentration limitations listed in Table 6 of this part.

[58 FR 50690, Sept. 28, 1993]

§ 455.27 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and must achieve the pretreatment standards for new sources (PSNS) as specified in 40 CFR 455.20(d). For the priority pollutants, the source must achieve discharges not exceeding the quantity (mass) determined by multiplying the process wastewater flow subject to this subpart as defined in 40 CFR 455.21(d) times the concentrations listed in table 6 of this part. If mass limitations have not been developed as required, the source shall achieve discharges not exceeding the concentration limitations listed in table 6 of this part.

[58 FR 50690, Sept. 28, 1993]

Subpart B—Metallo-Organic Pesticide Chemicals Manufacturing Subcategory

§ 455.30 Applicability; description of the metallo-organic pesticide chemicals manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the manufacture of metallo-organic active ingredients containing mercury, cadmium, arsenic, or copper. The manufacture of intermediates used to manufacture the active ingredients are excluded from coverage by this subpart.

§ 455.31 Specialized definitions.

(a) ''Metallo-organic active ingredients'' means carbon containing active ingredients containing one or more metallic atoms in the structure.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart, shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). 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 metallo-organic active ingredient: There shall be no discharge of process waste water pollutants to navigable waters.

[60 FR 33971, June 29, 1995]

§ 455.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 455.34 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT). [Reserved]

§ 455.35 New source performance standards (NSPS). [Reserved]

§ 455.36 Pretreatment standards for existing sources (PSES). [Reserved]

§ 455.37 Pretreatment standards for new sources (PSNS). [Reserved]

Subpart C—Pesticide Chemicals Formulating and Packaging Subcategory

§ 455.40 Applicability; description of the pesticide formulating, packaging and repackaging subcategory.

(a) The provisions of this subpart are applicable to discharges resulting from all pesticide formulating, packaging and repackaging operations except as provided in paragraphs (b), (c), (d), (e) and (f) of this section.

(b) The provisions of this subpart do not apply to repackaging of agricultural pesticides performed at refilling establishments, as described in § 455.60.

(c) The provisions of this subpart do not apply to wastewater discharges from: the operation of employee showers and laundry facilities; the testing of fire protection equipment; the testing and emergency operation of safety

showers and eye washes; storm water; Department of Transportation (DOT) aerosol leak test bath water from non-continuous overflow baths (batch baths) where no cans have burst from the time of the last water change-out; and on-site laboratories from cleaning analytical equipment and glassware and rinsing the retain sample container (except for the initial rinse of the retain sample container which is considered a process wastewater source for this subpart).

(d) The provisions of this subpart do not apply to wastewater discharges from the formulation, packaging and/or repackaging of sanitizer products (including pool chemicals); microorganisms; inorganic wastewater treatment chemicals; group 1 mixtures and group 2 mixtures, as defined under § 455.10.

(e) The provisions of this subpart do not apply to wastewater discharges from the development of new formulations of pesticide products and the associated efficacy and field testing at on-site or stand-alone research and development laboratories where the resulting pesticide product is not produced for sale.

(f) The provisions of this subpart do not apply to wastewater discharges from the formulation, packaging and/or repackaging of liquid chemical sterilant products (including any sterilant or subordinate disinfectant claims on such products) for use on a critical or semi-critical device, as defined in Section 201 of the Federal Food, Drug and Cosmetic Act and in Section 2(u) of the Federal Insecticide, Fungicide and Rodenticide Act.

[61 FR 57549, Nov. 6, 1996]

§ 455.41 Special definitions.

(a) *Initial Certification Statement* for this subpart means a written submission to the appropriate permitting authority, *e.g.*, the local Control Authority (the POTW) or NPDES permit writer which must be signed by the responsible corporate officer as defined in 40 CFR 403.12(l) or 40 CFR 122.22 and which:

(1) Lists and describes those product families, process lines and/or process units for which the PFPR facility is implementing the Pollution Prevention Alternative (''P2 Alternative'');

(2) Describes the PFPR facility specific practices for each product family/process line/process unit which are to be practiced as part of the P2 Alternative;

(3) Describes any justification allowing modification to the practices listed in Table 8 to this part 455; and

(4) Lists the treatment system being used to obtain a P2 allowable discharge (as defined in 455.41).

(b) *Periodic Certification Statement* for this subpart means a written submission to the appropriate permitting authority, *e.g.*, the local Control Authority (the POTW) or NPDES permit writer, which states that the P2 Alternative is being implemented in the manner set forth in the control mechanism (for indirect dischargers) or NPDES permit (for direct dischargers) or that a justification allowing modification of the practices listed in Table 8 to this part 455 has been implemented resulting in a change in the pollution prevention practices conducted at the facility. The Periodic Certification Statement must be signed by the responsible corporate officer as defined in 40 CFR 403.12(l) or 40 CFR 122.22.

(c) *On-site Compliance Paperwork* for this subpart means data or information maintained in the offices of the PFPR facility which supports the initial and periodic certification statements as follows:

(1) Lists and describes those product families, process lines and/or process units for which the facility is implementing the P2 Alternative;

(2) Describes the facility specific practices for each product family/process line/process unit which are to be practiced as part of the P2 Alternative;

(3) Describes any justification allowing modification to the practices listed in Table 8 to this part 455;

(4) Includes a written discussion demonstrating that the treatment system being used contains the appropriate pollution control technologies (or equivalent systems/pesticide manufacturing systems) for removing the PAIs which may be found in the wastewater;

(5) Establishes a method for demonstrating to the permitting/control authority that the treatment system is well operated and maintained; and

(6) Includes a discussion of the rationale for choosing the method of demonstration.

(d) For Indirect Dischargers:

Pollution prevention (P2) allowable discharge (excluding interior wastewater sources, leak and spill clean-up water, and floor wash) for this subpart means the quantity of/concentrations of pollutants in PFPR process wastewaters that remain after a facility has demonstrated that it is using the specified practices of the Pollution Prevention Alternative as listed in Table 8 to this part 455.

Pollution prevention (P2) allowable discharge for interior wastewater sources, leak and spill cleanup water, and floor wash for this subpart means the quantity of/concentrations of pollutants in PFPR process wastewaters that remain after a facility has demonstrated that it is using the specified practices of the Pollution Prevention Alternative as listed in Table 8 to this part 455 and that have been pretreated using appropriate pollution control technologies, as defined in §455.10(g), or a pesticide manufacturer's treatment system, or an equivalent system, used individually, or in any combination to achieve a sufficient level of pollutant reduction. Pretreatment requirements may be modified or waived by the Control Authority (POTW) to the extent that removal credits have been granted by the POTW in accordance with 40 CFR 403.7, provided the granting of such credits does not result in pass through or interference as defined in 40 CFR 403.3 and complies with the provisions of 40 CFR 403.5. The facility must demonstrate that the appropriate pollution control technology is properly maintained and operated.

(e) For Direct Dischargers:

Pollution prevention (P2) allowable discharge for this subpart means the quantity of/concentrations of pollutants in PFPR process wastewaters that remain after a facility has demonstrated that it is using the specified practices of the Pollution Prevention Alternative as listed in Table 8 to this part 455 and that have been treated using appropriate pollution control technologies, as defined in §455.10(g), or a pesticide manufacturer's treatment system, or an equivalent system, used individually, or in any combination to achieve a sufficient level of pollutant reduction. The facility must demonstrate that the appropriate pollution control technology is properly maintained and operated.

(f) *Process wastewater,* for this subpart, means all wastewater associated with pesticide formulating, packaging and repackaging except for sanitary water, non-contact cooling water and those wastewaters excluded from the applicability of the rule in §455.40.

[61 FR 57549, Nov. 6, 1996]

§455.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) Except as provided in paragraph (b) of this section, the following limitations establish the quantity or quality of pollutants or pollutant properties controlled by this paragraph which may be discharged from the formulation, packaging or repackaging of pesticides: There shall be no discharge of process wastewater pollutants to navigable waters.

NOTE: For existing PFPR/Manufacturer facilities, as defined in §455.10(p), which are also subject to the provisions of §455.22 or §455.32, ''zero discharge'' means that permitting authorities shall provide no additional discharge allowance for those pesticide active ingredients (PAIs) in the pesticide formulating, packaging and repackaging wastewaters when those PAIs are also manufactured at the same facility.

(b) Any existing facility subject to paragraph (a) of this section may have a pollution prevention allowable discharge, as defined in §455.41(e), of wastewater pollutants to navigable waters if the discharger agrees to NPDES permit conditions as follows:

(1) The discharger will meet the requirements of the Pollution Prevention Alternative listed in Table 8 to this

part 455 (or received a modification by Best Professional Judgement for modifications not listed in Table 8 of this Part 455);

(2) The discharger will notify its NPDES permit writer at the time of renewal or modification of its permit, of its intent to utilize the Pollution Prevention Alternative by submitting to the NPDES permit writer an initial certification statement as described in § 455.41(a);

(3) The discharger will submit to its NPDES permitting authority a periodic certification statements as described in § 455.41(b) once each year of operation; and

(4) The discharger will maintain at the office of the facility and make available for inspection the on-site compliance paperwork as described in § 455.41(c).

[61 FR 57550, Nov. 6, 1996]

§ 455.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

(a) Except as provided in paragraph (b) of this section, the BCT limitations are established as follows: There shall be no discharge of process wastewater pollutants to navigable waters.

NOTE: For existing PFPR/Manufacturer facilities, as defined in § 455.10(p), which are also subject to the provisions of §§ 455.23, *zero discharge* means that permitting authorities shall provide no discharge additional discharge allowance for those pesticide active ingredients (PAIs) in the pesticide formulating, packaging and repackaging wastewaters when those PAIs are also manufactured at the same facility.

(b) Any existing facility subject to paragraph (a) of this section may have a pollution prevention allowable discharge, as defined in § 455.41(e), of wastewater pollutants to navigable waters if the discharger agrees to NPDES permit conditions as follows:

(1) The discharger will meet the requirements of the Pollution Prevention Alternative listed in Table 8 to this Part 455 (or received a modification by Best Professional Judgement for modifications not listed in Table 8 of this Part 455);

(2) The discharger will notify its NPDES permit writer at the time of renewal or modification of its permit, of its intent to utilize the Pollution Prevention Alternative by submitting to the NPDES permit writer an initial certification statement as described in § 455.41(a);

(3) The discharger will submit to its NPDES permitting authority a periodic certification statement as described in § 455.41(b) once each year of operation; and

(4) The discharger will maintain at the office of the facility and make available for inspection the on-site compliance paperwork as described in § 455.41(c).

[61 FR 57550, Nov. 6, 1996]

§ 455.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology (BAT).

(a) Except as provided in paragraph (b) of this section, the BAT limitations are established as follows: There shall be no discharge of process wastewater pollutants to navigable waters.

NOTE: For existing PFPR/Manufacturer facilities, as defined in § 455.10(p), which are also subject to the provisions of §§ 455.24, *zero discharge* means that permitting authorities shall provide no additional discharge allowance for those pesticide active ingredients (PAIs) in the pesticide formulating, packaging and repackaging wastewaters when those PAIs are also manufactured at the same facility.

(b) Any existing facility subject to paragraph (a) of this section may have a pollution prevention allowable discharge, as defined in § 455.41(e), of

wastewater pollutants to navigable waters if the discharger agrees to NPDES permit conditions as follows:

(1) The discharger will meet the requirements of the Pollution Prevention Alternative listed in Table 8 to this Part 455 (or received a modification by Best Professional Judgement for modifications not listed on Table 8 of this Part 455);

(2) The discharger will notify its NPDES permitting authority at the time of renewal or modification of its permit, of its intent to utilize the Pollution Prevention Alternative by submitting to the NPDES permit writer an initial certification statement as described in §455.41(a);

(3) The discharger will submit to its NPDES permit writer a periodic certification statement as described in §455.41(b) once each year of operation; and

(4) The discharger will maintain at the office of the facility and make available for inspection the on-site compliance paperwork as described in §455.41(c).

[61 FR 57551, Nov. 6, 1996]

§455.45 New source performance standards (NSPS).

(a) Any new source, except as provided in paragraph (b) of this section, subject to this subpart which discharges process wastewater must meet the following standards: There shall be no discharge of process wastewater pollutants to navigable waters.

NOTE: For new PFPR/Manufacturer facilities, as defined in §455.10(p), which are also subject to the provisions of §§455.25, *zero discharge* means that permitting authorities shall provide no additional discharge allowance for those pesticide active ingredients (PAIs) in the pesticide formulating, packaging and repackaging wastewaters when those PAIs are also manufactured at the same facility.

(b) Any new source subject to paragraph (a) of this section may have a pollution prevention allowable discharge, as defined in §455.41(e), of wastewater pollutants to navigable waters if the discharger agrees to NPDES permit conditions as follows:

(1) The discharger will meet the requirements of the Pollution Prevention Alternative listed in Table 8 to this Part 455 (or received a modification by Best Professional Judgement for modifications not listed in Table 8 of this Part 455);

(2) The discharger will notify its NPDES permit writer at the time of submitting its application for a permit, of its intent to utilize the Pollution Prevention Alternative by submitting to the NPDES permit writer an initial certification statement as described in §455.41(a);

(3) The discharger will submit to its NPDES permitting authority a periodic certification statement as described in §455.41(b) once each year of operation; and

(4) The discharger will maintain at the office of the facility and make available for inspection the on-site compliance paperwork as described in §455.41(c).

[61 FR 57551, Nov. 6, 1996]

§455.46 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13 or in paragraph (b) of this section, no later than November 6, 1999, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve PSES as follows: There shall be no discharge of process wastewater pollutants.

(b) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to paragraph (a) of this section which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and may have a pollution prevention allowable discharge of wastewater pollutants, as defined in §455.41(d), if the discharger agrees to control mechanism or pretreatment agreement conditions as follows:

(1) The discharger will meet the requirements of the Pollution Prevention Alternative listed in Table 8 to this Part 455 (or received a modification by Best Engineering Judgement for modifications not listed in Table 8 to this Part 455);

(2) The discharger will notify its local Control Authority at the time of renewing or modifying its individual control mechanism or pretreatment

agreement of its intent to utilize the Pollution Prevention Alternative by submitting to the local Control Authority an initial certification statement as described in § 455.41(a);

(3) The discharger will submit to its local Control Authority a periodic certification statement as described in § 455.41(b) during the months of June and December of each year of operation; and

(4) The discharger will maintain at the offices of the facility and make available for inspection the on-site compliance paperwork as described in § 455.41(c).

(c) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to § 455.46(b) which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and may submit a request to its Control Authority to waive pretreatment of: floor wash; and/or a non-reusable final rinse of a triple rinse, if the concentrations of pesticide active ingredients and priority pollutants in those wastewater sources have been demonstrated to be too low to be effectively pretreated at the facility. The Control Authority may waive pretreatment for these two wastewaters only if the existing source makes the demonstrations and is in compliance with 40 CFR 403.5.

[61 FR 57551, Nov. 6, 1996]

§ 455.47 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7 and 403.13 or in paragraph (b) of this section, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve PSNS as follows: There shall be no discharge of process wastewater pollutants.

(b) Except as provided in 40 CFR 403.7 and 403.13, any new source subject to paragraph (a) of this section which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and may have a pollution prevention allowable discharge of wastewater pollutants, as defined in § 455.41(d), if the discharger agrees to control mechanism or pretreatment agreement conditions as follows:

(1) The discharger will meet the requirements of the Pollution Prevention Alternative listed in Table 8 to this Part 455 (or received a modification by Best Engineering Judgement for modifications not listed in Table 8 to this Part 455);

(2) The discharger will notify its local Control Authority at the time of submitting its application for an individual control mechanism or pretreatment agreement of its intent to utilize the Pollution Prevention Alternative by submitting to the local Control Authority an initial certification statement as described in § 455.41(a);

(3) The discharger will submit to its local Control Authority a periodic certification statement as described in § 455.41(b) during the months of June and December of each year of operation; and

(4) The discharger will maintain at the offices of the facility and make available for inspection the on-site compliance paperwork as described in § 455.41(c).

(c) Except as provided in 40 CFR 403.7 and 403.13, any new source subject to paragraph (b) of this section which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and may submit a request to its Control Authority to waive pretreatment of: floor wash; and/or a non-reusable final rinse of a triple rinse, if the concentrations of pesticide active ingredients and priority pollutants in those wastewater sources have been demonstrated to be too low to be effectively pretreated at the facility. The Control Authority may waive pretreatment for these two wastewaters only if the new source makes the demonstrations and is in compliance with 40 CFR 403.5.

[61 FR 57552, Nov. 6, 1996]

Subpart D—Test Methods for Pesticide Pollutants

§ 455.50 Identification of test procedures.

The pesticide active ingredients to which this regulation applies and for

which effluent limitations guidelines and standards are specified in this part are named, together with the Chemical Abstracts Service (CAS) number (provided to assist in identifying the pesticide active ingredient only) and analytical method(s) designation(s) in table 7 of this part. Except as provided in 40 CFR 136.5, the discharge parameter values required under the Clean Water Act must be determined by one of the analytical methods cited and described in table 7 of this part. Pesticide manufacturers may not use the analytical method cited in table 1B, table 1C, or table 1D of 40 CFR part 136 to make these determinations (except where the method cited in those tables is identical to the method specified in table 7 of this part). The full texts of the analytical methods cited in table 7 of this part are contained in the ''Methods For The Determination of Nonconventional Pesticides In Municipal and Industrial Wastewater, Volume I,'' EPA 821–R–93–010A (August 1993 Revision I) and ''Volume II'', EPA 821–R–93–010B (August 1993) (the ''Compendium''). Each pesticide chemical manufacturer that is required to determine discharge parameter values under this part using one of the analytical methods cited in table 7 of this part must request in writing a copy of the Compendium from the permit authority or local control authority (as applicable) prior to determining such discharge parameter values, unless the manufacturer already has a copy.

[58 FR 50690, Sept. 28, 1993]

Subpart E—Repackaging of Agricultural Pesticides Performed at Refilling Establishments

SOURCE: 61 FR 57552, Nov. 6, 1996, unless otherwise noted.

§455.60 Applicability; description of repackaging of agricultural pesticides performed by refilling establishments subcategory.

(a) The provisions of this subpart are applicable to discharges resulting from all repackaging of agricultural pesticides performed by refilling establishments, as defined in §455.10; whose primary business is wholesale or retail sales; and where no pesticide manufacturing, formulating or packaging occurs, except as provided in paragraphs (b), (c) and (d) of this section.

(b) The provisions of this subpart do not apply to wastewater discharges from custom application or custom blending, as defined in 40 CFR 167.3.

(c) The provisions of this subpart do not apply to wastewater discharges from: the operation of employee showers and laundry facilities; the testing of fire protection equipment; the testing and emergency operation of safety showers and eye washes; or storm water.

(d) The provisions of this subpart do not apply to wastewater discharges from the repackaging of microorganisms or Group 1 Mixtures, as defined under §455.10, or non-agricultural pesticide products.

§455.61 Special definitions.

Process wastewater, for this subpart, means all wastewater except for sanitary water and those wastewaters excluded from the applicability of the rule in §455.60.

§455.62 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable pollutant control technology (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable pollutant control technology: There shall be no discharge of process wastewater pollutants.

§455.63 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology: There shall be no discharge of process wastewater pollutants.

§ 455.64 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable: There shall be no discharge of process wastewater pollutants.

§ 455.65 New source performance standards (NSPS).

Any new source subject to this subpart which discharges process wastewater pollutants must meet the following standards: There shall be no discharge of process wastewater pollutants.

§ 455.66 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, no later than November 6, 1999 subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for existing sources as follows: There shall be no discharge of process wastewater pollutants.

§ 455.67 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and 403.13, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for existing sources as follows: There shall be no discharge of process wastewater pollutants.

TABLE 1 TO PART 455—LIST OF ORGANIC PESTICIDE ACTIVE INGREDIENTS

EPA census code	Pesticide code	Pesticide name	CAS No.
1	10501	Dicofol [1,1-Bis(chlorophenyl)-2,2,2-trichloroethanol]	00115–32–2
2	51501	Maleic Hydrazide	00123–33–1
3	42002	EDB [1,2-Ethylene dibromide]	00106–93–4
4	82901	Vancide TH [1,3,5-Triethylhexahydro-s-triazine]	07779–27–3
5	29001	Dichloropropene	00542–75–6
7	17901	Dowicil 75 [1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantanechloride].	04080–31–3
8	109901	Triadimefon	43121–43–3
9	44901	Hexachlorophene (nabac)	00070–30–4
10	55004	Tetrachlorophene	01940–43–8
11	55001	Dichlorophene	00097–23–4
12	84001	Dichlorvos	00062–73–7
13	102401	Landrin-2 [2,3,5-trimethylphenylmethylcarbamate]	02686–99–9
14	82601	Fenac [2,3,6-Trichlorophenylacetic acid]	00085–34–7
14	(1)	Fenac Salts and Esters	(1)
15	82001	2,4,5-T [2,4,5-Trichlorophenoxyacetic acid]	00093–76–5
15	(1)	2,4,5-T Salts and Esters	(1)
16	30001	2,4-D [2,4-Dichlorophenoxyacetic acid]	00094–75–7
16	(1)	2,4-D Salts and Esters	(1)
17	30801	2,4-DB [2,4-Dichlorophenoxybutyric acid]	00094–82–6
17	(1)	2,4-DB Salts and Esters	(1)
18	80811	Anilazine [2,4-Dichloro-6-(o-chloroanilino)-s-triazine]	00101–05–3
19	36001	Dinocap	39300–45–3
20	31301	Dichloran (2,6-dichloro-4-nitroaniline)	00099–30–9
21	8707	Busan 90 [2-Bromo-4-hydroxyacetophenone]	02491–38–5
22	15801	Mevinphos	07786–34–7
23	39001	Sulfallate [2-chloroallyldiethyldithiocarbamate]	00095–06–7
24	84101	Chlorfenvinphos	00470–90–6
25	10010	Cyanazine	21725–46–2
26	19101	Propachlor	01918–16–7
27	30501	MCPA [2-Methyl-4-chlorophenoxyacetic acid]	00094–74–6
27	(1)	MCPA Salts and Esters	(1)
28	99901	Octhilinone	26530–20–1
29	67703	Pindone	00083–26–1
30	31401	Dichlorprop [2-(2,4-Dichlorophenoxy) propionic acid]	00120–36–5
30	(1)	Dichlorprop Salts and Esters	(1)
31	31501	MCPP [2-(2-Methyl-4-chlorophenoxy)propionic acid]	00093–65–2
31	(1)	MCPP Salts and Esters	(1)
32	60101	Thiabendazole	00148–79–8

TABLE 1 TO PART 455—LIST OF ORGANIC PESTICIDE ACTIVE INGREDIENTS—Continued

EPA census code	Pesticide code	Pesticide name	CAS No.
33	80815	Belclene 310 [2-(methylthio)-4-(ethylamino)-6-(1,2-dimethylamino)-s-triazine].	22936–75–0
34	21201	Cloprop [2-(m-Chlorophenoxy)propionic acid]	00101–10–0
34	(1)	Cloprop Salts and Esters	(1)
35	35603	TCMTB [2-(Thiocyanomethylthio)benzothiazole]	21564–17–0
36	99001	HAE [2-((Hydroxymethyl)amino) ethanol	34375–28–5
37	6770	Chlorophacinone	03691–35–8
38	102401	Landrin-1 [3,4,5-trimethylphenylmethylcarbamate]	02686–99–9
39	101701	Pronamide	23950–58–5
40	100501	Methiocarb	02032–65–7
41	28201	Propanil	00709–98–8
42	107801	3-Iodo-2-propynyl butylcarbamate	55406–53–6
43	86001	3-(a-Acetonylfurfuryl)-4-hydroxycoumarin [Coumafuryl]	00117–52–2
43	(1)	Coumafuryl Salts and Esters	(1)
44	37507	DNOC (4,6-dinitro-*o*-cresol)	00534–52–1
45	101101	Metribuzin	21087–64–9
46	19401	CPA (4-chlorophenoxyacetic acid)	00122–88–3
46	(1)	CPA Salts and Esters	(1)
47	19201	MCPB [4-(2-Methyl-4-chlorophenoxy)butyric acid]	00094–81–5
47	(1)	MCPB Salts and Esters	(1)
48	44401	Aminocarb [4-(dimethylamino)-m-tolylmethylcarbamate]	02032–59–9
49	84701	Etridiazole	02593–15–9
50	55501	Ethoxyquin	00091–53–2
51	59804	Quinoliol sulfate (8-Quinoliol sulfate)	00134–31–6
52	103301	Acephate	30560–19–1
53	114401	Acifluorfen	50594–66–6
53	114402	Acifluorfen Salts and Esters	62476–59–9
54	90501	Alachlor	15972–60–8
55	98301	Aldicarb	00116–06–3
56	69105	Hyamine 3500 [Alkyl* dimethyl benzyl ammonium chloride* (50% C14, 40% C12, 10% C16)].	68424–85–1
57	4001	Allethrin (all isomers and allethrin coil)	00584–79–2
58	80801	Ametryn	00834–12–8
59	106201	Amitraz	33089–61–1
60	80803	Atrazine	01912–24–9
61	105201	Bendiocarb	22781–23–3
62	99101	Benomyl and Carbendazim	17804–35–2
63	8901	Benzene Hexachloride	00608–73–1
64	9501	Benzyl benzoate	00120–51–4
65	10101	Lethane 384 [Beta-Thiocyanoethyl esters of mixed fatty acids containing from 10–18 carbons].	00301–11–1
66	104301	Bifenox	42576–02–3
68	12301	Bromacil	00314–40–9
68	12302	Bromacil, lithium	53404–19–6
69	35301	Bromoxynil	01689–84–5
69	35302	Bromoxynil octanoate	01689–99–2
70	112301	Butachlor	23184–66–9
70	101401	Giv-gard [β-Bromo-β-nitrostyrene]	07166–19–0
73	81701	Captafol	02425–06–1
74	81301	Captan	00133–06–2
75	56801	Carbaryl [Sevin]	00063–25–2
76	90601	Carbofuran	01563–66–2
77	90602	Carbosulfan	55285–14–8
78	29901	Chloramben	00133–90–4
78	(1)	Chloramben Salts and Esters	(1)
79	58201	Chlordane	00057–74–9
80	27301	Chloroneb	02675–77–6
81	81501	Chloropicrin	00076–06–2
82	81901	Chlorothalonil	01897–45–6
83	25501	Chloroxuron	01982–47–4
84	83701	Stirofos	00961–11–5
85	59102	Chlorpyrifos methyl	05598–13–0
86	59101	Chlorpyrifos	02921–88–2
87	14504	Mancozeb	08018–01–7
90	109301	Fenvalerate	51630–58–1
91	43401	Cycloheximide	00066–81–9
92	28901	Dalapon (2,2-dichloropropionic acid)	00075–99–0
92	(1)	Dalapon Salts and Esters	(1)
93	27501	Dienochlor	02227–17–0
94	57601	Demeton [O,O-Diethyl O-(and S-) (2-ethylthio)ethyl) phosphorothioate].	08065–48–3

TABLE 1 TO PART 455—LIST OF ORGANIC PESTICIDE ACTIVE INGREDIENTS—Continued

EPA census code	Pesticide code	Pesticide name	CAS No.
95	104801	Desmedipham	13684–56–5
96	14502	Diammonium ethylenebisdithiocarbamate	03566–10–7
97	11301	DBCP [Dibromo-3-chloropropane]	00096–12–8
98	29801	Dicamba [3,6-Dichloro-o-anisic acid]	01918–00–9
98	(1)	Dicamba Salts and Esters	(1)
99	29601	Dichlone (Phygon)	00117–80–6
100	103401	Thiophanate ethyl	23564–06–9
101	32101	Perthane [Diethyl diphenyl dichloroethane and related compounds].	00072–56–0
102	86501	EXD [Diethyl dithiobis (thionoformate)]	00502–55–6
103	57801	Diazinon	00333–41–5
104	108201	Diflubenzuron	35367–38–5
105	69122	Benzethonium chloride	00121–54–0
106	35001	Dimethoate	00060–51–5
107	53501	Parathion methyl	00298–00–0
108	35201	Dicrotophos	00141–66–2
109	58801	Crotoxyphos	07700–17–6
110	78701	DCPA [Dimethyl 2,3,5,6-tetrachloroterephthalate]	01861–32–1
111	57901	Trichlorofon	00052–68–6
112	37505	Dinoseb	00088–85–7
113	37801	Dioxathion	00078–34–2
114	67701	Diphacinone	00082–66–6
115	36601	Diphenamid	00957–51–7
116	38501	Diphenylamine	00122–39–4
116	47201	MGK 326 [Dipropyl isocinchomeronate]	00113–48–4
118	63301	Nabonate [Disodium cyanodithioimidocarbonate]	00138–93–2
119	35505	Diuron	00330–54–1
120	44303	Metasol DGH [Dodecylguanidine hydrochloride]	13590–97–1
121	44301	Dodine (dodecylquanidine acetate)	02439–10–3
122	79401	Endosulfan [Hexachlorohexahydromethano-2,4,3-benzodioxathiepin-3-oxide].	00115–29–7
123	38901	Endothall	00145–73–3
123	(1)	Endothall Salts and Esters	(1)
124	41601	Endrin	00072–20–8
125	113101	Ethalfluralin	55283–68–6
126	58401	Ethion	00563–12–2
127	41101	Ethoprop	13194–48–4
128	100601	Fenamiphos	22224–92–6
129	28801	Chlorobenzilate	00510–15–6
130	41405	Butylate	02008–41–5
131	59901	Famphur	00052–85–7
132	206600	Fenarimol	60168–88–9
133	53301	Fenthion	00055–38–9
134	34801	Ferbam	14484–64–1
135	35503	Fluometuron	02164–17–2
136	75002	Fluoroacetamide	00640–19–7
137	81601	Folpet	00133–07–3
138	103601	Glyphosate [N-(Phosphonomethyl) glycine]	01071–83–6
138	(1)	Glyphosate Salts and Esters	(1)
139	103602	Glyphosine	02439–99–8
140	44801	Heptachlor	00076–44–8
141	115601	Cycloprate	54460–46–7
142	107201	Hexazinone	51235–04–2
143	109401	Isofenphos	25311–71–1
144	100201	Isopropalin	33820–53–0
145	47601	Propham	00122–42–9
146	97401	Karbutilate	04849–32–5
147	9001	Lindane	00058–89–9
148	35506	Linuron	00330–55–2
149	39504	Malachite green [Ammonium(4-(p-(dimethylamino)-alpha-phenylbenzylidine)-2,5-cyclohexadien-1-ylidene)-dimethyl chloride].	00569–64–2
150	57701	Malathion	00121–75–5
151	14505	Maneb	12427–38–2
152	34802	Manganous dimethyldithiocarbamate	15339–36–3
153	114001	Mefluidide [N-(2,4-dimethyl-5-(((trifluoromethyl) sulfonyl)-amino) phenyl acetamide].	53780–34–0
153	(1)	Mefluidide Salts and Esters	(1)
154	101201	Methamidophos	10265–92–6
155	100301	Methidathion	00950–37–8
156	90301	Methomyl	16752–77–5

TABLE 1 TO PART 455—LIST OF ORGANIC PESTICIDE ACTIVE INGREDIENTS—Continued

EPA census code	Pesticide code	Pesticide name	CAS No.
157	105401	Methoprene	40596–69–8
158	34001	Methoxychlor	00072–43–5
159	69134	Methylbenzethonium chloride	15716–02–6
160	53201	Methylbromide	00074–83–9
162	69129	Hyamine 2389 [Methyldodecylbenzyl trimethyl ammonium chloride 80% and methyldodecylxylylene bis (trimethylammoniumchloride) 20%].	01399–80–0
163	68102	Methylenebisthiocyanate	06317–18–6
164	54101	Quinmethionate	02439–01–2
165	108801	Metolachlor	51218–45–2
166	44201	Mexacarbate	00315–18–4
167	14601	Metiram	09006–42–2
168	35502	Monuron TCA	00140–41–0
169	35501	Monuron	00150–68–5
170	103001	Napropamide	15299–99–7
171	80301	Deet	00134–62–3
172	14503	Nabam	00142–59–6
173	34401	Naled	00300–76–5
174	35801	Norea	18530–56–8
175	105801	Norflurazon	27314–13–2
176	30701	N-1-Naphthylphthalimide	05333–99–3
176	30702	Naptalam [N-1-Naphthylphthalamic acid]	00132–66–1
176	30703	Naptalam Salts and Esters	00132–67–2
177	57001	MGK 264 [N-2-Ethylhexyl bicycloheptene dicarboximide]	00136–45–8
178	84301	Benfluralin	01861–40–1
179	79501	Sulfotepp	03689–24–5
180	79101	Aspon	03244–90–4
181	36501	Coumaphos	00056–72–4
182	32701	Fensulfothion	00115–90–2
183	32501	Disulfoton	00298–04–4
184	105901	Fenitrothion	00122–14–5
185	59201	Phosmet	00732–11–6
186	58001	Azinphos Methyl	00086–50–0
187	58702	Oxydemeton methyl	00301–12–2
192	(1)	Organo-tin pesticides	(1)
194	104201	Oryzalin	19044–88–3
195	103801	Oxamyl	23135–22–0
196	111601	Oxyfluorfen	42874–03–3
197	111501	Bolstar [Sulprofos]	35400–43–2
198	219900	Sulprofos Oxon	38527–90–1
199	41801	Santox (O-Ethyl O-(p-nitrophenyl) phenylphosphonothioate	02104–64–5
200	41701	Fonofos	00944–22–9
201	47802	Propoxur (o-Isopropylphenylmethylcarbamate)	00114–26–1
202	57501	Parathion	00056–38–2
203	108501	Pendimethalin	40487–42–1
204	56502	Pentachloronitrobenzene	00082–68–8
205	63001	Pentachlorophenol	00087–86–5
206	63003	Pentachlorophenol Salts and Esters	00131–52–2
207	108001	Perfluidone	37924–13–3
208	109701	Permethrin	52645–53–1
209	98701	Phenmedipham	13684–63–4
210	64501	Phenothiazine	00092–84–2
211	64103	Phenylphenol	00090–43–7
212	57201	Phorate	00298–02–2
213	97701	Phosalone	02310–17–0
214	18201	Phosphamidon	13171–21–6
215	5101	Picloram	01918–02–1
215	5104	Picloram Salts and Esters	02545–60–0
216	67501	Piperonyl butoxide	00051–03–6
217	69183	PBED (Busan 77) [Poly (oxyethylene (dimethylimino) ethylene (dimethylimino) ethylene dichloride].	31512–74–0
218	34803	Busan 85 [Potassium dimethyldithiocarbamate]	00128–03–0
219	102901	Busan 40 [Potassium N-hydroxymethyl-N-methyldithiocarbamate].	51026–28–9
220	39002	KN Methyl [Potassium N-methyldithiocarbamate]	00137–41–7
221	101301	Metasol J26 [Potassium N-(alpha-(nitroethyl) benzyl)-ethylene-diamine].	53404–62–9
222	111401	Profenofos	41198–08–7
223	80804	Prometon	01610–18–0
224	80805	Prometryn	07287–19–6
225	97601	Propargite	02312–35–8

TABLE 1 TO PART 455—LIST OF ORGANIC PESTICIDE ACTIVE INGREDIENTS—Continued

EPA census code	Pesticide code	Pesticide name	CAS No.
226	80808	Propazine	00139–40–2
227	77702	Propionic acid	00079–09–4
228	119301	Propamocarb and Propamocarb HCL	24579–73–5
229	69004	Pyrethrin coils	00121–21–1
230	69001	Pyrethrin I.	
231	69002	Pyrethrum (other than pyrethrins)	08003–34–7
232	69006	Pyrethrin II	00121–29–9
233	97801	Resmethrin	10453–86–8
234	58301	Ronnel	00299–84–3
235	71003	Rotenone	00083–79–4
236	74801	DEF [S,S,S-Tributyl phosphorotrithioate]	00078–48–8
237	35509	Siduron	01982–49–6
238	82501	Silvex [2-(2,4,5-Trichlorophenoxypropionic acid)]	00093–72–1
238	(1)	Silvex Salts and Esters	(1)
239	80807	Simazine	00122–34–9
240	103901	Bentazon	25057–89–0
241	34804	Carbam-S [Sodium dimethyldithiocarbanate]	00128–04–1
242	75003	Sodium monofluoroacetate	00062–74–8
243	39003	Vapam [Sodium methyldithiocarbamate]	00137–42–8
244	57101	Sulfoxide	00120–62–7
245	41301	Cycloate	01134–23–2
246	41401	EPTC [S-Ethyl dipropylthiocarbamate]	00759–94–4
247	41402	Molinate	02212–67–1
248	41403	Pebulate	01114–71–2
249	41404	Vernolate	01929–77–7
250	35604	HPTMS [S-(2-Hydroxypropyl) thiomethanesulfonate]	29803–57–4
251	9801	Bensulide	00741–58–2
252	105501	Tebuthiuron	34014–18–1
253	59001	Temephos	03383–96–8
254	12701	Terbacil	05902–51–2
255	105001	Terbufos	13071–79–9
256	80814	Terbuthylazine	05915–41–3
257	80813	Terbutryn	00886–50–0
258	63004	Tetrachlorophenol	25167–83–3
258	63007	Tetrachlorophenol Salts and Esters	(1)
259	35602	Dazomet	00533–74–4
260	102001	Thiophanate methyl	23564–05–8
261	79801	Thiram	00137–26–8
262	80501	Toxaphene	08001–35–2
263	74901	Merphos [Tributyl phosphorotrithioate]	00150–50–5
264	36101	Trifluralin	01582–09–8
265	86002	Warfarin [3-(a-Acetonylbenzyl)-4-hydroxycoumarin]	00081–81–2
265	(1)	Warfarin Salts and Esters	(1)
266	51705	Zinc MBT [Zinc 2-mercaptobenzothiazolate]	00155–04–4
267	14506	Zineb	12122–67–7
268	34805	Ziram	00137–30–4
269	78802	S-(2,3,3-trichloroallyl) diisopropylthiocarbamate	02303–17–5
270	69005	Phenothrin	26002–80–2
271	69003	Tetramethrin	07696–12–0
272	18301	Chloropropham	00101–21–3

Note:
[1] Multiple compounds for active ingredient.

[58 FR 50691, Sept. 28, 1993]

TABLE 2 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT EFFLUENT LIMITATIONS BEST AVAILABLE TECHNOLOGY ECONOMICALLY ACHIEVABLE (BAT) AND PRETREATMENT STANDARDS FOR EXISTING SOURCES (PSES)

Pesticide	kg/kkg (lb/1,000 lb) Pounds of pollutant per 1000 lbs. product		Notes
	Daily maximum shall not exceed	Monthly average shall not exceed	
2,4-D	1.97×10^{-3}	6.40×10^{-4}	.....
2,4-D Salts and Esters	(1)	(1)	.....
2,4-DB Salts and Esters	(1)	(1)	.....

TABLE 2 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT EFFLUENT LIMITATIONS BEST AVAILABLE TECHNOLOGY ECONOMICALLY ACHIEVABLE (BAT) AND PRETREATMENT STANDARDS FOR EXISTING SOURCES (PSES)—Continued

Pesticide	kg/kkg (lb/1,000 lb) Pounds of pollutant per 1000 lbs. product		Notes
	Daily maximum shall not exceed	Monthly average shall not exceed	
Acephate	6.39×10^{-4}	1.97×10^{-4}	.....
Acifluorfen	2.45	9.3×10^{-1}	.....
Alachlor	5.19×10^{-3}	1.54×10^{-3}	.....
Aldicarb	7.23×10^{-4}	3.12×10^{-4}	.....
Ametryn	7.72×10^{-3}	2.53×10^{-3}	.....
Atrazine	5.12×10^{-3}	1.72×10^{-3}	.....
Azinphos Methyl	2.74×10^{-2}	1.41×10^{-2}	.....
Benfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Benomyl and Carbendazim	3.50×10^{-2}	8.94×10^{-3}	2
Bolstar	1.69×10^{-2}	8.72×10^{-3}	.....
Bromacil	3.83×10^{-1}	1.16×10^{-1}	.....
Bromacil, lithium	(1)	(1)	.....
Bromoxynil	3.95×10^{-3}	1.27×10^{-3}	.....
Bromoxynil octanoate	3.95×10^{-3}	1.27×10^{-3}	.....
Busan 40 [Potassium N-hydroxymethyl -N- methyldithiocarbamate]	5.74×10^{-3}	1.87×10^{-3}	.....
Busan 85 [Potassium dimethyldithiocarbamate]	5.74×10^{-3}	1.87×10^{-3}	
Butachlor	5.19×10^{-3}	1.54×10^{-3}	.....
Captafol	4.24×10^{-6}	1.31×10^{-6}	.....
Carbam-S [Sodium dimethyldithiocarbamate]	5.74×10^{-3}	1.87×10^{-3}	.....
Carbaryl	1.6×10^{-3}	7.3×10^{-4}	.....
Carbofuran	1.18×10^{-4}	2.80×10^{-5}	.....
Chloroneb	8.16×10^{-2}	3.31×10^{-2}	.....
Chlorothalonil	1.51×10^{-3}	4.57×10^{-4}	.....
Chlorpyrifos	8.25×10^{-4}	2.43×10^{-4}	.....
Cyanazine	1.03×10^{-2}	3.33×10^{-3}	.....
Dazomet	5.74×10^{-3}	1.87×10^{-3}	.....
DCPA	7.79×10^{-2}	2.64×10^{-2}	.....
DEF [S,S,S-Tributyl phosphorotrithioate]	1.15×10^{-2}	5.58×10^{-3}	.....
Diazinon	2.82×10^{-3}	1.12×10^{-3}	.....
Dichlorprop Salts and Esters	(1)	(1)	.....
Dichlorvos	9.6×10^{-5}	2.95×10^{-5}	.....
Dinoseb	4.73	1.43	.....
Dioxathion	3.40×10^{-2}	1.29×10^{-2}	.....
Disulfoton	7.33×10^{-3}	3.79×10^{-3}	.....
Diuron	3.15×10^{-2}	1.4×10^{-2}	.....
Endothall Salts and Esters	(1)	(1)	.....
Endrin	2.2×10^{-2}	5.1×10^{-3}	.....
Ethalfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Ethion	5.51×10^{-3}	1.57×10^{-3}	.....
Fenarimol	1.02×10^{-1}	3.61×10^{-2}	.....
Fensulfothion	1.48×10^{-2}	7.64×10^{-3}	.....
Fenthion	1.83×10^{-2}	9.45×10^{-3}	.....
Fenvalerate	5.40×10^{-3}	2.08×10^{-3}	.....
Heptachlor	8.8×10^{-3}	2.9×10^{-3}	.....
Isopropalin	7.06×10^{-3}	2.49×10^{-3}	1
KN Methyl [Potassium N-methyldithiocarbamate]	5.74×10^{-3}	1.87×10^{-3}	.....
Linuron	2.69×10^{-3}	1.94×10^{-3}	.....
Malathion	2.35×10^{-4}	9.55×10^{-5}	.....
MCPA Salts and Esters	(1)	(1)	.....
MCPP Salts and Esters	(1)	(1)	.....
Merphos	1.15×10^{-2}	5.58×10^{-3}	.....
Methamidophos	1.46×10^{-2}	7.53×10^{-3}	.....
Methomyl	3.82×10^{-3}	1.76×10^{-3}	.....
Methoxychlor	3.23×10^{-3}	1.31×10^{-3}	.....
Metribuzin	1.36×10^{-2}	7.04×10^{-3}	.....
Mevinphos	1.44×10^{-4}	5.10×10^{-5}	.....
Nabam	5.74×10^{-3}	1.87×10^{-3}	.....
Nabonate	5.74×10^{-3}	1.87×10^{-3}	.....
Naled	(1)	(1)	.....
Norflurazon	7.20×10^{-4}	3.10×10^{-4}	.....
Organo-tin pesticides	1.72×10^{-2}	7.42×10^{-3}	3
Parathion	7.72×10^{-4}	3.43×10^{-4}	.....
Parathion methyl	7.72×10^{-4}	3.43×10^{-4}	.....
PCNB	5.75×10^{-4}	1.90×10^{-4}	.....
Pendimethalin	1.17×10^{-2}	3.62×10^{-3}	.....

TABLE 2 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT EFFLUENT LIMITATIONS BEST AVAILABLE TECHNOLOGY ECONOMICALLY ACHIEVABLE (BAT) AND PRETREATMENT STANDARDS FOR EXISTING SOURCES (PSES)—Continued

Pesticide	kg/kkg (lb/1,000 lb) Pounds of pollutant per 1000 lbs. product		Notes
	Daily maximum shall not exceed	Monthly average shall not exceed	
Permethrin	2.32×10^{-4}	6.06×10^{-5}	.....
Phorate	3.12×10^{-4}	9.37×10^{-5}	.....
Phosmet	(1)	(1)	4
Prometon	7.72×10^{-3}	2.53×10^{-3}	.....
Prometryn	7.72×10^{-3}	2.53×10^{-3}	.....
Pronamide	6.64×10^{-4}	2.01×10^{-4}	.....
Propachlor	5.19×10^{-3}	1.54×10^{-3}	.....
Propanil	1.06×10^{-3}	4.84×10^{-4}	.....
Propazine	7.72×10^{-3}	2.53×10^{-3}	.....
Pyrethrin I and Pyrethrin II	1.24×10^{-2}	3.33×10^{-3}	
Simazine	7.72×10^{-3}	2.53×10^{-3}	.....
Stirofos	4.10×10^{-3}	1.35×10^{-3}	.....
TCMTB	3.89×10^{-3}	1.05×10^{-3}	.....
Tebuthiuron	9.78×10^{-2}	3.40×10^{-2}	.....
Terbacil	3.83×10^{-1}	1.16×10^{-1}	.....
Terbufos	4.92×10^{-4}	1.26×10^{-4}	.....
Terbuthylazine	7.72×10^{-3}	2.53×10^{-3}	.....
Terbutryn	7.72×10^{-3}	2.53×10^{-3}	.....
Toxaphene	1.02×10^{-2}	3.71×10^{-3}	.....
Triadimefon	6.52×10^{-2}	3.41×10^{-2}	.....
Trifluralin	3.22×10^{-4}	1.09×10^{-4}	1
Vapam [Sodium methyldithiocarbamate]	5.74×10^{-3}	1.87×10^{-3}	.....
Ziram [Zinc dimethyldithiocarbanate]	5.74×10^{-3}	1.87×10^{-3}	.....

[1] No discharge of process wastewater pollutants.

Notes:
1 Monitor and report as total Trifluralin.
2 Pounds of product include Benomyl and any Carbendazim production not converted to Benomyl.
3 Monitor and report as total tin.
4 Applies to purification by recrystalization portion of the process.

[58 FR 50695, Sept. 28, 1993]

TABLE 3 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS)

Pesticide	kg/kkg (lb/1,000 lb) pounds of pollutant per 1000 lbs product		Notes
	Daily maximum shall not exceed	Monthly average shall not exceed	
2,4-D	1.42×10^{-3}	4.61×10^{-4}	
2,4-D Salts and Esters	(1)	(1)	
2,4-DB Salts and Esters	(1)	(1)	
Acephate	6.39×10^{-4}	1.97×10^{-4}	
Acifluorfen	1.77	6.69×10^{-1}	
Alachlor	3.74×10^{-3}	1.11×10^{-3}	
Aldicarb	5.21×10^{-4}	2.25×10^{-4}	
Ametryn	5.56×10^{-3}	1.82×10^{-3}	
Atrazine	3.69×10^{-3}	1.24×10^{-3}	
Benfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Benomyl and Carbendazom	2.52×10^{-2}	6.44×10^{-3}	2
Bolstar	1.22×10^{-2}	6.28×10^{-3}	
Bromacil	2.76×10^{-1}	8.36×10^{-2}	
Bromacil, lithium	(1)	(1)	
Bromoxynil	2.84×10^{-3}	9.14×10^{-4}	
Bromoxynil Octanoate	2.84×10^{-3}	9.14×10^{-4}	
Busan 40 [Potassium N-hydroxymethyl-N-methyldithiocarbamate]	4.14×10^{-3}	1.35×10^{-3}	
Busan 85 [Potassium dimethyldithiocarbamate]	4.14×10^{-3}	1.35×10^{-3}	
Butachlor	3.74×10^{-3}	1.11×10^{-3}	
Captafol	4.24×10^{-6}	1.31×10^{-6}	
Carbam-S [Sodium dimethyldithiocarbanate]	4.14×10^{-3}	1.35×10^{-3}	
Carbaryl	1.18×10^{-3}	5.24×10^{-4}	

TABLE 3 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS)—Continued

Pesticide	kg/kkg (lb/1,000 lb) pounds of pollutant per 1000 lbs product		Notes
	Daily maximum shall not exceed	Monthly average shall not exceed	
Carbofuran	1.18×10^{-4}	2.80×10^{-5}	
Chloroneb	5.87×10^{-2}	2.39×10^{-2}	
Chlorothalonil	1.09×10^{-3}	3.29×10^{-4}	
Chlorpyrifos	5.94×10^{-4}	1.75×10^{-4}	
Cyanazine	7.42×10^{-3}	2.40×10^{-3}	
Dazomet	4.14×10^{-3}	1.35×10^{-3}	
DCPA	5.61×10^{-2}	1.90×10^{-2}	
DEF [S,S,S-Tributyl phosphorotrithioate]	1.15×10^{-2}	5.58×10^{-3}	
Diazinon	2.05×10^{-3}	8.13×10^{-4}	
Dichlorprop Salts and Esters	(1)	(1)	
Dichlorvos	6.88×10^{-5}	2.13×10^{-5}	
Dinoseb	3.41	1.03	
Dioxathion	2.54×10^{-2}	9.31×10^{-3}	
Disulfoton	5.28×10^{-3}	2.72×10^{-3}	
Diuron	2.27×10^{-2}	1.01×10^{-2}	
Endothall Salts and Esters	(1)	(1)	
Endrin	1.57×10^{-2}	3.69×10^{-3}	
Ethalfluralin	3.22×10^{-4}	1.09×10^{-4}	1
Ethion	3.97×10^{-3}	1.33×10^{-3}	
Fenarimol	1.02×10^{-1}	3.61×10^{-2}	
Fensulfothion	1.06×10^{-2}	5.50×10^{-3}	
Fenthion	1.32×10^{-2}	6.79×10^{-3}	
Fenvalerate	3.91×10^{-3}	1.50×10^{-3}	
Guthion	1.97×10^{-2}	1.02×10^{-2}	
Heptachlor	6.31×10^{-3}	2.06×10^{-3}	
Isopropalin	5.07×10^{-3}	1.82×10^{-3}	
KN Methyl [Potassium N-methyldithiocarbamate]	4.14×10^{-3}	1.35×10^{-3}	
Linuron	1.94×10^{-3}	1.40×10^{-3}	
Malathion	1.69×10^{-4}	6.88×10^{-5}	
MCPA Salts and Esters	(1)	(1)	
MCPP Salts and Esters	(1)	(1)	
Merphos	1.15×10^{-2}	5.58×10^{-3}	
Methamidophos	1.05×10^{-2}	5.42×10^{-3}	
Methomyl	2.75×10^{-3}	1.27×10^{-3}	
Methoxychlor	2.34×10^{-3}	9.25×10^{-4}	
Metribuzin	9.80×10^{-3}	5.06×10^{-3}	
Mevinphos	1.03×10^{-4}	3.69×10^{-5}	
Nabam	4.14×10^{-3}	1.35×10^{-3}	
Nabonate	4.14×10^{-3}	1.35×10^{-3}	
Naled	(1)	(1)	
Norflurazon	7.20×10^{-4}	3.10×10^{-4}	
Organo-tin pesticides	1.25×10^{-2}	5.36×10^{-3}	3
Parathion Ethyl	5.56×10^{-4}	2.45×10^{-4}	
Parathion Methyl	5.56×10^{-4}	2.45×10^{-4}	
PCNB	4.16×10^{-4}	1.38×10^{-4}	
Pendimethalin	1.17×10^{-2}	3.62×10^{-3}	
Permethrin	1.68×10^{-4}	4.39×10^{-5}	
Phorate	3.12×10^{-4}	9.37×10^{-5}	
Phosmet	(1)	(1)	4
Prometon	5.56×10^{-3}	1.82×10^{-3}	
Prometyrn	5.56×10^{-3}	1.82×10^{-3}	
Pronamide	4.78×10^{-4}	1.45×10^{-4}	
Propachlor	3.74×10^{-3}	1.11×10^{-3}	
Propanil	7.63×10^{-4}	3.48×10^{-4}	
Propazine	5.56×10^{-3}	1.82×10^{-3}	
Pyrethrin I and Pyrethrin II	8.91×10^{-3}	2.40×10^{-3}	
Simazine	5.89×10^{-3}	1.91×10^{-3}	
Stirofos	2.95×10^{-3}	9.72×10^{-4}	
TCMTB	2.80×10^{-9}	7.54×10^{-4}	
Tebuthiuron	9.78×10^{-2}	3.41×10^{-2}	
Terbacil	2.76×10^{-1}	8.36×10^{-2}	
Terbufos	4.92×10^{-4}	1.26×10^{-4}	
Terbuthylazine	5.56×10^{-3}	1.82×10^{-3}	
Terbutryn	5.56×10^{-3}	1.82×10^{-3}	
Toxaphene	7.35×10^{-3}	2.67×10^{-3}	
Triadimefon	4.69×10^{-2}	2.46×10^{-2}	
Trifluralin	3.22×10^{-4}	1.09×10^{-4}	1

TABLE 3 TO PART 455—ORGANIC PESTICIDE ACTIVE INGREDIENT NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND PRETREATMENT STANDARDS FOR NEW SOURCES (PSNS)—Continued

Pesticide	kg/kkg (lb/1,000 lb) pounds of pollutant per 1000 lbs product		Notes
	Daily maximum shall not exceed	Monthly average shall not exceed	
Vapam [Sodium methyldithiocarbamate]	4.14×10^{-3}	1.35×10^{-3}	
Ziram [Zinc dimethyldithiocarbanate]	4.14×10^{-3}	1.35×10^{-3}	

[1] No discharge of process wastewater pollutants.

Notes:
1 Monitor and report as total Trifluralin.
2 Pounds of product shall include Benomyl and any Carbendazim production not converted to Benomyl.
3 Monitor and report as total tin.
4 Applies to purification by recrystalization portion of the process.

[58 FR 50696, Sept. 28, 1993]

TABLE 4 TO PART 455—BAT AND NSPS EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANTS FOR DIRECT DISCHARGE POINT SOURCES THAT USE END-OF-PIPE BIOLOGICAL TREATMENT

[Micrograms per liter (μg/l)]

Pollutant	Daily maximum shall not exceed	Monthly average shall not exceed
1,1-Dichloroethylene	25	16
1,1,1-Trichloroethane	54	21
1,2-Dichloroethane	211	68
1,2-Dichloropropane	230	153
1,2-Dichlorobenzene	163	77
1,2-trans-Dichloroethylene	54	21
1,3-Dichloropropene	44	29
1,4-Dichlorobenzene	28	15
2-chlorophenol	98	31
2,4-Dichlorophenol	112	39
2,4-Dimethylphenol	36	18
Benzene	136	37
Bromodichloromethane	380	142
Bromomethane	380	142
Chlorobenzene	28	15
Chloromethane	190	86
Cyanide (Total)	640	220
Dibromochloromethane	794	196
Dichloromethane	89	40
Ethylbenzene	108	32
Lead (Total)	690	320
Naphthalene	59	22
Phenol	26	15
Tetrachloroethylene	56	22
Tetrachloromethane	38	18
Toluene	80	26
Tribromomethane	794	196
Trichloromethane	46	21

[58 FR 50698, Sept. 28, 1993]

TABLE 5 TO PART 455—BAT AND NSPS EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANTS FOR DIRECT DISCHARGE POINT SOURCES THAT DO NOT USE END-OF-PIPE BIOLOGICAL TREATMENT

[Micrograms per liter (μg/l)]

Pollutant	Daily maximum shall not exceed	Monthly average shall not exceed
1,1-Dichloroethylene	60	22
1,1,1-Trichloroethane	59	22
1,2-trans-Dichloroethylene	66	25
1,2-Dichlorobenzene	794	196
1,2-Dichloropropane	794	196
1,2-Dichloroethane	574	180
1,3-Dichloropropene	794	196
1,4-Dichlorobenzene	380	142
2,4-Dimethylphenol	47	19
Benzene	134	57
Bromodichlorometh ane	380	142
Bromomethane	380	142
Chlorobenzene	380	142
Chloromethane	295	110
Cyanide (Total)	640	220
Dibromochlorometh ane	794	196
Dichloromethane	170	36
Ethylbenzene	380	142
Lead (Total)	690	320
Naphthalene	47	19
Phenol	47	19
Tetrachloroethylene	164	52
Tetrachloromethane	380	142
Toluene	74	28
Tribromomethane	794	196
Trichloromethane	325	111

[58 FR 50698, Sept. 28, 1993]

TABLE 6 TO PART 455—PSES AND PSNS FOR PRIORITY POLLUTANTS

[Micrograms per liter (μg/l)]

Pollutant	Daily maximum shall not exceed	Monthly maximum shall not exceed
1,1-Dichloroethylene	60	22
1,1,1-Trichloroethane	59	22
1,2-trans-Dichloroethylene	66	25
1,2-Dichlorobenzene	794	196
1,2-Dichloropropane	794	196
1,2-Dichloroethane	574	180
1,3-Dichloropropene	794	196
1,4-Dichlorobenzene	380	142
Benzene	134	57
Bromodichlorometh ane	380	142
Bromomethane	380	142
Chlorobenzene	380	142
Chloromethane	295	110

TABLE 6 TO PART 455—PSES AND PSNS FOR PRIORITY POLLUTANTS—Continued

[Micrograms per liter (μg/l)]

Pollutant	Daily maximum shall not exceed	Monthly maximum shall not exceed
Cyanide (Total)	640	220
Dibromochlorometh ane	794	196
Dichloromethane	170	36
Ethylbenzene	380	142
Lead (Total)	690	320
Naphthalene	47	19
Tetrachloroethylene	164	52
Tetrachloromethane	380	142
Toluene	74	28
Tribromomethane	794	196
Trichloromethane	325	111

[58 FR 50699, Sept. 28, 1993]

TABLE 7 TO PART 455—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS

EPA survey code	Pesticide name	CAS No.	EPA analytical method No.(s)
8	Triadimefon	43121–43–3	507/633/525.1/1656
12	Dichlorvos	00062–73–7	1657/507/622/525.1
16	2,4-D; 2,4-D Salts and Esters [2,4-Dichlorophenoxyacetic acid].	00094–75–7	1658/515.1/615/515.2/555
17	2,4-DB; 2,4-DB Salts and Esters [2,4-Dichlorophenoxybutyric acid].	00094–82–6	1658/515.1/615/515.2/555
22	Mevinphos	07786–34–7	1657/507/622/525.1
25	Cyanazine	21725–46–2	629/507
26	Propachlor	01918–16–7	1656/508/608.1/525.1
27	MCPA; MCPA Salts and Esters [2-Methyl-4-chlorophenoxyacetic acid].	00094–74–6	1658/615/555
30	Dichlorprop; Dichlorprop Salts and Esters [2-(2,4-Dichlorophenoxy) propionic acid].	00120–36–5	1658/515.1/615/515.2/555
31	MCPP; MCPP Salts and Esters [2-(2-Methyl-4-chlorophenoxy) propionic acid].	00093–65–2	1658/615/555
35	TCMTB [2-(Thiocyanomethylthio) benzothiazole]	21564–17–0	637
39	Pronamide	23950–58–5	525.1/507/633.1
41	Propanil	00709–98–8	632.1/1656
45	Metribuzin	21087–64–9	507/633/525.1/1656
52	Acephate	30560–19–1	1656/1657
53	Acifluorfen	50594–66–6	515.1/515.2/555
54	Alachlor	15972–60–8	505/507/645/525.1/1656
55	Aldicarb	00116–06–3	531.1
58	Ametryn	00834–12–8	507/619/525.1
60	Atrazine	01912–24–9	505/507/619/525.1/1656
62	Benomyl	17804–35–2	631
68	Bromacil; Bromacil Salts and Esters	00314–40–9	507/633/525.1/1656
69	Bromoxynil	01689–84–5	1625/1661
69	Bromoxynil octanoate	01689–99–2	1656
70	Butachlor	23184–66–9	507/645/525.1/1656
73	Captafol	02425–06–1	1656
75	Carbaryl [Sevin]	00063–25–2	531.1/632/553
76	Carbofuran	01563–66–2	531.1/632
80	Chloroneb	02675–77–6	1656/508/608.1/525.1
82	Chlorothalonil	01897–45–6	508/608.2/525.1/1656
84	Stirofos	00961–11–5	1657/507/622/525.1
86	Chlorpyrifos	02921–88–2	1657/508/622
90	Fenvalerate	51630–58–1	1660
103	Diazinon	00333–41–5	1657/507/614/622/525.1
107	Parathion methyl	00298–00–0	1657/614/622
110	DCPA [Dimethyl 2,3,5,6-tetrachloroterephthalate]	01861–32–1	508/608.2/525.1/515.1/515.2/1656
112	Dinoseb	00088–85–7	1658/515.1/615/515.2/555
113	Dioxathion	00078–34–2	1657/614.1
118	Nabonate [Disodium cyanodithioimidocarbonate]	00138–93–2	630.1
119	Diuron	00330–54–1	632/553
123	Endothall	00145–73–3	548/548.1
124	Endrin	00072–20–8	1656/505/508/608/617/525.1
125	Ethalfluralin	55283–68–6	[1] 1656/[1] 627

TABLE 7 TO PART 455—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS—Continued

EPA survey code	Pesticide name	CAS No.	EPA analytical method No.(s)
126	Ethion	00563–12–2	1657/614/614.1
127	Ethoprop	13194–48–4	1657/507/622/525.1
132	Fenarimol	60168–88–9	507/633.1/525.1/1656
133	Fenthion	00055–38–9	1657/622
138	Glyphosate [N-(Phosphonomethyl) glycine]	01071–83–6	547
140	Heptachlor	00076–44–8	1656/505/508/608/617/525.1
144	Isopropalin	33820–53–0	1656/627
148	Linuron	00330–55–2	553/632
150	Malathion	00121–75–5	1657/614
154	Methamidophos	10265–92–6	1657
156	Methomyl	16752–77–5	531.1/632
158	Methoxychlor	00072–43–5	1656/505/508/608.2/617/525.1
172	Nabam	00142–59–6	630/630.1
173	Naled	00300–76–5	1657/622
175	Norflurazon	27314–13–2	507/645/525.1/1656
178	Benfluralin	01861–40–1	[1] 1656/[1] 627
182	Fensulfothion	00115–90–2	1657/622
183	Disulfoton	00298–04–4	1657/507/614/622/525.1
185	Phosmet	00732–11–6	1657/622.1
186	Azinphos Methyl	00086–50–0	1657/614/622
192	Organo-tin pesticides	12379–54–3	Ind-01/200.7/200.9
197	Bolstar	35400–43–2	1657/622
203	Parathion	00056–38–2	1657/614
204	Pendimethalin	40487–42–1	1656
205	Pentachloronitrobenzene	00082–68–8	1656/608.1/617
206	Pentachlorophenol	00087–86–5	625/1625/515.2/555/515.1/ 525.1
208	Permethrin	52645–53–1	608.2/508/525.1/1656/1660
212	Phorate	00298–02–2	1657/622
218	Busan 85 [Potassium dimethyldithiocarbamate]	00128–03–0	630/630.1
219	Busan 40 [Potassium N-hydroxymethyl-N-methyldithiocarbamate].	51026–28–9	630/630.1
220	KN Methyl [Potassium N-methyldithiocarbamate]	00137–41–7	630/630.1
223	Prometon	01610–18–0	507/619/525.1
224	Prometryn	07287–19–6	507/619/525.1
226	Propazine	00139–40–2	507/619/525.1/1656
230	Pyrethrin I	00121–21–1	1660
232	Pyrethrin II	00121–29–9	1660
236	DEF [S,S,S-Tributyl phosphorotrithioate]	00078–48–8	1657
239	Simazine	00122–34–9	505/507/619/525.1/1656
241	Carbam-S [Sodium dimethyldithiocarbanate]	00128–04–1	630/630.1
243	Vapam [Sodium methyldithiocarbamate]	00137–42–8	630/630.1
252	Tebuthiuron	34014–18–1	507/525.1
254	Terbacil	05902–51–2	507/633/525.1/1656
255	Terbufos	13071–79–9	1657/507/614.1/525.1
256	Terbuthylazine	05915–41–3	619/1656
257	Terbutryn	00886–50–0	507/619/525.1
259	Dazomet	00533–74–4	630/630.1/1659
262	Toxaphene	08001–35–2	1656/505/508/608/617/525.1
263	Merphos [Tributyl phosphorotrithioate]	00150–50–5	1657/507/525.1/622
264	Trifluralin	01582–09–8	1656/508/617/627/525.1
268	Ziram [Zinc dimethyldithiocarbamate]	00137–30–4	630/630.1

[1] Monitor and report as total Trifluralin.

[58 FR 50699, Sept. 28, 1993]

TABLE 8 TO PART 455—LIST OF POLLUTION PREVENTION ALTERNATIVE PRACTICES

A modification to the list of practices on this table that an individual facility must comply with to be eligible for the pollution prevention alternative is allowed with acceptable justification as listed on this table as approved by the permit writer or control authority (using BPJ/BEJ) after submittal by the facility of a request for modification. A modification, for purposes of this table, means that a facility would no longer have to perform a listed practice or would need to comply with a modified practice. However, the modification only applies to the specific practice for which the modification has been justified and to no other listed practices. Facilities are required to thoroughly discuss all modifications

in the on-site compliance paperwork as described above in the limitations and standards (§ 455.41(c)).

1. Must use water conservation practices. These practices may include, but are not limited to using: spray nozzles or flow reduction devices on hoses, low volume/high pressure rinsing equipment, floor scrubbing machines, mop(s) and bucket(s), and counter current staged drum rinsing stations.

[Modification allowed when: Rinsing narrow transfer lines or piping where sufficient rinsing is better achieved by flushing with water.]

2. Must practice good housekeeping:

(a) Perform preventative maintenance on all valves and fittings and repair leaky valves and fittings in a timely manner;

(b) Use drip pans under any valves or fittings where hoses or lines are routinely connected and disconnected, collect for reuse when possible; and

(c) Perform quick cleanup of leaks and spills in outdoor bulk storage or process areas.

3. Must sweep or vacuum dry production areas prior to rinsing with water.

4. Must clean interiors of dry formulation equipment with dry carrier prior to any water rinse. The carrier material must be stored and reused in future formulation of the same or compatible product or properly disposed of as solid waste.

5. If operating continuous overflow Department of Transportation (DOT) aerosol leak test baths—>

Must operate with some recirculation.

6. If operating air pollution control wet scrubbers—>

Must operate as recirculating scrubbers (periodic blowdown is allowed as needed).

[Modification allowed when: Facility demonstrates that they would not be able to meet Resource Conservation Recovery Act or Clean Air Act (CAA) requirements.]

7. When performing rinsing of raw material drums, storage drums, and/or shipping containers that contained liquid PAI(s) and/or inert ingredients for the formulation of water-based products—>

Must reuse the drum/shipping container rinsate DIRECTLY into the formulation at the time of formulation; or store for use in future formulation of same or compatible product; or use a staged drum rinsing station (counter current rinsing).

[Modification allowed when: the drum/shipping container holds inert ingredient(s) only and (1) the facility can demonstrate that, after using water conservation practices, the large concentration of inert ingredient in the formulation creates more volume than could feasibly be reused; or (2) the facility can demonstrate that the concentration of the inert in the formulation is so small that the reuse would cause a formulation to exceed the ranges allowed in the Confidential Statement of Formula (CSF) (40 CFR 158.155).]

8. When performing rinsing of raw material drums, storage drums, and/or shipping containers that contained liquid PAI(s) and/or inert ingredients for the formulation of solvent-based products—>

Must reuse the drum/shipping container rinsate DIRECTLY into the formulation at the time of formulation or store for use in future formulation of same or compatible product.

[Modification allowed when:

(a) The drum/shipping container holds inert ingredient(s) only and: (1) The facility can demonstrate that, after using water conservation practices, the large concentration of inert ingredient in the formulation creates more volume than could feasibly be reused; or (2) the facility can demonstrate that the concentration of the inert in the formulation is so small that the reuse would cause a formulation to exceed the ranges allowed in the Confidential Statement of Formula (CSF) (40 CFR 158.155); *or*

(b) Drums/shipping containers are going to a drum refurbisher/recycler who will only accept drums rinsed with water.]

9. Must dedicate PFPR production equipment by water-based versus solvent-based products. Dedicated solvent-based or water-based equipment may be used on a non-routine basis for non-dedicated operations; however the facility may not discharge the solvent/aqueous changeover rinsate as part of

their P2 allowable discharge (i.e., the facility must achieve zero discharge of those process wastewater pollutants).

[Modification allowed when: Facility has installed and is using a solvent recovery system for the changeover rinsate (can also be used for other solvent recovery).]

10. Must store the rinsate from interior rinsing (does not include drum/shipping container rinsate) for reuse in future formulation of same or compatible product.

[Modification allowed when:

(a) Facility has evidence of biological growth or other product deterioration over a typical storage period;

(b) Facility has space limitations, BUT must still store rinsates for most frequently produced products;

(c) Manufacturer (or formulator contracting for toll formulating) has directed otherwise (i.e., send back to them or send for off-site disposal);

(d) Facility is dropping registration or production of the formulation and there is no compatible formulation for reuse of the rinsates or facility can provide reasonable explanation of why it does not anticipate formulation of same or compatible formulation within the next 12 months;

(e) Facility only performs packaging of the pesticide product from which interior rinsate is generated; or

(f) Facility has demonstrated that it must use a detergent to clean the equipment.]

NOTES

For indirect dischargers: After following the practices above, some wastewaters may require pretreatment prior to discharge to POTWs. See definition of pollution prevention allowable discharge for indirect dischargers (§ 455.41(d)).

For direct dischargers: After following the practices above, all wastewaters require treatment prior to discharge directly to the nation's waters. See definition of pollution prevention allowable discharge for direct dischargers (§ 455.41(e)).

Additional information and guidance on implementing these P2 practices as well as evaluating compliance with these practices will be available in a P2 Guidance Manual for the PFPR Industry.

[61 FR 57553, Nov. 6, 1996]

TABLE 9 TO PART 455—GROUP 2 MIXTURES

Shaughnessey code	Chemical name[1]
002201	Sabadilla alkaloids.
006501	Aromatic petroleum derivative solvent.
006602	Heavy aromatic naphtha.
016601[2]	Dry ice.
022003	Coal tar.
025001	Coal tar neutral oils.
025003	Creosote oil (Note: Derived from any source).
025004	Coal tar creosote.
031801	Ammonium salts of C8–18 and C18' fatty acids.
055601	BNOA.
063501	Kerosene.
063502	Mineral oil—includes paraffin oil from 063503.
063503	Petroleum distillate, oils, solvent, or hydrocarbons; also p.
063506	Mineral spirits.
067003	Terpineols (unspec.).
067205	Pine tar oil.
067207	Ester gum.
067302	Amines, N-coco alkyltrimethylenedi-, acetates.
069152	Amines, coco alkyl, hydrochlorides.
070801	Red Squill glycoside.
071004	Cube Resins other than rotenone.
071501	Ryania speciosa, powdered stems of.
072602[2]	Silica gel.
072605[2]	Silicon dioxide.
079014	Turkey red oil.
079021	Potassium salts of fatty acids.
079029	Fatty alcohols (52–61% C10, 39–46% C8, 0–3% C6, 0–3% C12).
079034	Methyl esters of fatty acids (100% C8–C12)
079059	Fatty alcohols (54.5% C10, 45.1% C8, 0.4% C6)
086803	Xylene range aromatic solvent
107302	Polyhedral inclusion bodies of Douglas fir tussock moth nucl.
107303	Polyhedral inclusion bodies of gypsy moth nucleopolyhedrosis.
107304	Polyhedral inclusion bodies of n. sertifer
116902	Gibberellin A4 mixt. with Gibberellin A7.
117001	Nosema locustae.
128888	Lactofen (ANSI).
128934[2]	Nitrogen, liquid.
129029	Bergamot Oil.
224600	Diethanolamides of the fatty acids of coconut oil (coded 079).
505200	Isoparaffinic hydrocarbons.

[1] Shaughnessey codes and chemical names are taken directly from the FATES database. Several chemical names are truncated because the chemical names listed in the FATES database are limited to 60 characters.

[2] EPA does not believe this PAI will persist in sanitary streams long enough to reach a POTW.

[61 FR 57554, Nov. 6, 1996]

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES

This table contains those pollutant control technologies, such as hydrolysis, chemical oxidation, precipitation and activated carbon adsorption, which

have been used for estimating compliance costs on a PAI specific basis. In general, these treatment technologies have been determined to be effective in treating pesticide containing wastewaters in literature, in bench or pilot scale treatability studies or in the Pesticide Manufacturing effluent guidelines. These are the same technologies that are presented as part of the Universal Treatment System. However, these technologies are PAI specific and may need to be used in conjunction with one another to provide treatment for all PAIs used at a facility over a period of time. In addition, facilities may experience difficulties treating wastewaters that contain emulsions, therefore, ''appropriate'' treatment for emulsified wastewaters must include an emulsion breaking step. For PAIs whose technology is listed as ''Pollution Prevention'', the permitting authority/control authority can determine if additional treatment is necessary through best professional judgement/best engineering judgement, respectively.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Dicofol	001	10501	DDT	Hydrolysis.
Maleic Hydrazide	002	51501	Hydrazide	Activated Carbon.
EDB	003	42002	EDB	Activated Carbon.
Vancide TH	004	82901	s-Triazine	Activated Carbon.
1,3-Dichloropropene	005	29001	EDB	Hydrolysis.
Thenarsazine Oxide	006	12601	Organoarsenic	Precipitation.
Dowicil 75	007	17901	NR4	Activated Carbon.
Triadimefon	008	109901	s-Triazine	Activated Carbon.
Hexachlorophene	009	44901	Chlorophene	Activated Carbon.
Tetrachlorophene	010		Chlorophene	Activated Carbon.
Dichlorophene	011	55001	Chlorophene	Activated Carbon.
Dichlorvos	012	84001	Phosphate	Hydrolysis.
Landrin-2	013		Carbamate	Activated Carbon.
2,3,6-T, S&E or Fenac	014	82605	2,4-D	Activated Carbon.
2,4,5-T and 2,4,5-T, S&E	015	(*)	2,4-D	Activated Carbon.
2,4-D (2,4-D, S&E)	016	(*)	2,4-D	Chemical Oxidation.
2,4-DB, S&E	017	(*)	2,4-D	Activated Carbon.
Dyrene or Anilazine	018	80811	s-Triazine	Activated Carbon.
Dinocap	019	36001	Phenylcrotonate	Activated Carbon.
Dichloran or DCNA	020	31301	Aryl Halide	Activated Carbon.
Busan 90	021	8707	Miscellaneous Organic	Activated Carbon.
Mevinphos	022	15801	Phosphate	Hydrolysis.
Sulfallate	023		Dithiocarbamate	Activated Carbon.
Chlorfenvinphos	024	84101	Phosphate	Activated Carbon.
Cyanazine or Bladex	025	100101	s-Triazine	Activated Carbon.
Propachlor	026	19101	Acetanilide	Activated Carbon.
MCPA, S&E	027	(*)	2,4-D	Activated Carbon.
Octhilinone	028	99901	Heterocyclic	Activated Carbon.
Pindone	029	67703	Miscellaneous Organic	Activated Carbon.
Dichlorprop, S&E	030	(*)	2,4-D	Activated Carbon.
MCPP, S&E or Mecoprop	031	(*)	2,4-D	Activated Carbon.
Thiabendazole	032	60101	Heterocyclic	Activated Carbon.
Belclene 310	033	80815	s-Triazine	Activated Carbon.
Chlorprop, S&E	034	21202	2,4-D	Activated Carbon.
Busan 72 or TCMTB	035	35603	Heterocyclic	Hydrolysis.
Chlorophacinone	037	67707	Miscellaneous Organic	Activated Carbon.
Landrin-1	038		Carbamate	Activated Carbon.
Pronamide	039	101701	Chlorobenzamide	Activated Carbon.
Methiocarb or Mesurol	040	100501	Carbamate	Hydrolysis.
Propanil	041	28201	Chloropropionanilide	Activated Carbon.
Polyphase [6]	042	107801	Carbamate	Activated Carbon.
Coumafuryl or Fumarin	043	86001	Coumarin	Activated Carbon.
DNOC	044		Phenol	Activated Carbon.
Metribuzin	045	101101	Triazathione	Activated Carbon.
CPA, S&E	046	(*)	2,4-D	Activated Carbon.
MCPB, S&E	047	19202	2,4-D	Activated Carbon.
Aminocarb	048		Carbamate	Hydrolysis.
Etridiazole	049	84701	Heterocyclic	Activated Carbon.
Ethoxyquin	050	55501	Quinolin	Activated Carbon.
Acephate or Orthene	052	103301	Phosphoroamidothioate	Activated Carbon.
Acifluorfen	053	114402	Benzoic Acid	Activated Carbon.
Alachlor	054	90501	Acetanilide	Activated Carbon.
Aldicarb	055	98301	Carbamate	Hydrolysis.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Allethrin	057	(*)	Pyrethrin	Activated Carbon.
Ametryn	058	80801	s-Triazine	Activated Carbon.
Amitraz	059	106201	Iminamide	Activated Carbon.
Atrazine	060	80803	s-Triazine	Hydrolysis.
Bendiocarb	061	105201	Carbamate	Hydrolysis.
Benomyl	062	99101	Carbamate	Hydrolysis.
BHC	063		Lindane	Hydrolysis.
Benzyl Benzoate	064	9501	Ester	Activated Carbon.
Lethane 60	065		Thiocyanate	Activated Carbon.
Bifenox	066	104301	Nitrobenzoate	Activated Carbon.
Biphenyl	067	17002	Aryl	Activated Carbon.
Bromacil (Lithium Salt)	068	(*)	Uracil	Activated Carbon.
Bromoxynil	069	(*)	Benzonitrile	Activated Carbon.
Butachlor	070		Acetanilide	Activated Carbon.
Giv-gard	071	101401	Miscellaneous Organic	Activated Carbon.
Cacodylic Acid	072	(*)	Organoarsenic	Precipitation.
Captafol	073		Phthalimide	Hydrolysis.
Captan	074	81301	Phthalimide	Hydrolysis.
Carbaryl	075	56801	Carbamate	Hydrolysis.
Carbofuran	076	90601	Carbamate	Hydrolysis.
Carbosulfan	077		Carbamate	Activated Carbon.
Chloramben	078	(*)	Benzoic Acid	Activated Carbon.
Chlordane	079	58201	Tricyclic	Activated Carbon.
Chloroneb	080	27301	Aryl Halide	Chemical Oxidation.
Chloropicrin	081	81501	Alkyl Halide	Chemical Oxidation.
Chlorothalonil	082	81901	Chloropropionanilide	Activated Carbon.
Chloroxuron	083		Urea	Activated Carbon.
Stirofos	084	83701	Phosphate	Hydrolysis.
Chlorpyrifos Methyl	085	59102	Phosphorothioate	Hydrolysis.
Chlorpyrifos	086	59101	Phosphorothioate	Chemical Oxidation.
Mancozeb	087	14504	Dithiocarbamate	Activated Carbon.
Bioquin (Copper)	088	24002	Organocopper	Precipitation.
Copper EDTA	089	39105	Organocopper	Precipitation.
Pydrin or Fenvalerate	090	109301	Pyrethrin	Activated Carbon.
Cycloheximide	091		Cyclic Ketone	Activated Carbon.
Dalapon	092	(*)	Alkyl Halide	Activated Carbon.
Dienochlor	093	27501	HCp	Activated Carbon.
Demeton	094		Phosphorothioate	Hydrolysis.
Desmedipham	095	104801	Carbamate	Hydrolysis.
Amobam	096		Miscellaneous Organic	Activated Carbon.
DBCP	097		EDB	Activated Carbon.
Dicamba	098	(*)	Aryl Halide	Activated Carbon.
Dichlone	099	29601	Quinone	Activated Carbon.
Thiophanate Ethyl	100	103401	Carbamate	Hydrolysis.
Perthane	101		DDT	Activated Carbon.
EXD	102		Dithiocarbamate	Activated Carbon.
Diazinon	103	57801	Phosphorothioate	Hydrolysis.
Diflubenzuron	104	108201	Urea	Activated Carbon.
Dimethoate	106	35001	Phosphorodithioate	Hydrolysis.
Parathion Methyl	107	53501	Phosphorothioate	Hydrolysis.
Dicrotophos	108	35201	Phosphate	Activated Carbon.
Crotoxyphos	109	58801	Phosphate	Activated Carbon.
DCPA	110	78701	Aryl Halide	Activated Carbon.
Trichlorofon	111	57901	Phosphonate	Activated Carbon.
Dinoseb	112	37505	Phenol	Activated Carbon.
Dioxathion	113	37801	Phosphorodithioate	Hydrolysis.
Diphacinone	114	67701	Indandione	Activated Carbon.
Diphenamide	115	36601	Acetamide	Activated Carbon.
Diphenylamine	116	38501	Aryl Amine	Activated Carbon.
MGK 326	117	47201	Ester	Activated Carbon.
Nabonate	118	63301	Isocyanate	Chemical Oxidation.
Diuron	119	35505	Urea	Activated Carbon.
Metasol DGH	120	44303	NR4	Activated Carbon.
Dodine	121	44301	NR4	Activated Carbon.
Endosulfan	122	79401	Tricyclic	Activated Carbon.
Endothall (Endothall S&E)	123	(*)	Bicyclic	Activated Carbon.
Endrin	124	41601	Tricyclic	Activated Carbon.
Ethalfluralin	125	113101	Toluidine	Activated Carbon.
Ethion	126	58401	Phosphorodithioate	Hydrolysis.
Ethoprop	127	41101	Phosphorodithioate	Activated Carbon.
Fenamiphos	128	100601	Phosphoroamidate	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Chlorobenzilate	129	28801	Aryl Halide	Activated Carbon.
Butylate	130	41405	Thiocarbamate	Activated Carbon.
Famphur	131		Phosphorothioate	Hydrolysis.
Fenarimol	132	206600	Pyrimidine	Activated Carbon.
Fenthion or Baytex	133	53301	Phosphorothioate	Hydrolysis.
Ferbam	134	34801	Dithiocarbamate	Activated Carbon.
Fluometuron	135	35503	Urea	Activated Carbon.
Fluoroacetamide	136		Acetamide	Activated Carbon.
Folpet	137	81601	Phthalimide	Hydrolysis.
Glyphosate (Glyphosate S&E)	138	(*)	Phosphoroamidate	Chemical Oxidation.
Glyphosine	139		Phosphoroamidate	Activated Carbon.
Heptachlor	140	44801	Tricyclic	Activated Carbon.
Cycloprate	141		Thiocarbamate	Activated Carbon.
Hexazinone	142	107201	s-Triazine	Activated Carbon.
Isofenphos	143	109401	Phosphoroamidothioate	Activated Carbon.
Isopropalin	144	100201	Toluidine	Activated Carbon.
Propham	145		Carbamate	Hydrolysis.
Karabutilate	146	97401	Carbamate	Hydrolysis.
Lindane	147	9001	Lindane	Activated Carbon.
Linuron	148	35506	Urea	Chemical Oxidation.
Malachite Green	149	39504	NR4	Activated Carbon.
Malathion	150	57701	Phosphorodithioate	Hydrolysis.
Maneb	151	14505	Dithiocarbamate	Activated Carbon.
Manam	152		Dithiocarbamate	Activated Carbon.
Mefluidide	153	114002	Carbamate	Activated Carbon.
Methamidophos	154	101201	Phosphoroamidothioate	Activated Carbon.
Methidathion	155	100301	Phosphorodithioate	Activated Carbon.
Methomyl	156	90301	Carbamate	Hydrolysis.
Methoprene	157	(*)	Ester	Activated Carbon.
Methoxychlor	158	34001	DDT	Hydrolysis.
Methyl Bromide	160	53201	Alkyl Halide	Activated Carbon.
Monosodium Methyl Arsenate	161	(*)	Organoarsenic	Precipitation.
Nalco D-2303	163	68102	Thiocyanate	Activated Carbon.
Quinomethionate	164	54101	Miscellaneous Organic	Activated Carbon.
Metolachlor	165	108801	Acetanilide	Activated Carbon.
Mexacarbate	166		Carbamate	Hydrolysis.
Metiram	167	14601	Dithiocarbamate	Activated Carbon.
Monuron TCA	168	35502	Urea	Activated Carbon.
Monuron	169	35501	Urea	Activated Carbon.
Napropamide	170	103001	Carbamate	Activated Carbon.
Deet	171	80301	Toluamide	Activated Carbon.
Nabam	172	14503	Dithiocarbamate	Chemical Oxidation.
Naled	173	34401	Phosphate	Hydrolysis.
Norea	174		Urea	Activated Carbon.
Norflurazon	175	105801	Heterocyclic	Activated Carbon.
Naptalam or Neptalam	176	30703	Phthalamide	Activated Carbon.
MGK 264	177	57001	Bicyclic	Activated Carbon.
Benfluralin	178	84301	Toluidine	Activated Carbon.
Sulfotepp	179	79501	Phosphorothioate	Activated Carbon.
Aspon	180		Phosphorothioate	Activated Carbon.
Coumaphos	181	36501	Phosphorothioate	Hydrolysis.
Fensulfothion	182	32701	Phosphorothioate	Hydrolysis.
Disulfoton	183	32501	Phosphorodithioate	Hydrolysis.
Fenitrothion	184	105901	Phosphorothioate	Hydrolysis.
Phosmet	185	59201	Phosphorodithioate	Hydrolysis.
Azinphos Methyl (Guthion)	186	58001	Phosphorodithioate	Hydrolysis.
Oxydemeton Methyl	187	58702	Phosphorothioate	Activated Carbon.
Organo-Arsenic Pesticides	188		Organoarsenic	Precipitation.
Organo-Cadmium Pesticides	189		Organocadmium	Precipitation
Organo-Copper Pesticides	190	(*)	Organocopper	Precipitation.
Organo-Mercury Pesticides	191	(*)	Organomercury	Precipitation.
Organo-Tin Pesticides	192	(*)	Organotin	Precipitation.
o-Dichlorobenzene	193	59401	Aryl Halide	Activated Carbon.
Oryzalin	194	104201	Sulfanilamide	Activated Carbon.
Oxamyl	195	103801	Carbamate	Hydrolysis.
Oxyfluorfen	196	111601	Miscellaneous Organic	Activated Carbon.
Bolstar	197	111501	Phosphorodithioate	Activated Carbon.
Sulprofos Oxon	198		Phosphorothioate	Hydrolysis.
Santox (EPN)	199	41801	Phosphorodithioate	Hydrolysis.
Fonofos	200	41701	Phosphorodithioate	Hydrolysis.
Propoxur	201	47802	Carbamate	Hydrolysis.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
p-Dichlorobenzene	202	61501	Aryl Halide	Activated Carbon.
Parathion Ethyl	203	57501	Phosphorothioate	Hydrolysis.
Pendimethalin	204	108501	Benzeneamine	Activated Carbon.
PCNB	205	56502	Aryl Halide	Activated Carbon.
PCP or Penta	206	(*)	Phenol	Activated Carbon.
Perfluidone	207		Sulfonamide	Activated Carbon.
Permethrin	208	109701	Pyrethrin	Activated Carbon.
Phenmedipham	209	98701	Carbamate	Hydrolysis.
Nemazine	210	64501	Heterocyclic	Activated Carbon.
Phorate	212	57201	Phosphorodithioate	Hydrolysis.
Phosalone	213	97701	Phosphorodithioate	Hydrolysis.
Phosphamidon	214	18201	Phosphate	Hydrolysis.
Picloram	215	(*)	Pyridine	Activated Carbon.
Piperonyl Butoxide	216	67501	Ester	Activated Carbon.
PBED or WSCP (Busan 77)	217	69183	NR4	Activated Carbon.
Busan 85 or Arylane	218	34803	Dithiocarbamate	Chemical Oxidation.
Busan 40	219	102901	Dithiocarbamate	Chemical Oxidation.
KN Methyl	220	39002	Dithiocarbamate	Chemical Oxidation.
Metasol J26	221	101301	Miscellaneous Organic	Activated Carbon.
Profenofos	222	111401	Phosphorothioate	Activated Carbon.
Prometon or Caparol	223	80804	s-Triazine	Chemical Oxidation.
Prometryn	224	80805	s-Triazine	Activated Carbon.
Propargite	225	97601	Miscellaneous Organic	Activated Carbon.
Propazine	226	80808	s-Triazine	Activated Carbon.
Propionic Acid	227	77702	Alkyl Acid	Activated Carbon.
Previcur N	228	119301	Carbamate	Hydrolysis.
Pyrethrin Coils	229	69004	Pyrethrin	Activated Carbon.
Pyrethrum I	230	69001	Pyrethrin	Hydrolysis.
Pyrethrum II	231	69002	Pyrethrin	Hydrolysis.
Pyrethrins	232	(*)	Pyrethrin	Hydrolysis.
Resmethrin	233	(*)	Pyrethrin	Activated Carbon.
Fenchlorphos or Ronnel	234	58301	Phosphorothioate	Hydrolysis.
Mexide or Rotenone	235	71003	Miscellaneous Organic	Activated Carbon.
DEF	236	74801	Phosphorotrithioate	Activated Carbon.
Siduron or Tupersan	237	35509	Urea	Activated Carbon.
Silvex	238	(*)	2,4-D	Activated Carbon.
Simazine	239	80807	s-Triazine	Activated Carbon.
Sodium Bentazon	240	103901	Heterocyclic	Chemical Oxidation.
Carbam-S or Sodam	241	34804	Dithiocarbamate	Chemical Oxidation.
Sodium Fluoroacetate	242	75003	Acetamide	Activated Carbon.
Vapam or Metham Sodium	243	39003	Dithiocarbamate	Chemical Oxidation.
Sulfoxide	244	57101	Miscellaneous Organic	Activated Carbon.
Cycloate or Ro-Neet	245	41301	Thiocarbamate	Activated Carbon.
EPrecipitationC or Eptam	246	41401	Thiocarbamate	Activated Carbon.
Molinate	247	41402	Thiocarbamate	Activated Carbon.
Pebulate or Tillman	248	41403	Thiocarbamate	Activated Carbon.
Vernolate or Vernam	249	41404	Thiocarbamate	Activated Carbon.
HPrecipitationMS	250	35604	Thiosulphonate	Activated Carbon.
Bensulide or Betesan	251	9801	Phosphorodithioate	Activated Carbon.
Tebuthiuron	252	105501	Urea	Activated Carbon.
Temephos	253	59001	Phosphorothioate	Hydrolysis.
Terbacil	254	12701	Uracil	Activated Carbon.
Terbufos or Counter	255	105001	Phosphorodithioate	Activated Carbon.
Terbuthylazine	256	80814	s-Triazine	Activated Carbon.
Terbutryn	257	80813	s-Triazine	Activated Carbon.
Tetrachlorophenol	258	63004	Phenol	Activated Carbon.
Dazomet	259	35602	Heterocyclic	Chemical Oxidation.
Thiophanate Methyl	260	102001	Carbamate	Hydrolysis.
Thiram	261	79801	Dithiocarbamate	Activated Carbon.
Toxaphene	262	80501	Bicyclic	Activated Carbon.
Merphos	263	74901	Phosphorotrithioate	Hydrolysis.
Trifluralin or Treflan	264	36101	Toluidine	Activated Carbon.
Warfarin	265	(*)	Coumarin	Activated Carbon.
Zinc MBT	266	51705	Organozinc	Precipitation.
Zineb	267	14506	Dithiocarbamate	Activated Carbon.
Ziram	268	34805	Dithiocarbamate	Activated Carbon.
Triallate	269	78802	Thiocarbamate	Activated Carbon.
Phenothrin	270	69005	Pyrethrin	Activated Carbon.
Tetramethrin	271	69003	Pyrethrin	Activated Carbon.
Chloropropham	272	18301	Carbamate	Hydrolysis.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Non-272 PAIs				
CFC 11		13	Alkyl Halide	Activated Carbon.
CFC 12		14	Alkyl Halide	Activated Carbon.
Polyethylene		152	Polymer	Activated Carbon.
Acrolein		701	Alcohol	Activated Carbon.
Dimethyl-m-dioxan-4-ol acetate		1001	Heterocyclic	Activated Carbon.
Dodecyl alcohol		1509	Alcohol	Activated Carbon.
Tetradecyl alcohol		1510	Alcohol	Activated Carbon.
Rosin amine D acetate		4201	Alkyl Acid	Activated Carbon.
Dihydroabietylamine acetate		4213	Alkyl Acid	Activated Carbon.
Amitrole		4401	Heterocyclic	Activated Carbon.
Allyl isothiocyanate		4901	Thiocyanate	Activated Carbon.
AMS		5501	Inorganic	Pollution Prevention.
Calcium sulfate		5602	Inorganic	Pollution Prevention.
Tartar emetic		6201	Inorganic	Pollution Prevention.
Diphenylstibene 2-ethylhexanoate.		6202	Aryl	Activated Carbon.
Streptomycin		6306	Heterocyclic	Activated Carbon.
Oxytetracycline hydrochloride		6308	Phthalamide	Activated Carbon.
Streptomycin sesquisulfate		6310	Heterocyclic	Activated Carbon.
Neomycin sulfate		6313	Benzeneamine	Activated Carbon.
Antimycin A		6314	Heterocyclic	Activated Carbon.
Calcium oxytetracycline		6321	Phthalamide	Activated Carbon.
Espesol 3A		6601	Phosphorothioate	Activated Carbon.
Arsenic acid		6801	Metallic	Precipitation.
Arsenic acid anhydride		6802	Metallic	Precipitation.
Arsenous acid anhydride		7001	Metallic	Precipitation.
Copper oxychloride		8001	Metallic	Precipitation.
Basic cupric sulfate		8101	Metallic	Precipitation.
Basic copper III—zinc sulfate complex (Declare copper and.		8102	Metallic	Precipitation.
Bromophos		8706	Phosphorothioate	Activated Carbon.
Benzyl bromoacetate		8710	Benzoic acid	Activated Carbon.
Benzoic acid		9101	Benzoic acid	Activated Carbon.
Benzyl diethyl ((2,6-xylylcarbamoyl)methyl) ammonium benzoate.		9106	NR4	Activated Carbon.
Benzyl alcohol		9502	Aryl	Activated Carbon.
3–Chloro-p-toluidine hydrochloride.		9901	Chloropropionanilide	Activated Carbon.
Butoxyethoxy)ethyl thiocyanate		10002	Thiocyanate	Activated Carbon.
2-Naphthol		10301	Phenol	Activated Carbon.
Boric acid		11001	Inorganic	Pollution Prevention.
Barium metaborate		11101	Inorganic	Pollution Prevention.
Boron sodium oxide (B8Na2O13), tetrahydrate (12280–03–4).		11103	Inorganic	Pollution Prevention.
Sodium metaborate (NaBO2)		11104	Inorganic	Pollution Prevention.
Boron sodium oxide (B8Na2O13) (12008–41–2).		11107	Inorganic	Pollution Prevention.
Boron sodium oxide (B4Na2O7), pentahydrate (12179–04–3).		11110	Inorganic	Pollution Prevention.
Boron sodium oxide (B4Na2O7) (1330–43–4).		11112	Inorganic	Pollution Prevention.
Polybutene		11402	Polymer	Activated Carbon.
Polyisobutylene		11403	Polymer	Activated Carbon.
Butyl cellosolve		11501	Alcohol	Activated Carbon.
Butoxypolypropylene glycol		11901	Polymer	Activated Carbon.
Neburon (ANSI)		12001	Chloropropionanilide	Activated Carbon.
Methyltrimethylenedioxy)bis(4-methyl-1,3,2-dioxaborinane).		12401	Bicyclic	Activated Carbon.
Oxybis(4,4,6-trimethyl-1,3,2-dioxaborinane).		12402	Bicyclic	Activated Carbon.
Cadmium chloride		12902	Metallic	Precipitation.
Lead arsenate, basic		13502	Metallic	Precipitation.
Lead arsenate		13503	Metallic	Precipitation.
Sodium arsenate		13505	Metallic	Precipitation.
Sodium arsenite		13603	Metallic	Precipitation.
Potassium bromide		13903	Inorganic	Pollution Prevention.
Camphor		15602	Bicyclic	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Carbon disulfide		16401	Inorganic	Pollution Prevention.
Carbon tetrachloride		16501	Alkyl Halide	Activated Carbon.
Barban (ANSI)		17601	Carbamate	Activated Carbon.
Chloro-2-propenyl)-3,5,7,triaza-1-azo niatricyclo(3.3.1.1)sup.		17902	Tricyclic	Activated Carbon.
Chlormequat chloride		18101	NR4	Activated Carbon.
Chloromethoxypropylmercuric acetate.		18401	Metallic	Precipitation.
Allidochlor		19301	Acetanilide	Activated Carbon.
Chromic acid		21101	Metallic	Precipitation.
Chromic oxide		21103	Metallic	Precipitation.
Cresol (unspec) (Cresylic acid)		22101	Phenol	Activated Carbon.
Cresol		22102	Phenol	Activated Carbon.
Copper (metallic)		22501	Metallic	Precipitation.
Copper ammonium carbonate		22703	Metallic	Precipitation.
Copper carbonate		22901	Metallic	Precipitation.
Copper hydroxide		23401	Metallic	Precipitation.
Copper chloride hydroxide (Cu2Cl(OH)3).		23501	Metallic	Precipitation.
Copper oxychloride sulfate		23503	Metallic	Precipitation.
Copper sulfate		24401	Metallic	Precipitation.
Copper (from triethanolamine complex).		24403	Metallic	Precipitation.
Copper as metallic (in the form of chelates of copper citrat).		24405	Metallic	Precipitation.
Copper as elemental from copper—ethylenediamine complex.		24407	Metallic	Precipitation.
Copper sulfate (anhydrous)		24408	Metallic	Precipitation.
Copper(I) oxide		25601	Metallic	Precipitation.
Cuprous thiocyanate		25602	Metallic	Precipitation.
Cyclohexane		25901	Aryl	Activated Carbon.
Cyclohexanone		25902	Cyclic Ketone	Activated Carbon.
Dichlobenil		27401	Chloropropionanilide	Activated Carbon.
Diquat dibromide		32201	NR4	Activated Carbon.
Dimethrin (ANSI)		34101	Pyrethrin	Activated Carbon.
Dicapthon		34502	Phosphorothioate	Activated Carbon.
Ziram, cyclohexylamine complex.		34806	Dithiocarbamate	Activated Carbon.
Butyl dimethyltrithioperoxycarbamate.		34807	Dithiocarbamate	Activated Carbon.
Daminozide		35101	Acetanilide	Activated Carbon.
Bis(trichloromethyl) sulfone		35601	Miscellaneous Organic	Activated Carbon
Bis(bromoacetoxy)-2-butene		35605	Alkyl Halide	Activated Carbon.
Dazomet, sodium salt		35607	Heterocyclic	Activated Carbon.
Butonate		35701	Phosphonate	Activated Carbon.
Trifluoro-4-nitro-m-cresol(**)=alpha,alpha,alpha-.		6201	Phenol	Activated Carbon.
Triethanolamine dinoseb (2-sec-Butyl-4,6-dinitrophenol).		37506	Phenol	Activated Carbon.
Sodium 4,6-dinitro-o-cresylate		37508	Phenol	Activated Carbon.
Dinitrophenol		37509	Phenol	Activated Carbon.
Alkanol* amine dinoseb (2-sec-butyl-4,6-dinitrophenol) *(s.		37511	Phenol	Activated Carbon.
Sodium dinoseb (2-sec-Butyl-4,6-dinitrophenol).		37512	Phenol	Activated Carbon.
Nitrilotriacetic acid, trisodium salt.		39106	Acetamide	Activated Carbon.
Trisodium(2-hydroxyethyl)ethylene diaminetriacetate.		39109	Acetanilide	Activated Carbon.
Ammonium ethylenediaminetetraacetate.		39117	Acetamide	Activated Carbon.
Pentasodium diethylenetriaminepentaacetate.		39120	Acetanilide	Activated Carbon.
Ethyl-1,3-hexanediol		41001	Alcohol	Activated Carbon.
Ethylene		41901	Miscellaneous Organic	Pollution Prevention.
EDC		42003	EDB	Activated Carbon.
Methylene chloride		42004	Alkyl Halide	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Methoxyethanol		42202	Alcohol	Activated Carbon.
Ethylene glycol		42203	Alcohol	Activated Carbon.
Butylene glycol		42205	Alcohol	Activated Carbon.
Ethylene oxide		42301	Miscellaneous Organic	Pollution Prevention.
Copper(II) oxide		42401	Metallic	Precipitation.
Cuprous and cupric oxide, mixed.		42403	Metallic	Precipitation.
Propylene oxide		42501	Miscellaneous Organic	Pollution Prevention.
Formaldehyde		43001	Miscellaneous Organic	Pollution Prevention.
Paraformaldehyde		43002	Polymer	Activated Carbon.
Bis(2-butylene) tetrahydro-2-furaldehyde.		43302	Tricyclic	Activated Carbon.
Giberellic acid		43801	Tricyclic	Activated Carbon.
Potassium gibberellate		43802	Tricyclic	Activated Carbon.
Glutaral		43901	Alcohol	Activated Carbon.
Copper citrate		44005	Metallic	Precipitation.
Methyl nonyl ketone		44102	Miscellaneous Organic	Activated Carbon.
Methyl-2-pentanone		44105	Miscellaneous Organic	Activated Carbon.
Monosodium 2,2'-methylenebis (3,4,6-trichlorophenate).		44902	Chlorophene	Activated Carbon.
Potassium 2,2'-methylenebis (3,4,6-trichlorophenate).		44904	Chlorophene	Activated Carbon.
Hexachloroepoxyoctahydro-endo, exo-dimethanoaphthalene 85%.		45001	Tricyclic	Activated Carbon.
Chlorhexidine diacetate		45502	Chloropropionanilide	Activated Carbon.
Hydrocyanic acid		45801	Inorganic	Activated Carbon.
Hydroxyethyl octyl sulfide		46301	Alcohol	Activated Carbon.
Heptadecenyl-2-(2-hydroxyethyl)-2-i midazolinium chloride.		46608	NR4	Activated Carbon.
Hydroxyethyl)-2-alkyl-2-imid-azoline (as in fatty acids of t.		46609	NR4	Activated Carbon.
IBA		46701	Bicyclic	Activated Carbon.
Dihydropyrone		46801	Cyclic ketone	Activated Carbon.
Butoxypolypropoxypolyethoxye-thanol-iodine complex.		46901	Polymer	Activated Carbon.
Polyethoxypolypropoxyethanol-iodine complex.		46904	Polymer	Activated Carbon.
Use code no. 046904 (polyethoxypolypropoxy etha-nol-iodine complex).		46909	Polymer	Activated Carbon.
Iodine-potassium iodide com-plex.		46917	Inorganic	Pollution Prevention.
Alkyl-omega-hydroxypoly(oxyethylen e)-io-dine complex *(100%.		46921	Polymer	Activated Carbon.
Lead acetate		48001	Metallic	Precipitation.
Nickel sulfate hexahydrate		50505	Metallic	Precipitation.
Maleic hydrazide, diethanolamine salt.		51502	Hydrazide	Activated Carbon.
Maleic hydrazide, potassium salt.		51503	Hydrazide	Activated Carbon.
Sodium 2-mercaptobenzothiolate.		51704	Heterocyclic	Activated Carbon.
Mercuric chloride		52001	Metallic	Precipitation.
Mercurous chloride		52201	Metallic	Precipitation.
Metaldehyde		53001	Miscellaneous Organic	Activated Carbon.
Methylated naphthalenes		54002	Aryl	Activated Carbon.
Sodium 2,2'-methylenebis(4-chlorophenate).		55005	Chlorophene	Activated Carbon.
Naphthalene		55801	Aryl	Activated Carbon.
NAD		56001	Benzoic Acid	Activated Carbon.
NAA (1–Naphthaleneacetic Acid).		56002	Benzoic Acid	Activated Carbon.
Potassium 1-naphthaleneacetate.		56003	Benzoic Acid	Activated Carbon.
Ammonium 1-naphthaleneacetate.		56004	Benzoic Acid	Activated Carbon.
Sodium 1-naphthaleneacetate		56007	Benzoic Acid	Activated Carbon.
Ethyl 1-naphthaleneacetate		56008	Benzoic Acid	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Nitrophenol		56301	Phenol	Activated Carbon.
Nicotine		56702	Pyridine	Activated Carbon.
Carbophenothion (ANSI)		58102	Phosphorodithioate	Activated Carbon.
Sodium 5-chloro-2-(4-chloro-2-(3-(3,4-dichlorophenyl)ureido).		58802	Aryl Halide	Activated Carbon.
Monocrotophos		58901	Phosphate	Activated Carbon.
Chlordimeform		59701	Chloropropionanilide	Activated Carbon.
Chlordimeform hydrochloride		59702	Chloropropionanilide	Activated Carbon.
Thiabendazole hypophosphite		60102	Hydrazide	Activated Carbon.
Hexachlorobenzene		61001	Lindane	Activated Carbon.
Butyl paraben		61205	Phenol	Activated Carbon.
Paraquat dichloride		61601	Pyridine	Activated Carbon.
Chloro-4-phenylphenol		62206	Chlorophene	Activated Carbon.
Chloro-2-phenylphenol		62208	Chlorophene	Activated Carbon.
Chloro-2-biphenylol, potassium salt.		62209	Chlorophene	Activated Carbon.
Chloro-2-phenylphenol		62210	Chlorophene	Activated Carbon.
Chloro-2-phenylphenol, potassium salt.		62211	Chlorophene	Activated Carbon.
Sodium phenate		64002	Phenol	Activated Carbon.
Butylphenol, sodium salt		64115	Phenol	Activated Carbon.
Ammonium 2-phenylphenate		64116	Phenol	Activated Carbon.
Chloro-2-cyclopentylphenol		64202	Chlorophene	Activated Carbon.
Bithionolate sodium		64203	Chlorophene	Activated Carbon.
Chloro-3-cresol		64206	Chlorophene	Activated Carbon.
Sodium 2,4,5-trichlorophenate		64217	Chlorophene	Activated Carbon.
Aluminum phosphide		66501	Inorganic	Pollution Prevention.
Phosphorus		66502	Inorganic	Pollution Prevention.
Magnesium phosphide		66504	Inorganic	Pollution Prevention.
1-(Alkyl*amino)-3-aminopropane* (Fatty acids of coconut oil).		67301	Iminamide	Activated Carbon.
Alkyl* amino)-3-aminopropane *(53%C12, 19%C14, 8.5%C16, 7%C8.		67305	Iminamide	Activated Carbon.
Alkyl*amino)-3-aminopropane benzoate*(fatty acids of coconut.		67307	Iminamide	Activated Carbon.
Alkyl* dipropoxyamine *(47% C12, 18% C14, 10% C18, 9% C10, 8.		67308	Iminamide	Activated Carbon.
Alkyl*amino)-3-aminopropane hydroxyacetate* (acids of coconut.		67309	Iminamide	Activated Carbon.
Alkyl* amino)-3-aminopropane *(42%C12, 26%C18, 15%C14, 8%C16.		67310	Iminamide	Activated Carbon.
Alkyl*amino)-3-aminopropane diacetate* (fatty acids of coconut.		67313	Iminamide	Activated Carbon.
Octadecenyl-1,3-propanediamine monogluconate.		67316	Acetamide	Activated Carbon.
Alkyl* amine acetate *(5%C8, 7%C10, 54%C12, 19%C14, 8%C16,.		67329	Iminamide	Activated Carbon.
Pindone sodium salt		67704	Indandione	Activated Carbon.
Diphacinone, sodium salt		67705	Indandione	Activated Carbon.
Isovaleryl-1,3-indandione, calcium salt.		67706	Indandione	Activated Carbon.
Methyl isothiocyanate		68103	Thiocyanate	Pollution Prevention.
Potassium dichromate		68302	Inorganic	Pollution Prevention.
Sodium chromate		68303	Inorganic	Pollution Prevention.
Sodium dichromate		68304	Metallic	Precipitation.
Alkenyl* dimethyl ethyl ammonium bromide *(90%C18', 10%C16').		69102	NR4	Activated Carbon.
Alkyl*-N-ethyl morpholinium ethyl sulfate *(92%C18, 8%C16).		69113	Heterocyclic	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Alkyl* isoquinolinium bromide *(50% C12, 30% C14, 17% C16, 3).	.....	69115	Quinolin	Activated Carbon.
Alkyl* methyl isoquinolinium chloride *(55%C14, 12%C12, 17%C).	.....	69116	Quinolin	Activated Carbon.
Cetyl trimethyl ammonium bromide.	.....	69117	NR4	Activated Carbon.
Cetyl pyridinium bromide	.....	69118	Pyridine	Activated Carbon.
Dodecyl dimethyl benzyl ammonium naphthenate.	.....	69127	NR4	Activated Carbon.
Alkyl* dimethyl ethylbenzyl ammonium cyclohexylsulfamate *(5).	.....	69135	NR4	Activated Carbon.
Alkyl*-N-ethyl morpholinium ethyl sulfate *(66%C18, 25%C16).	.....	69147	Heterocyclic	Activated Carbon.
Alkyl* trimethyl ammonium bromide *(95%C14, 5%C16).	.....	69153	NR4	Activated Carbon.
Benzyl((dodecylcarbamoyl) methyl)di methyl ammonium chloride.	.....	69159	NR4	Activated Carbon.
Cetyl pyridinium chloride	.....	69160	Pyridine	Activated Carbon.
Alkyl* dimethyl ethyl ammonium bromide *(85%C16, 15%C18).	.....	69186	NR4	Activated Carbon.
Cetyl-N-ethylmorpholinium ethyl sulfate.	.....	69187	Heterocyclic	Activated Carbon.
Use code no. 069102 (Alkenyl* Dimethyl Ethyl Ammonium bromide).	.....	69198	NR4	Activated Carbon.
p-Aminopyridine	.....	69201	Pyridine	Activated Carbon.
Nitrapyrin (ANSI)	.....	69203	Pyridine	Activated Carbon.
Alkyl pyridines	.....	69205	Pyridine	Activated Carbon.
Pyrazon (ANSI)	.....	69601	Heterocyclic	Activated Carbon.
Capsaicin (in oleoresin of capsicum).	.....	70701	Phenol	Activated Carbon.
Ryanodine	.....	71502	Tricyclic	Activated Carbon.
Silver	.....	72501	Inorganic	Pollution Prevention.
Silver chloride	.....	72506	Inorganic	Pollution Prevention.
Silver thiuronium acrylate copolymer.	.....	72701	Polymer	Activated Carbon.
Sodium chlorate	.....	73301	Inorganic	Pollution Prevention.
Calcium cyanide	.....	74001	Inorganic	Pollution Prevention.
Sodium cyanide	.....	74002	Inorganic	Pollution Prevention.
Cryolite	.....	75101	Inorganic	Pollution Prevention.
Sodium fluoride	.....	75202	Inorganic	Pollution Prevention.
Ammonium fluosilicate	.....	75301	Inorganic	Pollution Prevention.
Sodium fluosilicate	.....	75306	Inorganic	Pollution Prevention.
Potassium iodide	.....	75701	Inorganic	Pollution Prevention.
Potassium tetrathionate	.....	75903	Inorganic	Pollution Prevention.
Potassium nitrate	.....	76103	Inorganic	Pollution Prevention.
Sodium nitrate	.....	76104	Inorganic	Pollution Prevention.
Sodium nitrite	.....	76204	Inorganic	Pollution Prevention.
Benzenesulfonamide, N-chloro-, sodium salt.	.....	76501	Sulfonamide	Activated Carbon.
Salicyclic acid	.....	76202	Benzoic Acid	Activated Carbon.
Ethoxyethyl p-methoxycinnamate.	.....	76604	Aryl	Activated Carbon.
Calcium polysulfide	.....	76702	Polymer	Activated Carbon.
Strychnine	.....	76901	Tricyclic	Activated Carbon.
Strychnine sulfate	.....	76902	Tricyclic	Activated Carbon.
Niclosamide	.....	77401	Chlorobenzamide	Activated Carbon.
Dibromosalicylamilide	.....	77402	Chlorobenzamide	Activated Carbon.
Tribromsalan	.....	77404	Chlorobenzamide	Activated Carbon.
Dibromosalicylanilide	.....	77405	Chlorobenzamide	Activated Carbon.
Chlorosalicylanilide	.....	77406	Chlorobenzamide	Activated Carbon.
Sulfur	.....	77501	Inorganic	Pollution Prevention.
Sulfaquinoxaline	.....	77901	Sulfanilamide	Activated Carbon.
Sulfacetamide	.....	77904	Sulfanilamide	Activated Carbon.
Sulfuryl fluoride	.....	78003	Inorganic	Pollution Prevention.
Sodium bisulfite	.....	78201	Inorganic	Pollution Prevention.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Tetrachloroethylene	.....	78501	EDB	Activated Carbon.
Ethoxylated isooctylphenol	.....	79004	Phenol	Activated Carbon.
Lauric diethanolamide	.....	79018	Acetanilide	Activated Carbon.
Triethanolamine oleate	.....	79025	NR4	Activated Carbon.
Dioctyl sodium sulfosuccinate	.....	79027	Thiosulfonate	Activated Carbon.
Use code no. 069179 (alkyl*mono-ethanolamide).	.....	79036	Miscellaneous Organic	Activated Carbon.
Alkyl* diethanolamide *(70%C12, 30%C14).	.....	79045	Miscellaneous Organic	Activated Carbon.
Tetradecyl formate	.....	79069	Alkyl Acid	Activated Carbon.
Polyoxyethylene sorbitol oleate-laurate.	.....	79075	Polymer	Activated Carbon.
Polyethoxylated stearylamine	.....	79094	Polymer	Activated Carbon.
Capric diethanolamide	.....	79099	Acetanilide	Activated Carbon.
Calcium thiosulfate	.....	80101	Inorganic	Pollution Prevention.
Ammonium thiosulfate	.....	80103	Inorganic	Pollution Prevention.
Thymoxydichloroacetic acid	.....	80401	Benzoic Acid	Activated Carbon.
Thymol	.....	80402	Phenol	Activated Carbon.
Sodium trichloroacetate	.....	81001	Alkyl Halide	Activated Carbon.
Trichloroacetic acid	.....	81002	Alkyl Halide	Activated Carbon.
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine.	.....	83301	s-Triazine	Activated Carbon.
2-(Hydroxymethyl)-2-nitro-1,3-propanediol.	.....	83902	Alcohol	Activated Carbon.
Bomyl	.....	84201	Phosphate	Activated Carbon.
Turpentine	.....	84501	Miscellaneous Organic	Activated Carbon.
Chloro-1-(2,5-dichlorophen-yl)vinyl) O,O-diethyl phosphorothi.	.....	84901	Phosphorothioate	Activated Carbon.
Zinc chloride	.....	87801	Metallic	Precipitation.
Zinc 2-pyridinethiol-1-oxide	.....	88002	Metallic	Precipitation.
Hydroxy-2-(1H)-pyridinethione, sodium salt.	.....	88004	Pyridine	Activated Carbon.
Omadine TBAO	.....	88005	Pyridine	Activated Carbon.
Zinc naphthenate	.....	88301	Metallic	Precipitation.
Zinc oxide	.....	88502	Metallic	Precipitation.
Zinc phosphide (Zn3P2)	.....	88601	Metallic	Precipitation.
Zinc phenol sulfonate	.....	89002	Metallic	Precipitation.
Zinc sulfate, basic	.....	89101	Metallic	Precipitation.
Dimetilan	.....	90101	Carbamate	Activated Carbon.
Carboxin	.....	90201	Heterocyclic	Activated Carbon.
Oxycarboxin	.....	90202	Heterocyclic	Activated Carbon.
Benzocaine	.....	97001	Benzeneamine	Activated Carbon.
Piperalin	.....	97003	2,4-D	Activated Carbon.
Tetracaine hydrochloride	.....	97005	Benzeneamine	Activated Carbon.
Formetanate hydrochloride	.....	97301	Toluamide	Activated Carbon.
Azacosterol HCl	.....	98101	Tricyclic	Activated Carbon.
Use code no. 039502 (gentian violet).	.....	98401	NR4	Activated Carbon.
Ammonium alum	.....	98501	Inorganic	Pollution Prevention.
Bismuth subgallate	.....	98601	Metallic	Precipitation.
Chlorflurenol, methyl ester	.....	98801	Aryl Halide	Activated Carbon.
Benzisothiazolin-3-one	.....	98901	Heterocyclic	Activated Carbon.
Methyl 2-benzimidazolecarbamate phosphate.	.....	99102	Carbamate	Activated Carbon.
Ethephon	.....	99801	Phosphate	Activated Carbon.
Pentanethiol	.....	100701	Miscellaneous Organic	Activated Carbon.
Nitrobutyl)morpholine	.....	100801	Heterocyclic	Activated Carbon.
Ethyl-2-nitrotrimethyl-ene)dimorpholine.	.....	100802	Heterocyclic	Activated Carbon.
Tolyl diiodomethyl sulfone	.....	101002	Thiosulfonate	Activated Carbon.
Isobutyric acid	.....	101502	Alkyl Acid	Activated Carbon.
Dibromo-3-nitrilopropionamide	.....	101801	Acetamide	Activated Carbon.
Polyethoxylated oleylamine	.....	101901	Acetamide	Activated Carbon.
Dinitramine (ANSI)	.....	102301	Nitrobenzoate	Activated Carbon.
Phenylethyl propionate	.....	102601	Phenylcrotonate	Activated Carbon.
Eugenol	.....	102701	Phenol	Activated Carbon.
Tricosene	.....	103201	Miscellaneous Organic	Activated Carbon.
Tricosene	.....	103202	Miscellaneous Organic	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Sodium 1,4′,5′-trichloro-2′-(2,4,5-trichlorophenoxy)methanes.	.....	104101	2,4-D	Activated Carbon.
Hexahydro-1,3,5-tris(2-hydroxypropyl)-s-triazine.	.....	105601	s-Triazine	Activated Carbon.
Methazole	.....	106001	Hydrazide	Activated Carbon.
Difenzoquat methyl sulfate	.....	106401	Hydrazide	Activated Carbon.
Butralin	.....	106501	Benzeneamine	Activated Carbon.
Fosamine ammonium	.....	106701	Carbamate	Activated Carbon.
Asulam	.....	106901	Carbamate	Activated Carbon.
Sodium asulam	.....	106902	Carbamate	Activated Carbon.
Hydroxymethoxymethyl-1-aza-3,7-dioxabicyclo(3.3.0)octane.	.....	107001	Bicyclic	Activated Carbon.
Hydroxymethyl-1-aza-3,7-dioxabicyclo(3.3.0)octane.	.....	107002	Bicyclic	Activated Carbon.
Hydroxypoly(methyleneoxy)* methyl-1-aza-3,7-dioxabicyclo(3.3).	.....	107003	Bicyclic	Activated Carbon.
Chloro-2-methyl-3(2H)-isothiazolone.	.....	107103	Heterocyclic	Activated Carbon.
Methyl-3(2H)-isothiazolone	.....	107104	Heterocyclic	Activated Carbon.
Trimethoxysilyl)propyl dimethyl octadecyl ammonium chloride.	.....	107401	NR4	Activated Carbon.
Kinoprene	.....	107502	Ester	Activated Carbon.
Triforine (ANSI)	.....	107901	Hydrazide	Activated Carbon.
Pirimiphos-methyl (ANSI)	.....	108102	Phosphorothioate	Activated Carbon.
Thiobencarb	.....	108401	Thiocarbamate	Activated Carbon.
Ancymidol (ANSI)	.....	108601	Pyrimidine	Activated Carbon.
Oxadiazon (ANSI)	.....	109001	Hydrazide	Activated Carbon.
Mepiquat chloride	.....	109101	NR4	Activated Carbon.
Fluvalinate	.....	109302	Toluamide	Activated Carbon.
Chloro-N-(hydroxymethyl)acetamide.	.....	109501	Acetamide	Activated Carbon.
Dikegulac sodium	.....	109601	Tricyclic	Activated Carbon.
Iprodione (ANSI)	.....	109801	Hydrazide	Activated Carbon.
Phenylmethyl)-9-(tetrahydro-2H-pyran-2-yl)-9H-purin-6-amine.	.....	110001	Pyrimidine	Activated Carbon.
Prodiamine	.....	110201	Benzeneamine	Activated Carbon.
Erioglaucine	.....	110301	Benzeneamine	Activated Carbon.
Tartrazine	.....	110302	Hydrazide	Activated Carbon.
Dodemorph acetate	.....	110401	Heterocyclic	Activated Carbon.
Ethofumesate (ANSI)	.....	110601	Bicyclic	Activated Carbon.
Aldoxycarb (ANSI)	.....	110801	Carbamate	Activated Carbon.
Diclofop-methyl	.....	110902	Aryl Halide	Activated Carbon.
Bromo-1-(bromomethyl)-1,3-propanediCarbon.itrile.	.....	111001	Isocyanate	Activated Carbon.
Poly (imino imidocarbonyli minoimidocarbony liminohexameth ylene).	.....	111801	Polymer	Activated Carbon.
Imazalil	.....	111901	Aryl Halide	Activated Carbon.
Bromadiolone	.....	112001	Coumarin	Activated Carbon.
Brodifacoum	.....	112701	Coumarin	Activated Carbon.
Bromethalin (ANSI)	.....	112802	Aryl Amine	Activated Carbon.
Fluridone (ANSI)	.....	112900	Aryl Halide	Activated Carbon.
Vinclozolin	.....	113201	Aryl Halide	Activated Carbon.
Metalaxyl	.....	113501	Benzeneamine	Activated Carbon.
Propetamphos (ANSI)	.....	113601	Phosphoroamidothioate	Activated Carbon.
Methyl-1-naphthyl)maleimide	.....	113701	Phthalamide	Activated Carbon.
Hexadecadien-1-yl acetate	.....	114101	Ester	Activated Carbon.
Hexadecadien-1-yl acetate	.....	114102	Ester	Activated Carbon.
Epoxy-2-methyloctadecane	.....	114301	Heterocyclic	Activated Carbon.
Thiodicarb (ANSI)	.....	114501	Thiocarbamate	Activated Carbon.
Dimethyloxazolidine (8CA & 9CA).	.....	114801	Heterocyclic	Activated Carbon.
Trimethyloxazolidine	.....	114802	Heterocyclic	Activated Carbon.
Hydroxyphenyl) oxoace tohydroximic chloride.	.....	114901	Phenol	Activated Carbon.
EEEBC	.....	115001	Carbamate	Activated Carbon.
MDM Hydantoin	.....	115501	Hydrazide	Activated Carbon.
DMDM Hydantoin	.....	115502	Hydrazide	Activated Carbon.
Triclopyr (ANSI)	.....	116001	Pyridine	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Triethylamine triclopyr		116002	Pyridine	Activated Carbon.
Butoxyethyl triclopyr		116004	Pyridine	Activated Carbon.
Decenyl)dihydro-2(3H)-furanone		116501	Ester	Activated Carbon.
Cytokinins		116801	Toluidine	Activated Carbon.
Benzyladenine		116901	Pyrimidine	Activated Carbon.
Clopyralid, monoethanolamine salt.		117401	Pyridine	Activated Carbon.
Clopyralid (ANSI)		117403	Pyridine	Activated Carbon.
Flucythrinate (ANSI)		118301	Pyrethrin	Activated Carbon.
Hydramethylnon (ANSI)		118401	Iminimide	Activated Carbon.
Chlorsulfuron		118601	s-Triazine	Activated Carbon.
Dimethipin		118901	Heterocyclic	Activated Carbon.
Hexadecenal		120001	Miscellaneous Organic	Activated Carbon.
Tetradecenal		120002	Miscellaneous Organic	Activated Carbon.
Thidiazuron		120301	Urea	Activated Carbon.
Metronidazole		120401	Hydrazide	Activated Carbon.
Erythrosine B		120901	Tricyclic	Activated Carbon.
Sethoxydim		121001	Cyclic Ketone	Activated Carbon.
Clethodim		121011	Heterocyclic	Activated Carbon.
Cyromazine		121301	s-Triazine	Activated Carbon.
Tralomethrin		121501	Pyrethrin	Activated Carbon.
Azadirachtin		121701	Tricyclic	Activated Carbon.
Tridecen-1-yl acetate		121901	Ester	Activated Carbon.
Tridecen-1-yl acetate		121902	Ester	Activated Carbon.
Sulfometuron methyl		122001	Pyrimidine	Activated Carbon.
Metsulfuron-methyl		122010	s-Triazine	Activated Carbon.
Propiconazole		122101	Aryl Halide	Activated Carbon.
Furanone, dihydro-5-pentyl		122301	Cyclic Ketone	Activated Carbon.
Furanone, 5-heptyldihydro-		122302	Cyclic Ketone	Activated Carbon.
Abamectin (ANSI)		122804	Tricyclic	Activated Carbon.
Fluazifop-butyl		122805	Pyridine	Activated Carbon.
Fluazifop-R-butyl		122809	Pyridine	Activated Carbon.
Flumetralin		123001	Nitrobenzoate	Activated Carbon.
Fosetyl-Al		123301	Phosphate	Activated Carbon.
Methanol, (((2-(dihydro-5-methyl-3(2H)-oxazolyl)-1-methyl)et.		123702	Heterocyclic	Activated Carbon.
Fomesafen		123802	Nitrobenzoate	Activated Carbon.
Tridiphane		123901	Aryl Halide	Activated Carbon.
POE isooctadecanol		124601	Alcohol	Activated Carbon.
Periplanone B		124801	Bicyclic	Activated Carbon.
Fenoxycarb		125301	Carbamate	Activated Carbon.
Clomazone		125401	Aryl Halide	Activated Carbon.
Clofentezine		125501	Aryl Halide	Activated Carbon.
Paclobutrazol		125601	Hydrazide	Activated Carbon.
Flurprimidol		125701	Pyrimidine	Activated Carbon.
Isoxaben		125851	Heterocyclic	Activated Carbon.
Isazofos		126901	Phosphorothioate	Activated Carbon.
Triadimenol		127201	Hydrazide	Activated Carbon.
Fenpropathrin		127901	Pyrethrin	Activated Carbon.
Sulfosate		128501	Phosphorothioate	Activated Carbon.
Fenoxaprop-ethyl		128701	Heterocyclic	Activated Carbon.
Quizalofop-ethyl		128711	Phthalimide	Activated Carbon.
Bensulfuron-methyl		128820	Pyrimidine	Activated Carbon.
Imazapyr		128821	Hydrazide	Activated Carbon.
Bifenthrin		128825	Pyrethrin	Activated Carbon.
Imazapyr, isopropylamine salt		128829	Hydrazide	Activated Carbon.
Sodium salt of 1-carboxymethyl-3,5,7-triaza-1-azoniatricyclo.		128832	s-Triazine	Activated Carbon.
Linalool		128838	Alcohol	Activated Carbon.
Imazaquin, monoammonium salt.		128840	Pyrimidine	Activated Carbon.
Imazethabenz		128842	Pyrimidine	Activated Carbon.
Thifensulfuron methyl		128845	s-Triazine	Activated Carbon.
Imazaquin		128848	Pyrimidine	Activated Carbon.
Myclobutanil (ANSI)		128857	s-Triazine	Activated Carbon.
Zinc borate (3ZnO, 2B03, 3.5H2O; mw 434.66).		128859	Metallic	Precipitation.
Cyhalothrin		128867	Pyrethrin	Activated Carbon.
Potassium cresylate		128870	Phenol	Activated Carbon.
Triflumizole		128879	Toluidine	Activated Carbon.

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Tribenuron methyl		128887	s-Triazine	Activated Carbon.
Cyhalothrin		128897	Pyrethrin	Activated Carbon.
Chlorimuron-ethyl		128901	Pyrimidine	Activated Carbon.
Dodecen-1-yl acetate		128906	Ester	Activated Carbon.
Dodecen-1-yl acetate		128907	Ester	Activated Carbon.
DDOL		128908	Alcohol	Activated Carbon.
Farnesol		128910	Alcohol	Activated Carbon.
Nerolidol		128911	Alcohol	Activated Carbon.
Tefluthrin		128912	Pyrethrin	Activated Carbon.
Bromoxynil heptanoate		128920	Chloropropionanilide	Activated Carbon.
Imazethapyr		128922	Pyrimidine	Activated Carbon.
Imazethapyr, ammonium salt		128923	Pyrimidine	Activated Carbon.
Chitosan		128930	Polymer	Activated Carbon.
Sulfuric acid, monourea adduct		128961	Urea	Activated Carbon.
Hydroprene		128966	Miscellaneous Organic	Activated Carbon.
Triasulfuron		128969	Urea	Activated Carbon.
Primisulfuron-methyl		128973	Urea	Activated Carbon.
Uniconazole (ANSI)		128976	s-Triazine	Activated Carbon.
Tetradecenyl acetate		128980	Miscellaneous Organic	Activated Carbon.
Chitin		128991	Polymer	Activated Carbon.
Sulfluramid		128992	Sulfonamide	Activated Carbon.
Dithiopyr (ANSI)		128994	Pyridine	Activated Carbon.
Nicosulfuron		129008	Pyrimidine	Activated Carbon.
Zinc		129015	Metallic	Precipitation.
Tetradecen-1-ol, acetate, (E)-		129019	Alkyl Acid	Activated Carbon.
Imazaquin, sodium salt		129023	Pyrimidine	Activated Carbon.
Dodecadien-1-ol		129028	Alcohol	Activated Carbon.
Ionone		129030	Miscellaneous Organic	Activated Carbon.
Dicamba, aluminum salt		129042	Aryl Halide	Activated Carbon.
Benzenemethanaminium, N-(2-((2,6-dimethylphenyl)amino)-2-oxo.		129045	NR4	Activated Carbon.
Fenoxaprop-p-Ethyl		129092	Tricyclic	Activated Carbon.
Alkyl* bis(2-hydroxyethyl) ammonium acetate *(as in fatty ac.		169103	NR4	Activated Carbon.
Alkenyl* dimethyl ammonium acetate *(75% C18', 25% C16').		169104	NR4	Activated Carbon.
Amines, N-coco alkyltrimethylenedi-, adipates.		169109	Iminamide	Activated Carbon.
Dialkyl* dimethyl ammonium bentonite *(as in fatty acids of.		169111	NR4	Activated Carbon.
Alkyl* bis(2-hydroxyethyl) amine acetate *(65% C18, 30% C16,.		169125	Acetamide	Activated Carbon.
Dodecyl bis(hydroxy ethyl) dioctyl ammonium phosphate.		169154	NR4	Activated Carbon.
Dodecyl bis(2-hydroxyethyl) octyl hydrogen ammonium phosphat.		169155	NR4	Activated Carbon.
Didecyl - N - methyl - 3 - (trimethoxysilyl) propanaminium chloride.		169160	NR4	Activated Carbon.
Cholecalciferol		202901	Bicyclic	Activated Carbon.
Use code no. 202901 (Vitamin D3).		208700	Bicyclic	Activated Carbon.
Alkyl* N,N-bis(2-hydroxyethyl)amine *(100% C8–C18).		210900	NR4	Activated Carbon.
Bromo-2-nitropropane-1,3-diol		216400	Alcohol	Activated Carbon.
Use code no. 114601 (cyclohexyl-4, 5-dichloro- 4-isothioazolin-3-one).		229300	Heterocyclic	Activated Carbon.
Diethatyl ethyl		279500	Toluidine	Activated Carbon.
Hydroprene (ANSI)		486300	Miscellaneous Organic	Activated Carbon.
Zinc sulfate monohydrate		527200	Metallic	Precipitation

TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES [1]—Continued

PAI name [2]	PAI code [3]	Shaughnessy code [4]	Structural group [5]	Treatment technology
Geraniol	.....	597501	Alcohol	Activated Carbon.

[1] The 272 Pesticide Active Ingredients (PAIs) are listed first, by PAI code, followed by the non-272 PAIs from the 1988 FIFRA and TSCA Enforcement System (FATES) Database, which are listed in Shaughnessy code order. PAIs that were exempted or reserved from the PFPR effluent guidelines are not listed in the table.
[2] The non-272 PAI names are taken directly from the 1988 FATES database. Several of the PAI names are truncated because the PAI names listed in the FATES database are limited to 60 characters.
[3] The non-272 PAIs do not have PAI codes.
[4] All Shaughnessy codes are taken from the 1988 FATES database. Some of the 272 PAIs are not listed in the 1988 FATES database; therefore, no Shaughnessy codes are listed for these PAIs.
[5] Structural groups are based on an analysis of the chemical structures of each PAI.
[6] EPA has also received data indicating that acid hydrolysis may also be effective in treating this PAI.
* This PAI code represents a category or group of PAIs; therefore, it has multiple Shaughnessy codes.

[61 FR 57554, Nov. 6, 1996]

PART 457—EXPLOSIVES MANUFACTURING POINT SOURCE CATEGORY

Subpart A—Manufacture of Explosives Subcategory

Sec.
457.10 Applicability; description of the commercial manufacture 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

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).

SOURCE: 41 FR 10184, Mar. 9, 1976, unless otherwise noted.

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 part 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.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart, shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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 1 day	Average of daily values for 30 consecutive days shall not exceed—
COD	7.77	2.59
BOD5	0.72	0.24
TSS	0.25	0.084
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[41 FR 10184, Mar. 9, 1976, as amended at 60 FR 33971, June 29, 1995]

Subpart B [Reserved]

Subpart C—Explosives Load, Assemble, 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 part 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.

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart, shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(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	0.26	0.088
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[41 FR 10184, Mar. 9, 1976, as amended at 60 FR 33971, June 29, 1995]

PART 458—CARBON BLACK MANUFACTURING POINT SOURCE CATEGORY

Subpart A—Carbon Black Furnace Process Subcategory

Sec.
458.10 Applicability; description of the carbon black furnace process subcategory.
458.11 Specialized definitions.
458.12 [Reserved]
458.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
458.14 [Reserved]
458.15 Standards of performance for new sources.
458.16 Pretreatment standards for new sources.

Subpart B—Carbon Black Thermal Process Subcategory

458.20 Applicability; description of the carbon black thermal process subcategory.
458.21 Specialized definitions.
458.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

458.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
458.24 [Reserved]
458.25 Standards of performance for new sources.
458.26 Pretreatment standards for new sources.

Subpart C—Carbon Black Channel Process Subcategory

458.30 Applicability; description of the carbon black channel process subcategory.
458.31 Specialized definitions.
458.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
458.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
458.34 [Reserved]
458.35 Standards of performance for new sources.
458.36 Pretreatment standards for new sources.

Subpart D—Carbon Black Lamp Process Subcategory

458.40 Applicability; description of the carbon black lamp process subcategory.
458.41 Specialized definitions.
458.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
458.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
458.44 [Reserved]
458.45 Standards of performance for new sources.
458.46 Pretreatment standards for new sources.

AUTHORITY: Secs. 301, 304 (b) and (c), 306(b), 307 (b) and (c), Federal Water Pollution Control Act, 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).

SOURCE: 43 FR 1343, Jan. 9, 1978, unless otherwise noted.

Subpart A—Carbon Black Furnace Process Subcategory

§ 458.10 Applicability; description of the carbon black furnace process subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of carbon black by the furnace process.

§ 458.11 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''product'' shall mean carbon black manufactured by the furnace process.

(c) The term ''process waste water'' shall mean waters which result from baghouse operations or thermal quench operations.

§ 458.12 [Reserved]

§ 458.13 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, controlled by this paragraph, which may be discharged from the carbon black furnace process 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.

§ 458.14 [Reserved]

§ 458.15 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged from the carbon black furnace process by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

§458.16 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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-Oil and grease.
Pretreatment standard-100mg/liter.

[60 FR 33972, June 29, 1995]

Subpart B—Carbon Black Thermal Process Subcategory

§458.20 Applicability: description of the carbon black thermal process subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of carbon black by the thermal process.

§458.21 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''product'' shall mean carbon black manufactured by the thermal process.

(c) The term ''process waste water'' shall mean waters which result from baghouse operations or thermal quench operations.

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

Except as provided in §§125.30 through 125.32, any existing point source subject to this subpart, shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants into navigable waters.

[60 FR 33972, June 29, 1995]

§458.23 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 paragraph which may be discharged from the carbon black thermal process 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.

§458.24 [Reserved]

§458.25 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged from the carbon black thermal process by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

§458.26 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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-Oil and grease.
Pretreatment standard-100mg/liter.

[60 FR 33972, June 29, 1995]

Subpart C—Carbon Black Channel Process Subcategory

§ 458.30 Applicability; description of the carbon black channel process subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of carbon black by the channel process.

§ 458.31 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''product'' shall mean carbon black manufactured by the channel process.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart, shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants into navigable waters.

[60 FR 33972, June 29, 1995]

§ 458.33 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 paragraph, which may be discharged from the carbon black channel process 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.

§ 458.34 [Reserved]

§ 458.35 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged from the carbon black channel process by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

§ 458.36 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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-Oil and grease.
Pretreatment standard-100mg/liter.

[60 FR 33972, June 29, 1995]

Subpart D—Carbon Black Lamp Process Subcategory

§ 458.40 Applicability; description of the carbon black lamp process subcategory.

The provisions of this subpart are applicable to discharges resulting from the production of carbon black by the lamp process.

§ 458.41 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''product'' shall mean carbon black manufactured by the lamp process.

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

Except as provided in §§125.30 through 125.32, any existing point source subject to this subpart, shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): There shall be no discharge of process waste water pollutants into navigable waters.

[60 FR 33972, June 29, 1995]

§458.43 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, controlled by this paragraph, which may be discharged from the carbon black lamp process 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.

§458.44 [Reserved]

§458.45 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged from the carbon black lamp process by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

§458.46 Pretreatment standards for new sources.

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403. In addition, 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-Oil and grease.
Pretreatment standard-100mg/liter.

[60 FR 33972, June 29, 1995]

PART 459—PHOTOGRAPHIC POINT SOURCE CATEGORY

Subpart A—Photographic Processing Subcategory

Sec.
459.10 Applicability; description of the photographic processing subcategory.
459.11 Specialized definitions.
459.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

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

SOURCE: 41 FR 29079, July 14, 1976, unless otherwise noted.

Subpart A—Photographic Processing Subcategory

§459.10 Applicability; description of the photographic processing subcategory.

The provisions of this subpart are applicable to point source discharges resulting from the development or printing of paper prints, slides, negatives, enlargements, movie film, and other sensitized materials except that facilities processing 150 sq. meters (1600 sq. feet) per day or less are not covered. Both commercial and military facilities are covered by this subpart.

§459.11 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''product'' shall mean articles developed or printed by photographic processes, such as paper prints, slides, negatives, enlargements, movie film and other sensitized materials.

§ 459.12 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 of 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 a photographic processing point source subject to the provisions of this paragraph after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kilograms per 1,000 m^2 of product)	
Ag	0.14	0.07
CN	0.18	0.09
pH	(1)	(1)
	English units (pounds per 1,000 ft^2 of product)	
Ag	0.030	0.015
CN	0.038	0.019
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

PART 460—HOSPITAL POINT SOURCE CATEGORY

Subpart A—Hospital Category

Sec.
460.10 Applicability; description of the hospital category.
460.11 Specialized definitions.
460.12 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), 360(b), 307 (b) and (c), Federal Water Pollution Control Act, 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).

SOURCE: 41 FR 18777, May 6, 1976, unless otherwise noted.

Subpart A—Hospital Category

§ 460.10 Applicability; description of the hospital category.

The provisions of this subpart are applicable to discharges resulting from the functional operations of the hospital point source category.

§ 460.11 Specialized definitions.

For the purpose of this subpart:

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

(b) The term ''product'' shall mean service resulting from the hospital activity in terms of 1,000 occupied beds.

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

Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart, shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

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

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg/1,000 occupied beds)	
BOD5	41.0	33.6
TSS	55.6	33.8
pH	(1)	(1)
	English units (lb/1,000 occupied beds)	
BOD5	90.4	74.0
TSS	122.4	74.5
pH	(1)	(1)

[1] Within the range 6.0 to 9.0.

[41 FR 18777, May 6, 1976, as amended at 60 FR 33972, June 29, 1995]

PART 461—BATTERY MANUFACTURING POINT SOURCE CATEGORY

GENERAL PROVISIONS

Sec.
461.1 Applicability.
461.2 General definitions.
461.3 Monitoring and reporting requirements.
461.4 Compliance date for PSES.

Subpart A—Cadmium Subcategory

461.10 Applicability; description of the cadmium subcategory.
461.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
461.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
461.13 New source performance standards (NSPS).
461.14 Pretreatment standards for existing sources (PSES).
461.15 Pretreatment standards for new sources (PSNS).

Subpart B—Calcium Subcategory

461.20 Applicability; description of the calcium subcategory.
461.21–461.22 [Reserved]
461.23 New source performance standards (NSPS).
461.24 [Reserved]
461.25 Pretreatment standards for new sources (PSNS).

Subpart C—Lead Subcategory

461.30 Applicability; description of the lead subcategory.
461.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
461.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
461.33 New source performance standards (NSPS).
461.34 Pretreatment standards for existing sources (PSES).
461.35 Pretreatment standards for new sources (PSNS).

Subpart D—Leclanche Subcategory

461.40 Applicability; description of the Leclanche subcategory.
461.41–461.42 [Reserved]
461.43 New source performance standards (NSPS).
461.44 Pretreatment standards for existing sources (PSES).
461.45 Pretreatment standards for new sources (PSNS).

Subpart E—Lithium Subcategory

461.50 Applicability; description of the lithium subcategory.
461.51–461.52 [Reserved]
461.53 New source performance standards (NSPS).
461.54 [Reserved]
461.55 Pretreatment standards for new sources (PSNS).

Subpart F—Magnesium Subcategory

461.60 Applicability; description of the magnesium subcategory.
461.61–461.62 [Reserved]
461.63 New source performance standards (NSPS).
461.64 Pretreatment standards for existing sources (PSES).
461.65 Pretreatment standards for new sources (PSNS).

Subpart G—Zinc Subcategory

461.70 Applicability; description of the zinc subcategory.
461.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
461.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
461.73 New source performance standards (NSPS).
461.74 Pretreatment standards for existing sources (PSES).
461.75 Pretreatment standards for new sources (PSNS).

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), 308 and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 49 FR 9134, Mar. 9, 1984, unless otherwise noted.

GENERAL PROVISIONS

§ 461.1 Applicability.

This part applies to any battery manufacturing plant that discharges or may discharge a pollutant to waters of the United States or that introduces pollutants to a publicly owned treatment works. Battery manufacturing operations subject to regulation under this part shall not be subject to regulation under part 413 or 433.

§ 461.2 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) ''Battery'' means a modular electric power source where part or all of the fuel is contained within the unit and electric power is generated directly from a chemical reaction rather than indirectly through a heat cycle engine. In this regulation there is no differentiation between a single cell and a battery.

(b) ''Battery manufacturing operations'' means all of the specific processes used to produce a battery including the manufacture of anodes and cathodes and associated ancillary operations. These manufacturing operations are excluded from regulation under any other point source category.

(c) ''Ancillary operations'' means all of the operations specific to battery manufacturing and not included specifically within anode or cathode manufacture (ancillary operations are primarily associated with battery assembly and chemical production of anode or cathode active materials).

(d) ''Plate soak'' shall mean the process operation of soaking or reacting lead subcategory battery plates, that are more than 2.5 mm (0.100 in) thick, in sulfuric acid.

(e) ''Discharge allowance'' means the amount of pollutant (mg per kg of production unit) that a plant will be permitted to discharge. For this category the allowances are specific to battery manufacturing operations.

(f) ''Miscellaneous wastewater streams'' shall mean the combined wastewater streams from the process operations listed below for each subcategory. If a plant has one of these

streams then the plant receives the entire miscellaneous waste stream allowance.

(1) *Cadmium subcategory*. Cell wash, electrolyte preparation, floor and equipment wash, and employee wash.

(2) *Lead subcategory*. Floor wash, wet air pollution control, battery repair, laboratory, hand wash, and respirator wash.

(3) *Lithium subcategory*. Floor and equipment wash, cell testing, and lithium scrap disposal.

(4) *Zinc subcategory*. Cell wash, electrolyte preparation, employee wash, reject cell handling, floor and equipment wash.

(g) ''Trucked batteries'' shall mean batteries moved into or out of the plant by truck when the truck is actually washed in the plant to remove residues left in the truck from the batteries.

§ 461.3 Monitoring and reporting requirements.

The ''monthly average'' regulatory values shall be the basis for the monthly average discharge in direct discharge permits and for pretreatment standards. Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

§ 461.4 Compliance date for PSES.

The compliance date for pretreatment standards for existing sources is March 9, 1987.

Subpart A—Cadmium Subcategory

§ 461.10 Applicability; description of the cadmium subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from the manufacturing of cadmium anode batteries.

§ 461.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

(1) Subpart A—Pasted and Pressed Powder Anodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	0.92	0.41
Nickel	5.18	3.43
Zinc	3.94	1.65
Cobalt	0.57	0.24
Oil and grease	54.00	32.40
TSS	111.00	52.65
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(2) Subpart A—Electrodeposited Anodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	237.0	104.6
Nickel	1,338.2	885.2
Zinc	1,017.6	425.2
Cobalt	146.4	62.7
Oil and grease	13,940.0	8,364.0
TSS	28,577.0	13,592.0
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(3) Subpart A—Impregnated Anodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	339.3	149.7
Nickel	1,916.2	1,267.5
Zinc	1,457.1	608.8
Cobalt	209.6	89.8
Oil and grease	19,960.0	11,976.0
TSS	40,918.0	19,461.0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(4) Subpart A—Nickel Electrodeposited Cathodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	193.5	85.4
Nickel	1,092.5	722.6
Zinc	830.7	347.1
Cobalt	119.5	51.2
Oil and grease	11,380.0	6,828.0
TSS	23,329.0	11,095.5
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(5) Subpart A—Nickel Impregnated Cathodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	557.6	246.0
Nickel	3,148.8	2,082.8
Zinc	2,394.4	1,000.4
Cobalt	344.4	147.6
Oil and grease	32,800.0	19,680.0
TSS	67,240.0	31,980.0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(6) Subpart A—Miscellaneous Wastewater Streams.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Cadmium	6.29	2.77
Nickel	35.54	23.50
Zinc	27.02	11.29
Cobalt	3.89	1.66
Oil and grease	370.20	222.12
TSS	758.91	360.94
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(7) Subpart A—Cadmium Powder Production.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium powder produced English units—pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	22.34	9.86
Nickel	126.14	83.44
Zinc	95.92	40.08
Cobalt	13.80	5.91
Oil and grease	1,314.00	788.40
TSS	2,693.00	1,281.20
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(8) Subpart A—Silver Powder Production.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Cadmium	7.21	3.18
Nickel	40.70	26.92
Silver	8.69	3.61
Zinc	30.95	12.93
Cobalt	4.45	1.91
Oil and grease	424.00	254.40
TSS	869.20	413.40
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(9) Subpart A—Cadmium Hydroxide Production.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium used English units—pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.31	0.14
Nickel	1.73	1.14
Zinc	1.31	0.55
Cobalt	0.19	0.08
Oil and grease	18.00	10.80
TSS	36.90	17.60
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(10) Subpart A—Nickel Hydroxide Production.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel used English units—pounds per 1,000,000 pounds of nickel used	
Cadmium	37.4	16.5
Nickel	211.2	139.7
Zinc	160.6	67.1
Cobalt	23.1	9.9
Oil and grease	2,200.0	1,320.0
TSS	4,510.0	2,145.0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

(1) Subpart A—Electrodeposited Anodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	11.95	5.27
Nickel	67.49	44.64
Zinc	51.32	21.44
Cobalt	7.38	3.16

(2) Subpart A—Impregnated Anodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(3) Subpart A—Nickel Electrodeposited Cathodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	11.22	4.95
Nickel	63.36	41.91
Zinc	48.18	20.13
Cobalt	6.93	2.97

(4) Subpart A—Nickel Impregnated Cathodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(5) Subpart A—Miscellaneous Wastewater Streams.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Cadmium	0.79	0.35
Nickel	4.47	2.96
Zinc	3.40	1.42
Cobalt	0.49	0.21

(6) Subpart A—Cadmium Powder Production.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium powder produced English units—pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	2.23	0.99
Nickel	12.61	8.34
Zinc	9.59	4.01
Cobalt	1.38	0.59

(7) Subpart A—Silver Powder Production.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Cadmium	1.09	0.48
Nickel	6.16	4.08
Silver	1.32	0.55
Zinc	4.69	1.96
Cobalt	0.67	0.29

(8) Subpart A—Cadmium Hydroxide Production.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium used English units—pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.05	0.02
Nickel	0.27	0.18
Zinc	0.20	0.09
Cobalt	0.03	0.01

(9) Subpart A—Nickel Hydroxide Production.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel used English units—pounds per 1,000,000 pounds of nickel used	
Cadmium	5.61	2.48
Nickel	31.68	20.96
Zinc	24.09	10.07
Cobalt	3.47	1.49

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.13 New source performance standards (NSPS).

(a) The discharge of wastewater pollutants from any new source subject to

this subpart shall not exceed the standards set forth below:

(1) Subpart A—Electrodeposited Anodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	7.03	2.81
Nickel	19.33	13.01
Zinc	35.85	14.76
Cobalt	4.92	2.46
Oil and grease	351.5	351.5
TSS	527.3	421.8
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(2) Subpart A—Impregnated Anodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0
Oil and grease	2,000.0	2,000.0
TSS	3,000.0	2,400.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(3) Subpart A—Nickel Electrodeposited Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	6.60	2.64
Nickel	18.15	12.21
Zinc	33.66	13.86
Cobalt	4.62	2.31
Oil and grease	330.0	330.0
TSS	495.0	396.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(4) Subpart A—Nickel Impregnated Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0
Oil and grease	2,000.0	2,000.0
TSS	3,000.0	2,400.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(5) Subpart A—Miscellaneous Wastewater Streams—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Cadmium	0.47	0.19
Nickel	1.28	0.86
Zinc	2.38	0.98
Cobalt	0.33	0.16
Oil and grease	23.3	23.3
TSS	35.0	28.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(6) Subpart A—Cadmium Powder Production—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium powder produced English units—pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	1.31	0.53
Nickel	3.61	2.43
Zinc	6.70	2.76
Cobalt	0.92	0.46
Oil and grease	65.70	65.70
TSS	98.55	78.84
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(7) Subpart A—Silver Powder Production—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Cadmium	0.64	0.26
Nickel	1.77	1.19
Silver	0.93	0.39
Zinc	3.27	1.35
Cobalt	0.45	0.22
Oil and grease	32.10	32.10
TSS	48.15	38.52
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(8) Subpart A—Cadmium Hydroxide Production—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium used English units—pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.028	0.011
Nickel	0.077	0.051
Zinc	0.142	0.058
Cobalt	0.019	0.009
Oil and grease	1.40	1.40
TSS	2.10	1.68
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(9) Subpart A—Nickel Hydroxide Production—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel used English units—pounds per 1,000,000 pounds of nickel used	
Cadmium	3.30	1.32
Nickel	9.08	6.11
Zinc	16.83	6.93
Cobalt	2.31	1.16
Oil and grease	165.0	165.0
TSS	247.5	198.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.14 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and § 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for existing sources listed below:

(1) Subpart A—Electrodeposited Anodes.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	11.95	5.27
Nickel	67.49	44.64
Zinc	51.32	21.44
Cobalt	7.38	3.16

(2) Subpart A—Impregnated Anodes.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(3) Subpart A—Nickel Electrodeposited Cathodes.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	11.22	4.95
Nickel	63.36	41.91
Zinc	48.18	20.13
Cobalt	6.93	2.97

(4) Subpart A—Nickel Impregnated Cathodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(5) Subpart A—Miscellaneous Wastewater Streams—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Cadmium	0.79	0.35
Nickel	4.47	2.96
Zinc	3.40	1.42
Cobalt	0.49	0.21

(6) Subpart A—Cadmium Powder Production—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium powder produced English units—pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	2.23	0.99
Nickel	12.61	8.34
Zinc	9.59	4.01
Cobalt	1.38	0.59

(7) Subpart A—Silver Powder Production—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Cadmium	1.09	0.48
Nickel	6.16	4.08
Silver	1.32	0.55
Zinc	4.69	1.96
Cobalt	0.67	0.29

(8) Subpart A—Cadmium Hydroxide Production—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium used English units—pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.05	0.02
Nickel	0.27	0.18
Zinc	0.20	0.09
Cobalt	0.03	0.012

(9) Subpart A—Nickel Hydroxide Production—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel used English units—pounds per 1,000,000 pounds of nickel used	
Cadmium	5.61	2.48
Nickel	31.68	20.96
Zinc	24.09	10.07
Cobalt	3.47	1.49

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.15 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for new sources listed below:

(1) Subpart A—Electrodeposited Anodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	7.03	2.81
Nickel	19.33	13.01
Zinc	35.85	14.76
Cobalt	4.92	2.46

(2) Subpart A—Impregnated Anodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium English units—pounds per 1,000,000 pounds of cadmium	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0

(3) Subpart A—Nickel Electrodeposited Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	6.60	2.64
Nickel	18.15	12.21
Zinc	33.66	13.86
Cobalt	4.62	2.31

(4) Subpart A—Nickel Impregnated Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0

(5) Subpart A—Miscellaneous Wastewater Streams—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Cadmium	0.47	0.19
Nickel	1.28	0.86
Zinc	2.38	0.98
Cobalt	0.33	0.16

(6) Subpart A—Cadmium Powder Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average.
	Metric units—mg/kg of cadmium powder produced English units—pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	1.31	0.53
Nickel	3.61	2.43
Zinc	6.70	2.76
Cobalt	0.92	0.46

(7) Subpart A—Silver Powder Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average.
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Cadmium	0.64	0.26
Nickel	1.77	1.19
Silver	0.93	0.39
Zinc	3.27	1.35
Cobalt	0.45	0.22

(8) Subpart A—Cadmium Hydroxide Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cadmium used English units—pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.028	0.011
Nickel	0.077	0.051
Zinc	0.142	0.058
Cobalt	0.019	0.009

(9) Subpart A—Nickel Hydroxide Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel used English units—pounds per 1,000,000 pounds of nickel used	
Cadmium	3.30	1.32
Nickel	9.08	6.11
Zinc	16.83	6.93
Cobalt	2.31	1.16

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart B—Calcium Subcategory

§461.20 Applicability; description of the calcium subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from manufacturing calcium anode batteries.

§§461.21–461.22 [Reserved]

§461.23 New source performance standards (NSPS).

(a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(b) There shall be no discharge for process wastewater pollutants from any battery manufacturing operations.

§461.24 [Reserved]

§461.25 Pretreatment standards for new sources (PSNS).

(a) Except as provided in §403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for new sources listed below.

(b) There shall be no discharge for process wastewater pollutants from any battery manufacturing operations.

Subpart C—Lead Subcategory

§461.30 Applicability; description of the lead subcategory.

This subpart applies to discharges to waters of the United States and introduction of pollutants into publicly owned treatment works from the manufacturing of lead anode batteries.

§461.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

(1) Subpart C—Closed Formation—Double Fill, or Fill and Dump.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.86	0.45
Lead	0.19	0.090
Iron	0.54	0.27
Oil and grease	9.00	5.40
TSS	18.45	8.78
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(2) Subpart C—Open Formation—Dehydrated.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	20.99	11.05
Lead	4.64	2.21
Iron	16.13	6.74
Oil and grease	221.00	132.60
TSS	453.05	215.47
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(3) Subpart C—Open Formation—Wet.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.10	0.05
Lead	0.02	0.01
Iron	0.06	0.03
Oil and grease	1.06	0.64
TSS	2.17	1.03
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(4) Subpart C—Plate Soak.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.040	0.020
Lead	0.009	0.004
Iron	0.030	0.010
Oil and grease	0.420	0.250
TSS	0.860	0.410
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(5) Subpart C—Battery Wash (with Detergent).

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	1.71	0.90
Lead	0.38	0.18
Iron	1.08	0.55
Oil and grease	18.00	10.80
TSS	36.90	17.55
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(6) Subpart C—Battery Wash (Water Only).

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	1.12	0.59
Lead	0.25	0.12
Iron	0.71	0.36
Oil and grease	11.80	7.08
TSS	24.19	11.51
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(7) Subpart C—Direct Chill Lead Casting.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.00040	0.00020
Lead	0.00008	0.00004
Iron	0.00020	0.00010
Oil and grease	0.00400	0.00200
TSS	0.00800	0.00300
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(8) Subpart C—Mold Release Formulation.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.011	0.006
Lead	0.002	0.001
Iron	0.007	0.004
Oil and grease	0.120	0.072
TSS	0.246	0.117
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(9) Subpart C—Truck Wash.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead in trucked batteries English units—pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.026	0.014
Lead	0.005	0.002
Iron	0.016	0.008
Oil and grease	0.280	0.168
TSS	0.574	0.273
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(10) Subpart C—Laundry.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.21	0.11
Lead	0.05	0.02
Iron	0.13	0.07
Oil and grease	2.18	1.31
TSS	4.47	2.13
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(11) Subpart C—Miscellaneous Wastewater Streams.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.81	0.43
Lead	0.18	0.09
Iron	0.51	0.26
Oil and grease	8.54	5.12
TSS	17.51	8.33
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

(1) Subpart C—Open Formation—Dehydrated.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	3.19	1.68
Lead	0.71	0.34
Iron	2.02	1.02

(2) Subpart C—Open Formation—Wet.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.100	0.053
Lead	0.022	0.010
Iron	0.06	0.03

(3) Subpart C—Plate Soak.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.039	0.021
Lead	0.008	0.004
Iron	0.030	0.010

(4) Subpart C—Battery Wash (Detergent).

BAT EFFLUENT LIMITATIONS

Pollutant or Pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	1.71	0.90
Lead	0.38	0.18
Iron	1.08	0.55

(5) Subpart C—Direct Chill Lead Casting.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.0004	0.0002
Lead	0.00008	0.00004
Iron	0.0002	0.0001

(6) Subpart C—Mold Release Formulation.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.011	0.006
Lead	0.002	0.001
Iron	0.007	0.003

(7) Subpart C—Truck Wash.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead in trucked batteries English units—pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.026	0.014
Lead	0.005	0.002
Iron	0.016	0.008

(8) Subpart C—Laundry.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.21	0.11
Lead	0.05	0.02
Iron	0.13	0.07

(9) Subpart C—Miscellaneous Wastewater Streams.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.58	0.31
Lead	0.13	0.06
Iron	0.37	0.19

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984, as amended at 51 FR 30816, Aug. 28, 1986]

§ 461.33 New source performance standards (NSPS).

(a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

(1) Subpart C—Open Formation—Dehydrated—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	2.15	1.02
Lead	0.47	0.21
Iron	2.01	1.02
Oil and grease	16.80	16.80
TSS	25.20	20.16
pH	(1)	(1)

1 Within the limits of 7.5 to 10.0 at all times.

(2) Subpart C—Open Formation—Wet—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.067	0.032
Lead	0.014	0.006
Iron	0.063	0.032
Oil and grease	0.53	0.53
TSS	0.80	0.64
pH	(1)	(1)

1 Within the limits of 7.5 to 10.0 at all times.

(3) Subpart C—Plate Soak—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.026	0.012
Lead	0.005	0.002
Iron	0.025	0.012
Oil and grease	0.21	0.21
TSS	0.32	0.25
pH	(1)	(1)

1 Within the limits of 7.5 to 10.0 at all times.

(4) Subpart C—Battery Wash (Detergent)—NSPS.

Pollutant or pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	1.152	0.549
Lead	0.252	0.117
Iron	1.08	0.55
Oil and grease	9.0	9.0
TSS	13.5	10.8
pH	(1)	(1)

1 Within the limits of 7.5 to 10.0 at all times.

(5) Subpart C—Direct Chill Lead Casting—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.000256	0.000122
Lead	0.000056	0.000026
Iron	0.000240	0.000122
Oil and grease	0.0020	0.0020
TSS	0.0030	0.0024
pH	(1)	(1)

[1] Within the limits of 7.5 to 10.0 at all times.

(6) Subpart C—Mold Release Formulation—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.0077	0.0037
Lead	0.0017	0.0008
Iron	0.0072	0.0037
Oil and grease	0.060	0.060
TSS	0.090	0.072
pH	(1)	(1)

[1] Within the limits of 7.5 to 10.0 at all times.

(7) Subpart C—Truck Wash—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead in trucked batteries English units—pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.006	0.003
Lead	0.001	0.0007
Iron	0.006	0.003
Oil and grease	0.050	0.050
TSS	0.075	0.060
pH	(1)	(1)

[1] Within the limits of 7.5 to 10.0 at all times.

(8) Subpart C—Laundry—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.14	0.07
Lead	0.03	0.01
Iron	0.13	0.07
Oil and grease	1.09	1.09
TSS	1.64	1.31
pH	(1)	(1)

[1] Within the limits of 7.5 to 10.0 at all times.

(9) Subpart C—Miscellaneous Wastewater Streams—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.39	0.19
Lead	0.085	0.039
Iron	0.37	0.19
Oil and grease	3.07	3.07
TSS	4.61	3.69
pH	(1)	(1)

[1] Within the limits of 7.5 to 10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984, as amended at 51 FR 30816, Aug. 28, 1986]

§ 461.34 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for existing sources listed below:

(1) Subpart C—Open Formation—Dehydrated—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	3.19	1.68
Lead	0.71	0.34

(2) Subpart C—Open Formation—Wet—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.100	0.053
Lead	0.022	0.010

(3) Subpart C—Plate Soak—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.039	0.021
Lead	0.008	0.004

(4) Subpart C—Battery Wash—(Detergent)—PSES.

Pollutant or pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	1.71	0.90
Lead	0.38	0.18

(5) Subpart C—Direct Chill Lead Casting—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.0004	0.0002
Lead	0.00008	0.00004

(6) Subpart C—Mold Release Formulation—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.011	0.006
Lead	0.002	0.001

(7) Subpart C—Truck Wash—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead in trucked batteries English units—pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.026	0.014
Lead	0.005	0.002

(8) Subpart C—Laundry—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.21	0.11
Lead	0.05	0.02

(9) Subpart C—Miscellaneous Wastewater Streams—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.58	0.31
Lead	0.13	0.06

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

(c)(1) In cases where battery employee shower wastewater containing concentrations of lead exceeding 0.20 mg/l is combined with process wastewaters prior to treatment, the Control Authority may, for purposes of applying the Combined Wastestream Formula under § 403.6(e) of this chapter, notwithstanding the provisions of § 403.6(e), exercise its discretion and classify battery employee shower wastewater as an unregulated rather than a dilute (F_D) wastestream.

(2) Before the Control Authority may exercise its discretion to classify such a stream as an unregulated stream, the battery manufacturer must provide engineering, production, and sampling and analysis information sufficient to allow a determination by the Control Authority on how the stream should be classified.

[49 FR 9134, Mar. 9, 1984, as amended at 51 FR 30816, Aug. 28, 1986]

§ 461.35 Pretreatment standards for new sources (PSNS).

(a) Except as provided in § 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources:

(1) Subpart C—Open Formation—Dehydrated—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	2.15	1.02
Lead	0.47	0.21

(2) Subpart C—Open Formation—Wet—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.067	0.032
Lead	0.014	0.006

(3) Subpart C—Plate Soak—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.026	0.012
Lead	0.005	0.002

(4) Subpart C—Battery Wash—(Detergent)—PSNS.

Pollutant or pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	1.152	0.549
Lead	0.252	0.117

(5) Subpart C—Direct Chill Lead Casting—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.000256	0.000122
Lead	0.000056	0.000026

(6) Subpart C—Mold Release Formulation—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.007	0.0037
Lead	0.0017	0.0008

(7) Subpart C—Truck Wash—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead in trucked batteries English units—pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.006	0.003
Lead	0.001	0.0007

(8) Subpart C—Laundry—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.14	0.07
Lead	0.03	0.01

(9) Subpart C—Miscellaneous Wastewater Streams—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead used English units—pounds per 1,000,000 pounds of lead used	
Copper	0.39	0.19
Lead	0.085	0.039

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operations other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984, as amended at 51 FR 30817, Aug. 28, 1986]

Subpart D—Leclanche Subcategory

§ 461.40 Applicability; description of the Leclanche subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from manufacturing Leclanche type batteries (zinc anode batteries with acid electrolyte).

§§ 461.41–461.42 [Reserved]

§ 461.43 New source performance standards (NSPS).

(a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

(1) Subpart D—Foliar Battery Miscellaneous Wash—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015
Oil and grease	0.66	0.66
TSS	0.99	0.79
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants

from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.44 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources listed below:

(1) Subpart D—Foliar Battery Miscellaneous Wash—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 27946, July 9, 1984]

§ 461.45 Pretreatment standards for new sources (PSNS).

(a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below.

(1) Subpart D—Foliar Battery Miscellaneous Wash—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart E—Lithium Subcategory

§ 461.50 Applicability; description of the lithium subcategory.

This subpart applies to discharges to waters of the United States and introduction of pollutants into publicly owned treatment works from the manufacturing of lithium anode batteries.

§§ 461.51–461.52 [Reserved]

§ 461.53 New source performance standards (NSPS).

(a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

(1) Subpart E—Lead Iodide Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead English units—pounds per 1,000,000 pounds of lead	
Chromium	23.34	9.46
Lead	17.66	8.20
Iron	75.70	38.48
TSS	946.2	756.96
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(2) Subpart E—Iron Disulfide Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of Iron disulfide English units—pounds per 1,000,000 pounds of Iron disulfide	
Chromium	2.79	1.13
Lead	2.11	0.98
Iron	9.05	4.60
TSS	113.1	90.5
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(3) Subpart E—Miscellaneous Wastewater Streams—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Chromium	0.039	0.016
Lead	0.030	0.014
Iron	0.129	0.066
TSS	1.62	1.30
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(4) Subpart E—Air Scrubbers—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
TSS	434.0	207.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§461.54 [Reserved]

§461.55 Pretreatment standards for new sources (PSNS).

(a) Except as provided in §403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below:

(1) Subpart E—Lead Iodide Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of lead English units—pounds per 1,000,000 pounds of lead	
Chromium	23.34	9.46
Lead	17.66	8.20

(2) Subpart E—Iron Disulfide Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of iron disulfide English units—pounds per 1,000,000 pounds of iron disulfide	
Chromium	2.79	1.13
Lead	2.11	0.98

(3) Subpart E—Miscellaneous Wastewater Streams—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Chromium	0.039	0.016
Lead	0.030	0.014

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart F—Magnesium Subcategory

§461.60 Applicability; description of the magnesium subcategory.

This subpart applies to discharges to waters of the United States and introduction of pollutants into publicly owned treatment works from the manufacturing of magnesium anode batteries.

§§461.61–461.62 [Reserved]

§461.63 New source performance standards (NSPS).

(a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

(1) Subpart F—Silver Chloride Cathodes—Chemically Reduced—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Lead	22.93	10.65
Silver	23.75	9.83
Iron	98.28	49.96
TSS	1,228.5	982.8
COD	4,095.0	1,999.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(2) Subpart F—Silver Chloride Cathodes—Electrolytic—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Lead	40.6	18.9
Silver	42.1	17.4
Iron	174.0	88.5
TSS	2,175.0	1,740.0
COD	7,250.0	3,540.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(3) Subpart F—Cell Testing—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Lead	19.5	7.89
Silver	15.3	6.31
Iron	63.1	32.1
TSS	789.0	631.2
COD	2,630.0	1,290.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(4) Subpart F—Floor and Equipment Wash—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Lead	0.026	0.012
Silver	0.027	0.011
Iron	0.112	0.057
COD	4.70	2.30
TSS	1.41	1.13
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(5) Subpart F—Air Scrubber—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
TSS	8,467.0	4,030.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.64 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources listed below:

(1) Subpart F—Silver Chloride Cathodes—Chemically Reduced—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Lead	1,032.36	491.60
Silver	1,007.78	417.86

(2) Subpart F—Silver Chloride Cathodes—Electrolytic—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Lead	60.9	29.0
Silver	59.5	24.7

(3) Subpart F—Cell Testing—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Lead	22.1	10.5
Silver	21.6	8.9

(4) Subpart F—Floor and Equipment Wash—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Lead	0.039	0.018
Silver	0.038	0.015

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.65 Pretreatment standards for new sources (PSNS).

(a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below:

(1) Subpart F—Silver Chloride Cathodes—Chemically Reduced—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Lead	22.93	10.65
Silver	23.75	9.83

(2) Subpart F—Silver Chloride Cathodes—Electrolytic PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Lead	40.6	18.9
Silver	42.1	17.4

(3) Subpart F—Cell Testing—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Lead	19.5	7.89
Silver	15.3	6.31

(4) Subpart F—Floor and Equipment Wash—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Lead	0.026	0.012
Silver	0.027	0.011

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart G—Zinc Subcategory

§ 461.70 Applicability; description of the zinc subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from the manufacturing of zinc anode batteries.

§ 461.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

(1) Subpart G—Wet Amalgamated Powder Anodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of Zinc English units—pounds per 1,000,000 pounds of Zinc	
Chromium	1.67	0.68
Mercury	0.95	0.38
Silver	1.56	0.65
Zinc	5.55	2.32
Manganese	2.58	1.10
Oil and grease	76.0	45.6
TSS	155.8	74.1
pH	(1)	(1)

[1] Within the range of 7.5—10.0 at all times.

(2) Subpart G—Gelled Amalgam Anodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of Zinc English units—pounds per 1,000,000 pounds of Zinc	
Chromium	0.30	0.12
Mercury	0.17	0.07
Silver	0.28	0.12
Zinc	0.99	0.42
Manganese	0.46	0.20
Oil and grease	13.6	8.16
TSS	27.9	13.26
pH	(1)	(1)

[1] Within the range of 7.5—10.0 at all times.

(3) Subpart G—Zinc Oxide, Formed Anodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of Zinc English units—pounds per 1,000,000 pounds of Zinc	
Chromium	62.9	25.7
Mercury	35.8	14.3
Silver	58.7	24.3
Zinc	208.8	87.2
Manganese	97.2	41.5
Oil and grease	2,860.0	1,716.0
TSS	5,863.0	2,789.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(4) Subpart G—Electrodeposited Anodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc deposited English units—pounds per 1,000,000 pounds of zinc deposited	
Chromium	1,404.0	574.0
Mercury	798.0	319.0
Silver	1,308.0	543.0
Zinc	4,657.0	1,946.0
Manganese	2,169.0	925.0
Oil and grease	63,800.0	38,280.0
TSS	130,700.0	62,210.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(5) Subpart G—Silver Powder, Formed Cathodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	86.2	35.3
Mercury	49.0	19.6
Silver	80.4	33.3
Zinc	286.2	119.6
Manganese	133.3	56.8
Oil and grease	3,920.0	2,350.0
TSS	8,036.0	3,822.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(6) Subpart G—Silver Oxide Powder, Formed Cathodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	57.7	23.6
Mercury	32.8	13.1
Silver	53.7	22.3
Zinc	191.3	79.9
Manganese	89.1	38.0
Oil and grease	2,620.0	1,570.0
TSS	5,370.0	2,554.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(7) Subpart G—Silver Peroxide Cathodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	13.8	5.65
Mercury	7.85	3.14
Silver	12.9	5.34
Zinc	45.8	19.2
Manganese	21.4	9.11
Oil and grease	628.0	377.0
TSS	1,287.0	612.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(8) Subpart G—Nickel Impregnated Cathodes.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Chromium	721.6	295.2
Mercury	410.0	164.0
Nickel	3,149.0	2,083.0
Silver	672.4	279.0
Zinc	2,394.4	1,000.4
Manganese	1,115.2	475.6
Oil and grease	32,800.0	19,680.0
TSS	67,240.0	31,980.0
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(9) Subpart G—Miscellaneous Wastewater Streams.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Chromium	3.85	1.58
Cyanide	2.54	1.05
Mercury	2.19	0.88
Nickel	16.82	11.12
Silver	3.59	1.49
Zinc	12.79	5.34
Manganese	5.96	2.54
Oil and grease	175.20	105.12
TSS	359.16	170.82
pH	(1)	(1)

[1] Within the range of 7.5–10.0 at all times.

(10) Subpart G—Silver Etch.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Chromium	21.6	8.84
Mercury	12.3	4.91
Silver	20.2	8.35
Zinc	71.7	30.0
Manganese	33.4	14.3
Oil and grease	982.0	589.2
TSS	2,013.1	957.5
pH	(1)	(1)

1 Within the range of 7.5–10.0 at all times.

(11) Subpart G—Silver Peroxide Production.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver peroxide processed English units—pounds per 1,000,000 pounds of silver peroxide processed	
Chromium	23.0	9.40
Mercury	13.1	5.22
Silver	21.4	8.88
Zinc	76.2	31.80
Manganese	35.5	15.10
Oil and grease	1,044.0	627.00
TSS	2,140.0	1,018.00
pH	(1)	(1)

1 Within the range of 7.5–10.0 at all times.

(12) Subpart G—Silver Powder Production.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder processed English units—pounds per 1,000,000 pounds of silver powder processed	
Chromium	9.33	3.82
Mercury	5.30	2.12
Silver	8.69	3.61
Zinc	30.95	12.93
Manganese	14.42	6.15
Oil and grease	424.0	254.40
TSS	869.0	413.40
pH	(1)	(1)

1 Within the range of 7.5–10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

(1) Subpart G—Wet Amalgamated Powder Anodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of Zinc English units—pounds per 1,000,000 pounds of Zinc	
Chromium	0.24	0.099
Mercury	0.14	0.055
Silver	0.23	0.093
Zinc	0.80	0.34
Manganese	0.37	0.16

(2) Subpart G—Gelled Amalgam Anodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of Zinc English units—pounds per 1,000,000 pounds of Zinc	
Chromium	0.030	0.012
Mercury	0.017	0.007
Silver	0.028	0.012
Zinc	0.099	0.042
Manganese	0.046	0.020

(3) Subpart G—Zinc Oxide Formed Anodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of Zinc English units—pounds per 1,000,000 pounds of Zinc	
Chromium	9.53	3.90
Mercury	5.42	2.17
Silver	8.89	3.68
Zinc	31.64	13.22
Manganese	14.74	6.28

(4) Subpart G—Electrodeposited Anodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc deposited English units—pounds per 1,000,000 pounds of zinc deposited	
Chromium	94.47	38.65
Mercury	53.68	21.47
Silver	88.03	36.50
Zinc	313.46	130.97
Manganese	146.00	62.26

(5) Subpart G—Silver Powder Formed Cathodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	13.07	5.35
Mercury	7.43	2.97
Silver	12.18	5.05
Zinc	43.36	18.12
Manganese	20.20	8.61

(6) Subpart G—Silver Oxide Powder Formed Cathodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	8.73	3.57
Mercury	4.96	1.99
Silver	8.14	3.37
Zinc	28.98	12.11
Manganese	13.50	5.76

(7) Subpart G—Silver Peroxide Cathodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	2.09	0.87
Mercury	1.19	0.48
Silver	1.95	0.81
Zinc	6.95	2.90
Manganese	3.24	1.38

(8) Subpart G—Nickel Impregnated Cathodes.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Chromium	88.0	36.0
Mercury	50.0	20.0
Nickel	384.0	254.0
Silver	82.0	34.0
Zinc	292.0	122.0
Manganese	136.0	58.0

(9) Subpart G—Miscellaneous Wastewater Streams.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Chromium	0.57	0.23
Cyanide	0.38	0.16
Mercury	0.32	0.13
Nickel	2.48	1.64
Silver	0.53	0.22
Zinc	1.88	0.79
Manganese	0.88	0.37

(10) Subpart G—Silver Etch.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Chromium	3.27	1.34
Mercury	1.86	0.74
Silver	3.05	1.26
Zinc	10.86	4.54
Manganese	5.06	2.16

(11) Subpart G—Silver Peroxide Production.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver peroxide produced English units—pounds per 1,000,000 pounds of silver peroxide produced	
Chromium	3.48	1.42
Mercury	1.98	0.79
Silver	3.24	1.34
Zinc	11.55	4.83
Manganese	5.38	2.29

(12) Subpart G—Silver Powder Production.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Chromium	1.41	0.58
Mercury	0.80	0.32
Silver	1.32	0.55
Zinc	4.69	1.96
Manganese	2.18	0.93

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.73 New source performance standards. (NSPS).

(a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

(1) Subpart G—Zinc Oxide Formed Anodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc English units—pounds per 1,000,000 pounds of zinc	
Chromium	4.55	1.97
Mercury	2.82	1.19
Silver	4.55	1.97
Zinc	0.87	0.39
Manganese	6.50	4.98
Oil and grease	216.7	216.7
TSS	325.0	260.0
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(2) Subpart G—Electrodeposited Anodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc deposited English units—pounds per 1,000,000 pounds of zinc deposited	
Chromium	45.09	19.54
Mercury	27.91	11.81
Silver	45.09	19.54
Zinc	8.59	3.86
Manganese	64.41	49.38
Oil and grease	2,147.00	2,147.00
TSS	3,220.50	2,576.40
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(3) Subpart G—Silver Powder Formed Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	6.24	2.70
Mercury	3.86	1.63
Silver	6.24	2.70
Zinc	1.19	0.53
Manganese	8.91	6.83
Oil and grease	297.00	297.00
TSS	445.5	356.40
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(4) Subpart G—Silver Oxide Powder Formed Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	4.17	1.81
Mercury	2.58	1.09
Silver	4.17	1.81
Zinc	0.79	0.36
Manganese	5.96	4.57
Oil and grease	198.5	198.5
TSS	297.8	238.2
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(5) Subpart G—Silver Peroxide Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	1.00	0.43
Mercury	0.62	0.26
Silver	1.00	0.43
Zinc	0.19	0.09
Manganese	1.43	1.09
Oil and grease	47.6	47.6
TSS	71.4	57.1
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(6) Subpart G—Nickel Impregnated Cathodes—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Chromium	42.0	18.2
Mercury	26.0	11.0
Nickel	42.0	18.2
Silver	42.0	18.2
Zinc	8.0	3.6
Manganese	60.0	46.0
Oil and grease	2,000.0	2,000.0
TSS	3,000.0	2,400.00
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(7) Subpart G—Miscellaneous Wastewater Streams—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Chromium	0.27	0.12
Cyanide	0.039	0.016
Mercury	0.17	0.07
Nickel	0.27	0.12
Silver	0.27	0.12
Zinc	0.05	0.02
Manganese	0.39	0.30
Oil and grease	12.90	12.90
TSS	19.35	15.48
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(8) Subpart G—Silver Etch—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Chromium	1.56	0.68
Mercury	0.97	0.41
Silver	1.56	0.68
Zinc	0.30	0.13
Manganese	2.23	1.71
Oil and grease	74.40	74.40
TSS	111.60	89.28
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(9) Subpart G—Silver Peroxide Production—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver peroxide produced English units—pounds per 1,000,000 pounds of silver peroxide produced	
Chromium	1.66	0.72
Mercury	1.03	0.44
Silver	1.66	0.72
Zinc	0.32	0.14
Manganese	2.37	1.82
Oil and grease	79.10	79.10
TSS	118.65	94.92
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(10) Subpart G—Silver Powder Production—NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Chromium	0.67	0.29
Mercury	0.42	0.18
Silver	0.67	0.29
Zinc	0.13	0.06
Manganese	0.96	0.74
Oil and grease	32.10	32.10
TSS	48.15	38.52
pH	(1)	(1)

[1] Within the limits of 7.5–10.0 at all times.

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.74 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources:

(1) Subpart G—Wet Amalgamated Powder Anode—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc English units—pounds per 1,000,000 pounds of zinc	
Chromium	0.24	0.099
Mercury	0.14	0.055
Silver	0.23	0.093
Zinc	0.80	0.34
Manganese	0.37	0.16

(2) Subpart G—Gelled Amalgam Anodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc English units—pounds per 1,000,000 pounds of zinc	
Chromium	0.030	0.12
Mercury	0.017	0.006
Silver	0.028	0.012
Zinc	0.099	0.042
Manganese	0.046	0.020

(3) Subpart G—Zinc Oxide Formed Anodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc English units—pounds per 1,000,000 pounds of zinc	
Chromium	9.53	3.90
Mercury	5.42	2.17
Silver	8.89	3.68
Zinc	31.64	13.22
Manganese	14.74	6.28

(4) Subpart G—Electrodeposited Anodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc deposited English units—pounds per 1,000,000 pounds of zinc deposited	
Chromium	94.47	38.65
Mercury	53.68	21.47
Silver	88.03	36.50
Zinc	313.46	130.97
Manganese	146.00	62.26

(5) Subpart G—Silver Powder Formed Cathodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	13.07	5.35
Mercury	7.43	2.97
Silver	12.18	5.05
Zinc	43.36	18.12
Maganese	20.20	8.61

(6) Subpart G—Silver Oxide Powder Formed Cathodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	8.73	3.57
Mercury	4.96	1.99
Silver	8.14	3.37
Zinc	28.98	12.11
Manganese	13.50	5.76

(7) Subpart G—Silver Peroxide Cathodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	2.09	0.87
Mercury	1.19	0.48
Silver	1.95	0.81
Zinc	6.95	2.90
Manganese	3.24	1.38

(8) Subpart G—Nickel Impregnated Cathodes—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Chromium	88.0	36.0
Mercury	50.0	20.0
Nickel	384.0	254.0
Silver	82.0	34.0
Zinc	292.0	122.0
Manganese	136.0	58.0

(9) Subpart G—Miscellaneous Wastewater Streams—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Chromium	0.57	0.23
Cyanide	0.38	0.16
Mercury	0.32	0.13
Nickel	2.48	1.64
Silver	0.53	0.22
Zinc	1.88	0.79
Manganese	0.88	0.37

(10) Subpart G—Silver Etch—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Chromium	3.27	1.34
Mercury	1.86	0.74
Silver	3.05	1.26
Zinc	10.86	4.54
Manganese	5.06	2.16

(11) Subpart G—Silver Peroxide Production—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver peroxide produced English units—pounds per 1,000,000 pounds of silver peroxide produced	
Chromium	3.48	1.42
Mercury	1.98	0.79
Silver	3.24	1.34
Zinc	11.55	4.83
Manganese	5.38	2.29

(12) Subpart G—Silver Powder Production—PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Chromium	1.41	0.58
Mercury	0.80	0.32
Silver	1.32	0.55
Zinc	4.69	1.96
Manganese	2.18	0.93

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.75 Pretreatment standards for new sources (PSNS).

(a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below:

(1) Subpart G—Zinc Oxide Formed Anodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc English units—pounds per 1,000,000 pounds of zinc	
Chromium	4.55	1.97
Mercury	2.82	1.19
Silver	4.55	1.97
Zinc	0.87	0.39
Manganese	6.50	4.98

(2) Subpart G—Electrodeposited Anodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of zinc deposited English units—pounds per 1,000,000 pounds of zinc deposited	
Chromium	45.09	19.54
Mercury	27.91	11.81
Silver	45.09	19.54
Zinc	8.59	3.86
Manganese	64.41	49.38

(3) Subpart G—Silver Powder Formed Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	6.24	2.70
Mercury	3.86	1.63
Silver	6.24	2.70
Zinc	1.19	0.53
Manganese	8.91	6.83

(4) Subpart G—Silver Oxide Powder Formed Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	4.17	1.81
Mercury	2.58	1.09
Silver	4.17	1.81
Zinc	0.79	0.36
Manganese	5.96	4.57

(5) Subpart G—Silver Peroxide Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver applied English units—pounds per 1,000,000 pounds of silver applied	
Chromium	1.00	0.43
Mercury	0.62	0.26
Silver	1.00	0.43
Zinc	0.19	0.09
Manganese	1.43	1.09

(6) Subpart G—Nickel Impregnated Cathodes —PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied English units—pounds per 1,000,000 pounds of nickel applied	
Chromium	42.0	18.2
Mercury	26.0	11.0
Nickel	42.0	18.2
Silver	42.0	18.2
Zinc	8.0	3.6
Manganese	60.0	46.0

(7) Subpart G—Miscellaneous Wastewater Streams—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced English units—pounds per 1,000,000 pounds of cells produced	
Chromium	0.27	0.12
Cyanide	0.039	0.016
Mercury	0.17	0.07
Nickel	0.27	0.12
Silver	0.27	0.12
Zinc	0.05	0.02
Manganese	0.39	0.30

(8) Subpart G—Silver Etch—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed English units—pounds per 1,000,000 pounds of silver processed	
Chromium	1.56	0.68
Mercury	0.97	0.41
Silver	1.56	0.68
Zinc	0.30	0.13
Manganese	2.23	1.71

(9) Subpart G—Silver Peroxide Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver peroxide produced English units—pounds per 1,000,000 pounds of silver peroxide produced	
Chromium	1.66	0.72
Mercury	1.03	0.44
Silver	1.66	0.72
Zinc	0.32	0.14
Manganese	2.37	1.82

(10) Subpart G—Silver Powder Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced English units—pounds per 1,000,000 pounds of silver powder produced	
Chromium	0.67	0.29
Mercury	0.42	0.18
Silver	0.67	0.29
Zinc	0.13	0.06
Manganese	0.96	0.74

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

PART 463—PLASTICS MOLDING AND FORMING POINT SOURCE CATEGORY

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463.36 Pretreatment standards for new sources.
463.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307, 308, and 501, Clean Water Act (Federal Water Pollution Control Act Amendments of 1972, as amended by Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e) and (g), 1316 (b) and (c), 1317 (b) and (c), 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 49 FR 49047, Dec. 17, 1984, unless otherwise noted.

GENERAL PROVISIONS

§463.1 Applicability.

(a) This part applies to any plastics molding and forming process that discharges or may discharge pollutants to waters of the United States or that introduces pollutants into a publicly owned treatment works. Plastics molding and forming processes include processes that blend, mold, form, or otherwise process plastic materials into intermediate or final plastic products. They include commonly recognized processes such as extrusion, molding, coating and laminating, thermoforming, calendering, casting, foaming, cleaning, and finishing.

(b) Plastics molding and forming processes (e.g., extrusion and pelletizing) used by plastics resin manufacturers to process crude intermediate plastic material for shipment off-site are excluded from this regulation and regulated under the organic chemicals, plastics, and synthetic fibers category. Plastics molding and forming processes used by plastic resin manufacturers to process crude intermediate plastic materials, which are further processed on-site into intermediate or final plastics products in molding and forming processes, are controlled by the effluent limitations guidelines and standards for the plastics molding and forming category in this part.

(c) Processes that coat a plastic material onto a substrate may fall within the definition of electroplating and metal finishing as defined in 40 CFR parts 413 and 433. These coating processes are excluded from the effluent limitations guidelines and standards for the electroplating and metal finishing point source categories and are subject to the plastics molding and forming regulation in this part.

(d) Coating of plastic material onto a formed metal substrate is also covered by the plastics molding and forming effluent limitations guidelines and standards and is not covered by the specific metal forming guidelines such as aluminum forming (40 CFR part 467), copper forming (40 CFR part 468), and nonferrous metals forming (40 CFR part 471). However, the plastics molding and forming effluent limitations guidelines and standards in this part apply only to the coating process; the metal forming operations are subject to the specific metal forming regulation.

(e) Research and development laboratories that produce plastic products using a plastics molding and forming process are subject to the effluent limitations guidelines and standards in this part if the plastics molding and forming process discharges process water. The mass of plastic product produced in the plastics molding and forming process is not considered when determining the applicability of the plastics molding and forming regulation in this part to plastics molding and forming processes at research and development laboratories.

(f) Chemical and thermal reticulation processes for polyurethane foam are not subject to the effluent limitations guidelines and standards in this part. Water used in those processes is not considered to be process water as defined in this regulation. Processes used to further mold or form the reticulated foam are subject, however, to this regulation if they discharge process water.

(g) Processes used to regenerate cellulose and to produce a product (e.g., rayon) from the regenerated cellulose are not subject to the effluent limitations guidelines and standards in this part. Processes that mold or form cellulose derivatives (e.g., cellulose acetate) are subject to the effluent limitations guidelines and standards in this part if they discharge process water.

[49 FR 49047, Dec. 17, 1984; 50 FR 18249, Apr. 30, 1985]

§463.2 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) ''Plastics molding and forming'' is a manufacturing process in which plastic materials are blended, molded, formed, or otherwise processed into intermediate or final products.

(b) ''Process water'' is any raw, service, recycled, or reused water that contacts the plastic product or contacts shaping equipment surfaces such as molds and mandrels that are, or have been, in contact with the plastic product.

(c) ''Contact cooling and heating water'' is process water that contacts the raw materials or plastic product for the purpose of heat transfer during the plastics molding and forming process.

(d) ''Cleaning water'' is process water used to clean the surface of an intermediate or final plastic product or to clean the surfaces of equipment used in plastics molding and forming that contact an intermediate or final plastic product. It includes water used in both the detergent wash and rinse cycles of a cleaning process.

(e) ''Finishing'' water is processed water used to remove waste plastic material generated during a finishing process or to lubricate a plastic product during a finishing process. It includes water used to machine or to assemble intermediate or final plastic products.

(f) ''Plastic material'' is a synthetic organic polymer (i.e., a thermoset polymer, a thermoplastic polymer, or a combination of a natural polymer and a thermoset or thermoplastic polymer) that is solid in its final form and that was shaped by flow. The material can be either a homogeneous polymer or a polymer combined with fillers, plasticizers, pigments, stabilizers, or other additives.

(g) ''Crude intermediate plastic material'' is plastic material formulated in an on-site polymerization process.

(h) ''Mass of pollutant that can be discharged'' is the pollutant mass calculated by multiplying the pollutant concentration times the average process water usage flow rate.

§ 463.3 Monitoring and reporting requirements.

The ''monthly average'' regulatory values shall be the basis for the monthly average effluent limitations guidelines and standards in direct discharge permits. Compliance with the monthly average effluent limitations guidelines and standards is required regardless of the number of samples analyzed and averaged.

Subpart A—Contact Cooling and Heating Water Subcategory

§ 463.10 Applicability; description of the contact cooling and heating water subcategory.

This subpart applies to discharges of pollutants from processes in the contact cooling and heating water subcategory to waters of the United States and the introduction of such pollutants into publicly owned treatment works. Processes in the contact cooling and heating water subcategory are processes where process water comes in contact with plastic materials or plastic products for the purpose of heat transfer during plastics molding and forming.

§ 463.11 Specialized definitions.

For the purpose of this subpart:

(a) The ''average process water usage flow rate'' of a contact cooling and heating water process in liters per day is equal to the volume of process water (liters) used per year by a process divided by the number of days per year the process operates. The ''average process water usage flow rate'' for a plant with more than one plastics molding and forming process that uses contact cooling and heating water is the sum of the ''average process water usage flow rates'' for the contact cooling and heating processes.

(b) The ''volume of process water used per year'' is the volume of process water that flows through a contact cooling and heating water process and comes in contact with the plastic product over a period of one year.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (i.e., mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available,

which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a point source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate BPT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD5	26
Oil and grease	29
TSS	19
pH	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the contact cooling and heating water processes from the permittee.

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

(a) The BAT effluent limitations guidelines for bis(2-ethylhexyl) phthalate are reserved.

(b) The Agency has determined that, with the exception of bis(2-ethylhexyl) phthalate, there are no toxic pollutants in treatable concentrations in contact cooling and heating water. Accordingly, the Agency is promulgating BAT effluent limitations guidelines equal to the BPT effluent limitations guidelines.

§ 463.14 New source performance standards.

(a) NSPS for bis(2-ethylhexyl) phthalate are reserved.

(b) Any new source subject to this subpart must achieve performance standards (i.e., mass of pollutant discharged), which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a new source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate NSPS	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD5	26
Oil and grease	29
TSS	19
pH	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source contact cooling and heating water processes from the permittee.

§ 463.15 Pretreatment standards for existing sources.

(a) PSES for bis(2-ethylhexyl) phthalate are reserved.

(b) Any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403—General Pretreatment Regulations.

§ 463.16 Pretreatment standards for new sources.

(a) PSNS for bis(2-ethylhexyl)phthalate are reserved.

(b) Any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403—General Pretreatment Regulations.

§ 463.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (i.e., mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology, which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a point source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate BCT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD5	26
Oil and grease	29
TSS	19
pH	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the contact cooling and heating water processes from the permittee.

Subpart B—Cleaning Water Subcategory

§ 463.20 Applicability; description of the cleaning water subcategory.

This subpart applies to discharges of pollutants from processes in the cleaning water subcategory to waters of the United States and the introduction of such pollutants into publicly owned treatment works. Processes in the cleaning water subcategory are processes where water comes in contact with the plastic product for the purpose of cleaning the surface of the product and where water comes in contact with shaping equipment, such as molds and mandrels, that contact the plastic material for the purpose of cleaning the equipment surfaces.

§ 463.21 Specialized definitions.

For the purpose of this subpart:

(a) The ''average process water usage flow rate'' of a cleaning water process in liters per day is equal to the volume of process water (liters) used per year by a process divided by the number of days per year the process operates. The ''average process water usage flow rate'' for a plant with more than one plastics molding and forming process that uses cleaning water is the sum of the ''average process water usage flow rates'' for the cleaning processes.

(b) The ''volume of process water used per year'' is the volume of process water that flows through a cleaning process and comes in contact with the plastic product over a period of one year.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (i.e., mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, which are calculated by multiplying the average process water usage flow rate for the cleaning water processes at a point source times the following pollutant concentrations:

SUBPART B

[Cleaning water]

Concentration used to calculate BPT effluent limitations		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
BOD5	49	22
Oil and grease	71	17
TSS	117	36
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the cleaning water processes from the permittee.

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

The Agency has determined that there are insignificant quantities of toxic pollutants in cleaning process wastewaters after compliance with applicable BPT effluent limitations guidelines. Accordingly, because the BPT level of treatment provides adequate control, the Agency is establishing BAT effluent limitations guidelines equal to the BPT effluent limitations guidelines.

§ 463.24 New source performance standards.

Any new source subject to this subpart must achieve performance standards (i.e., mass of pollutant discharged)

calculated by multiplying the average process water usage flow rate for cleaning processes at a new source times the following pollutant concentrations:

SUBPART B

[Cleaning water]

Concentration used to calculate NSPS		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
BOD5	49	22
Oil and Grease	71	17
TSS	117	36
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source cleaning water processes from the permittee.

§ 463.25 Pretreatment standards for existing sources.

Any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403—General Pretreatment Regulations.

§ 463.26 Pretreatment for new sources.

Any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403—General Pretreatment Regulations.

§ 463.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart C—Finishing Water Subcategory

§ 463.30 Applicability; description of the finishing water subcategory.

This subpart applies to discharges of pollutants from processes in the finishing water subcategory to waters of the United States and the introduction of such pollutants into publicly owned treatment works. Processes in the finishing water subcategory are processes where water comes in contact with the plastic product during finishing.

§ 463.31 Specialized definitions.

For the purpose of this subpart:

(a) The ''average process water usage flow rate'' of a finishing water process in liters per day is equal to the volume of process water (liters) used per year by a process divided by the number of days per year the process operates. The ''average process water usage flow rate'' for a plant with more than one plastics molding and forming process that uses finishing water is the sum of the ''average process water usage flow rates'' for the finishing processes.

(b) The ''volume of process water used per year'' is the volume of process water that flows through a finishing water process and comes in contact with the plastics product over a period of one year.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (i.e., mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, which are calculated by multiplying the average process water usage flow rate for the finishing water processes at a point source times the following pollutant concentrations:

SUBPART C

[Finishing water]

Concentration used to calculate BPT effluent limitations		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
TSS	130	37
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the finishing water processes from the permittee.

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

(a) The BAT effluent limitations guidelines for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) The Agency has determined that, with the exception of bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate, there are no toxic pollutants in treatable concentrations in finishing waters. Accordingly, the Agency is promulgating BAT effluent limitations guidelines equal to BPT effluent limitations guidelines.

§ 463.34 New source performance standards.

(a) NSPS for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) Any new source subject to this subpart must achieve performance standards (i.e., mass of pollutant discharged), which are calculated by multiplying the average process water usage flow rate for the finishing water processes at a new source times the following pollutant concentrations:

SUBPART C

[Finishing water]

Concentration used to calculate NSPS		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
TSS	130	37
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source finishing water processes from the permittee.

§ 463.35 Pretreatment standards for existing sources.

(a) PSES for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) Any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403—General Pretreatment Regulations.

§ 463.36 Pretreatment standards for new sources.

(a) PSNS for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) Any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403—General Pretreatment Regulations.

§ 463.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

PART 464—METAL MOLDING AND CASTING POINT SOURCE CATEGORY

GENERAL PROVISIONS

Sec.
464.01 Applicability.
464.02 General definitions.
464.03 Monitoring and reporting requirements.
464.04 Compliance date for PSES.

Subpart A—Aluminum Casting Subcategory

464.10 Applicability; description of the aluminum casting subcategory.
464.11 Specialized definitions.
464.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
464.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
464.14 New source performance standards.
464.15 Pretreatment standards for existing sources.
464.16 Pretreatment standards for new sources.
464.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart B—Copper Casting Subcategory

464.20 Applicability; description of the copper casting subcategory.
464.21 Specialized definitions.

464.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
464.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
464.24 New source performance standards.
464.25 Pretreatment standards for existing sources.
464.26 Pretreatment standards for new sources.
464.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart C—Ferrous Casting Subcategory

464.30 Applicability; description of the ferrous casting subcategory.
464.31 Specialized definitions.
464.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
464.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
464.34 New source performance standards.
464.35 Pretreatment standards for existing sources.
464.36 Pretreatment standards for new sources.
464.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart D—Zinc Casting Subcategory

464.40 Applicability; description of the zinc casting subcategory.
464.41 Specialized definitions.
464.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
464.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
464.44 New source performance standards.
464.45 Pretreatment standards for existing sources.
464.46 Pretreatment standards for new sources.
464.47 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307, 308, and 501 of the Clean Water Act (Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e) and (g), 1316 (b) and (c), 1317 (b) and (c), 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 50 FR 45247, Oct. 30, 1985, unless otherwise noted.

GENERAL PROVISIONS

§ 464.01 Applicability.

(a) This part applies to metal molding and casting facilities that discharge or may discharge pollutants to waters of the United States or that introduce pollutants into a publicly owned treatment works.

§ 464.02 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) *Aluminum casting.* The remelting of aluminum or an aluminum alloy to form a cast intermediate or final product by pouring or forcing the molten metal into a mold, except for ingots, pigs, or other cast shapes related to nonferrous (primary and secondary) metals manufacturing (40 CFR part 421) and aluminum forming (40 CFR part 467). Processing operations following the cooling of castings not covered under aluminum forming, except for grinding scrubber operations which are covered here, are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).

(b) *Copper casting.* The remelting of copper or a copper alloy to form a cast intermediate or final product by pouring or forcing the molten metal into a mold, except for ingots, pigs, or other cast shapes related to nonferrous (primary and secondary) metals manufacturing (40 CFR part 421). Also excluded are casting of beryllium alloys in which beryllium is present at 0.1 or greater percent by weight and precious metals alloys in which the precious

metal is present at 30 or greater percent by weight. Except for grinding scrubber operations which are covered here, processing operations following the cooling of castings are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).

(c) *Ferrous casting.* The remelting of ferrous metals to form a cast intermediate or finished product by pouring the molten metal into a mold. Except for grinding scrubber operations which are covered here, processing operations following the cooling of castings are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).

(d) *Zinc casting.* The remelting of zinc or zinc alloy to form a cast intermediate or final product by pouring or forcing the molten metal into a mold, except for ingots, pigs, or other cast shapes related to nonferrous (primary) metals manufacturing (40 CFR part 421) and nonferrous metals forming (40 CFR part 471). Processing operations following the cooling of castings not covered under nonferrous metals forming are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).

(e) *POTW* shall mean ''publicly owned treatment works.''

(f) A *non-continuous discharger* is a plant which does not discharge pollutants during specific periods of time for reasons other than treatment plant upset, such periods being at least 24 hours in duration. A typical example of a non-continuous discharger is a plant where wastewaters are routinely stored for periods in excess of 24 hours to be treated on a batch basis. For non-continuous discharging direct discharging plants, NPDES permit authorities shall apply the mass-based annual average effluent limitations or standards and the concentration-based maximum day and maximum for monthly average effluent limitations or standards established in the regulations. POTWs may elect to establish concentration-based standards for non-continuous discharges to POTWs. They may do so by establishing concentration-based pretreatment standards equivalent to the mass-based standards provided in §§ 464.15, 464.16, 464.25, 464.26, 464.35, 464.36, 464.45, and 464.46 of the regulations. Equivalent concentration standards may be established by following the procedures outlined in § 464.03(b).

(g) *Total phenols* shall mean total phenolic compounds as measured by the procedure listed in 40 CFR part 136 (distillation followed by colorimetric—4AAP).

(h) *Sm^3* shall mean standard cubic meters.

(i) *SCF* shall means standard cubic feet.

(j) *Total toxic organics* (TTO) shall mean the sum of the mass of each of the toxic organic compounds which are found at a concentration greater than 0.010 mg/l. The specialized definitions for each subpart contain a discrete list of toxic organic compounds comprising TTO for each process segment in which TTO is regulated.

§ 464.03 Monitoring and reporting requirements.

(a) As an alternative to monitoring for TTO (total toxic organics), an indirect discharging plant may elect to monitor for Oil and Grease instead. Compliance with the Oil and Grease standard shall be considered equivalent to complying with the TTO standard. Alternate Oil and Grease standards are provided as substitutes for the TTO standards provided in §§ 464.15, 464.16, 464.25, 464.26, 464.35, 464.36, 464.45, and 464.46.

(b) POTWs may establish concentration standards rather than mass standards, but must ensure that the concentration standards are exactly equivalent to the mass-based standards provided in §§ 464.15, 464.16, 464.25, 464.26, 464.35, 464.36, 464.45, and 464.46. Equivalent concentration standards may be determined by multiplying the mass-based standards included in the regulations by an appropriate measurement of average production, raw material usage, or air scrubber flow (kkg of metal poured, kkg of sand reclaimed, or standard cubic meters of air scrubbed) and dividing by an appropriate measure of average discharge flow to the POTW, taking into account the proper conversion factors to ensure that the units (mg/l) are correct.

(c) The ''monthly average'' regulatory values shall be the basis for the

monthly average effluent limitations guidelines and standards in direct discharge permits and for pretreatment standards. Compliance with the monthly average effluent limitations guidelines and standards is required regardless of the number of samples analyzed and averaged.

§464.04 Compliance date for PSES.

The compliance date of PSES is October 31, 1988.

Subpart A—Aluminum Casting Subcategory

§464.10 Applicability; description of the aluminum casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction of pollutants into publicly owned treatment works resulting from aluminum casting operations as defined in §464.02(a).

§464.11 Specialized definitions.

For the purpose of this subpart:

(a) *Total toxic organics (TTO).* TTO is a regulated parameter under PSES (§464.15) and PSNS (§464.16) for the aluminum subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:

(1) Casting Quench (§464.15(b) and §464.16(b)):

4. benzene
21. 2,4,6-trichlorophenol
22. Para-chloro meta-cresol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
65. phenol
66. bis(2-ethylhexyl) phthalate
67. butyl benzyl phthalate
84. pyrene
85. tetrachloroethylene
87. trichloroethylene

(2) Die Casting (§464.15(c) and §464.16(c)):

1. acenaphthene
4. benzene
7. chlorobenzene
11. 1,1,1-trichloroethane
21. 2,4,6-trichlorophenol
22. para-chloro meta-cresol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
55. naphthalene
65. phenol
66. bis(2-ethylhexyl) phthalate
67. butyl benzyl phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
72. benzo (a)anthracene (1,2-benzanthracene)
73. benzo (a)pyrene (3,4-benzopyrene)
76. chrysene
78. anthracene
80. fluorene
81. phenanthrene
84. pyrene
85. tetrachloroethylene
86. toluene

(3) Dust Collection Scrubber (§464.15(d) and §464.16(d)):

1. acenaphthene
21. 2,4,6-trichlorophenol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
65. phenol
66. bis (2-ethylhexyl) phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
73. benzo (a)pyrene (3,4-benzopyrene)
84. pyrene

(4) Investment Casting (§464.15(f) and §464.16(f)):

11. 1,1,1-trichloroethane
23. chloroform (trichloromethane)
44. methylene chloride (dichloromethane)
66. bis (2-ethylhexyl) phthalate
84. pyrene
85. tetrachloroethylene
87. trichloroethylene

(5) Melting Furnace Scrubber (§464.15(g) and §464.16(g)):

1. acenaphthene
21. 2,4,6-trichlorophenol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
65. phenol
66. bis (2-ethylhexyl) phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
73. benzo (a)pyrene (3,4-benzopyrene)
84. pyrene

(6) Mold Cooling (§464.15(h) and §464.16(h)):

4. benzene
21. 2,4,6-trichlorophenol
22. para-chloro meta-cresol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol

39. fluoranthene
44. methylene chloride
65. phenol
66. bis(2-ethylhexyl) phthalate
67. butyl benzyl phthalate
84. pyrene
85. tetrachloroethylene
87. trichloroethylene

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitation and annual average mass limitation shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0771	0.0421
Lead (T)	0.0791	0.039
Zinc (T)	0.114	0.0431
Oil & grease	3.0	1.0
TSS	3.80	1.50
pH	(1)	(1)

[1] Within the range of 7.0 to 10.00 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.017
Lead (T)	0.79	0.39	0.022
Zinc (T)	1.14	0.43	0.027
Oil & grease	30	10	0.501
TSS	38	15	1.0
pH	([3])	([3])	([3])

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (12/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[3] Within the range of 7.0 to 10.0 at all times.

(b) *Casting Quench Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0093	0.0051
Lead (T)	0.0096	0.0047
Zinc (T)	0.0138	0.0052
Oil & grease	0.363	0.121
TSS	0.46	0.182
pH	([1])	([1])

[1] Within the range of 7.0 to 10.0 at all times.

[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[3] Within the range of 7.0 to 10.0 at all times.

(g) *Melting Furnace Scrubber Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	3.01	1.64
Lead (T)	3.09	1.52
Zinc (T)	4.45	1.68
Total phenols	3.36	1.17
Oil and grease	117	39.1
TSS	148	58.6
pH	([1])	([1])

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.664
Lead (T)	0.79	0.39	0.859
Zinc (T)	1.14	0.43	1.05
Total phenols	0.86	0.3	0.781
Oil and grease	30	10	19.5
TSS	38	15	39.1
pH	([2])	([3])	([3])

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.

[2] These concentrations must be multiplied by the ratio of (0.468/x) where x is the acutal normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

[3] Within the range of 7.0 to 10.0 at all times.

(h) *Mold Cooling Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.297	0.162
Lead (T)	0.305	0.151
Zinc (T)	0.44	0.166
Oil and grease	11.6	3.86
TSS	14.7	5.79
pH	([1])	([1])

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [1]	(mg/) [1]	
Copper (T)	0.77	0.42	0.0656
Lead (T)	0.79	0.39	0.0849
Zinc (T)	1.14	0.43	0.104
Oil and grease	30	10	1.93
TSS	38	15	3.86
pH	([3])	([3])	([3])

[1] kg/1,000 kkg (pounds per million pounds) of metal

[2] These concentrations must be multiplied by the ratio of (46.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[3] Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0771	0.0421
Lead (T)	0.0791	0.039
Zinc (T)	0.114	0.0431

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.017
Lead (T)	0.79	0.39	0.022
Zinc (T)	1.14	0.43	0.027

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (12/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(b) *Casting Quench Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0093	0.0051
Lead (T)	0.0096	0.0047
Zinc (T)	0.0138	0.0052

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0021
Lead (T)	0.79	0.39	0.0027
Zinc (T)	1.14	0.43	0.0033

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1.45/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) *Die Casting Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0068	0.0034
Zinc (T)	0.0098	0.0037
Total Phenols	0.0074	0.0026

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.79	0.39	0.0019
Zinc (T)	1.14	0.43	0.0023
Total Phenols	0.86	0.3	0.0017

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(d) *Dust Collection Scrubber Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.231	0.126
Lead (T)	0.237	0.117
Zinc (T)	0.343	0.129
Total Phenols	0.258	0.09

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0511
Lead (T)	0.79	0.39	0.0661
Zinc (T)	1.14	0.43	0.0811
Total Phenols	0.86	0.3	0.0601

[1] kg/62.3 million Sm^3 (lb per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.036/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(e) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(f) *Investment Casting.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	1.87
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.14	0.43	2.97

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(g) *Melting Furnace Scrubber Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	3.01	1.64
Lead (T)	3.09	1.52
Zinc (T)	4.45	1.68
Total phenols	3.36	1.17

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.664
Lead (T)	0.79	0.39	0.859
Zinc (T)	1.14	0.43	1.05
Total phenols	0.86	0.3	0.781

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed

[2] These concentrations must be multiplied by the ratio of (0.468/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(h) *Mold Cooling Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.297	0.162
Lead (T)	0.305	0.151
Zinc (T)	0.44	0.166

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0656
Lead (T)	0.79	0.39	0.0849
Zinc (T)	1.14	0.43	0.104

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (46.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

§ 464.14 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0771	0.0421
Lead (T)	0.0791	0.039
Zinc (T)	0.114	0.0431
Oil and grease	3.0	1.0
TSS	3.8	1.5
pH	([1])	([1])

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.017
Lead (T)	0.79	0.39	0.022
Zinc (T)	1.14	0.43	0.027
Oil and grease	30	10	0.501
TSS	38	15	1.0
pH	([3])	([3])	([3])

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (12/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(b) *Casting Quench Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0093	0.0051
Lead (T)	0.0096	0.0047
Zinc (T)	0.0138	0.0052
Oil and grease	0.363	0.121
TSS	0.46	0.182
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0021
Lead (T)	0.79	0.39	0.0027
Zinc (T)	1.14	0.43	0.0033
Oil and grease	30	10	0.0605
TSS	38	15	0.121
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1.45/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(c) *Die Casting Operations.*

NSPS

Pollutant or pollutant property	Maximum for one 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0068	0.0034
Zinc (T)	0.0098	0.0037
Total Phenols	0.0074	0.0026
Oil and grease	0.259	0.0864
TSS and	0.33	0.13
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.79	0.39	0.0019
Zinc (T)	1.14	0.43	0.0023
Total phenols	0.86	0.3	0.0017
Oil and grease	30	10	0.0432
TSS and	38	15	0.0864
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured)
[3] Within the range of 7.0 to 10.0 at all times.

(d) *Dust Collection Scrubber Operations.*

NSPS

Pollutant of pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Cooper (T)	0.231	0.126
Lead (T)	0.237	0.117
Zinc (T)	0.343	0.129
Total phenols	0.258	0.09
Oil and grease	9.01	3.0
TSS	11.4	4.51
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Cooper (T)	0.77	0.42	0.0511
Lead (T)	0.79	0.39	0.0661
Zinc (T)	1.14	0.43	0.0811
Total phenols	0.86	0.3	0.0601
Oil and grease	30	10	1.5
TSS	38	15	3.0
pH	(3)	(3)	(3)

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.036/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(e) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(f) *Investment Casting.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74
Oil and grease	330	110
TSS	419	165
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	1.87
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.14	0.43	2.97
Oil and grease	30	10	55.1
TSS	38	15	110
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds) of metal poured
2 These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(g) *Melting Furnace Scrubber Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm[3] (pounds per billion SCF) of air scrubbed	
Copper (T)	3.01	1.64
Lead (T)	3.09	1.52
Zinc (T)	4.45	1.68
Total phenols	3.36	1.17
Oil and grease	117	39.1
TSS	148	58.6
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.664
Lead (T)	0.79	0.39	0.859
Zinc (T)	1.14	0.43	1.05
Total phenols	0.86	0.3	0.781
Oil and grease	30	10	19.5
TSS	38	15	39.1
pH	(3)	(3)	(3)

1 kg/62.3 million Sm[3] (pounds per billion SCF) of air scrubbed.
2 These concentrations must be multiplied by the ratio of (0.468/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(h) *Mold Cooling Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.297	0.162
Lead (T)	0.305	0.151
Zinc (T)	0.44	0.166
Oil and grease	11.6	3.86
TSS	14.7	5.79
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.0656
Lead (T)	0.79	0.39	0.0849
Zinc (T)	1.14	0.43	0.104
Oil and grease	30	10	1.93
TSS	38	15	3.86
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds of metal poured.
2 These concentrations must be multiplied by the ratio of (46.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

§ 464.15 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

(a) *Casting Cleaning Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0771	0.0421
Lead (T)	0.0791	0.039
Zinc (T)	0.114	0.0431

(b) *Casting Quench Operation.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0093	0.0051
Lead (T)	0.0096	0.0047
Zinc (T)	0.0138	0.0052
TT0	0.029	0.0095
Oil and grease (for alternate monitoring)	0.363	0.121

(c) *Die Casting Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0068	0.0034
Zinc (T)	0.0098	0.0037
Total phenols	0.0074	0.0026
TTO	0.0308	0.01
Oil and grease (for alternate monitoring)	0.259	0.0864

(d) *Dust Collection Scrubber Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.231	0.126
Lead (T)	0.237	0.117
Zinc (T)	0.343	0.129
Total phenols	0.258	0.09
TTO	0.613	0.2
Oil and grease (for alternate monitoring)	9.01	3.00

(e) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.

(f) *Investment Casting.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74
TTO	18.1	5.91
Oil and grease (for alternate monitoring	330	110

(g) *Melting Furnace Scrubber Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	3.01	1.64
Lead (T)	3.09	1.52
Zinc (T)	4.45	1.68
Total phenols	3.36	1.17
TTO	7.97	2.6
Oil and grease (for alternate monitoring)	117	39.1

(h) *Mold Cooling Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.297	0.162
Lead (T)	0.305	0.151
Zinc (T)	0.44	0.166
TTO	0.935	0.304
Oil and grease (for alternate monitoring)	11.6	3.86

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

§ 464.16 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

(a) *Casting Cleaning Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0771	0.0421
Lead (T)	0.0791	0.039
Zinc (T)	0.114	0.0431

(b) *Casting Quench Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0093	0.0051
Lead (T)	0.0096	0.0047
Zinc (T)	0.0138	0.0052
TTO	0.029	0.0095
Oil and grease (for alternate monitoring)	0.363	0.121

(c) *Die Casting Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0068	0.0034
Zinc (T)	0.0098	0.0037
Total Phenols	0.0074	0.0026
TTO	0.0308	0.01
Oil and grease (for alternate monitoring)	0.259	0.0864

(d) *Dust Collection Scrubber Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.231	0.126
Lead (T)	0.237	0.117
Zinc (T)	0.343	0.129
Total Phenols	0.258	0.09
TTO	0.613	0.2
Oil and grease (for alternate monitoring)	9.01	3.0

(e) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.

(f) *Investment Casting.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74
TTO	18.1	5.91
Oil and grease (for alternate monitoring)	330	110

(g) *Melting Furnace Scrubber Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	3.01	1.64
Lead (T)	3.09	1.52
Zinc (T)	4.45	1.68
Total Phenols	3.36	1.17
TTO	7.97	2.6
Oil and grease (for alternate monitoring)	117	39.1

(h) *Mold Cooling Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.297	0.162
Lead (T)	0.305	0.151
Zinc (T)	0.44	0.166
TTO	0.935	0.304
Oil and grease (for alternate monitoring)	11.6	3.86

§464.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart B—Copper Casting Subcategory

§464.20 Applicability; description of the copper casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction of pollutants into publicly owned treatment works resulting from copper casting operations as defined in §464.02(b).

§464.21 Specialized definitions.

For the purpose of this subpart:

(a) *Total Toxic Organics* (*TTO*). TTO is a regulated parameter under PSES (§464.25) and PSNS (§464.26) for the copper subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:

(1) Casting Quench (§464.25(a) and §464.26(a)):

23. chloroform (trichloromethane)
64. pentachlorophenol
66. bis(2-ethylhexyl)phthalate
71. dimethyl phthalate

(2) Dust Collection Scrubbers (§464.25(c) and 464.26(c)):

1. acenaphthene
22. para-chloro meta-cresol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol
55. naphthalene
58. 4-nitrophenol
64. pentachlorophenol
65. phenol
66. bis(2-ethylhexyl)phthalate
67. butyl benzyl phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
71. dimethyl phthalate
72. benzo(a)anthracene (1,2-benzanthracene)
74. 3,4-benzofluoranthene
75. benzo(k) fluoranthene
76. chrysene
77. acenaphthylene
78. anthracene
81. phenanthrene
84. pyrene

(3) Investment Casting (§464.25(e) and §464.26(e)):

1. acenaphthene
22. para-chloro meta-cresol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol
55. naphthalene
58. 4-nitrophenol
64. pentachlorophenol
65. phenol
66. bis (2-ethylhexyl)phthalate
67. butyl benzyl phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
71. dimethyl phthalate
72. benzo(a)anthracene (1,2-benzanthracene)
74. 3,4-benzofluoranthene
75. benzo(k) fluoranthene
76. chrysene
77. acenaphthylene
78. anthracene
81. Phenanthrene
84. pyrene

(4) Melting Furnace Scrubber (§464.25(f) and §464.26(f)):

1. acenaphthene
22. para-chloro meta-cresol
23. chloroform (trichloromethane)
34. 2,4-dimethylphenol
55. naphthalene
58. 4-nitrophenol
64. pentachlorophenol
65. phenol
66. bis (2-ethylhexyl) phthalate
67. butyl benzyl phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
71. dimethyl phthalate
72. benzo(a)anthracene (1,2-benzanthracene)
74. 3,4-benzoflouranthene
75. benzo(k) flouranthene
76. chrysene
77. acenaphthylene
78. anthracene
81. phenanthrene
84. pyrene

(5) Mold Cooling (§464.25(g) and §464.26(g)):

23. chloroform (trichloromethane)
64. pentachlorophenol
66. bis(2-ethylhexyl)phthalate
71. dimethyl phthalate

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Quench Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0307	0.0168
Lead (T)	0.0315	0.0156
Zinc (T)	0.0455	0.0171
Oil and grease	1.2	0.399
TSS	1.52	0.598
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0068
Lead (T)	0.79	0.39	0.0088
Zinc (T)	1.14	0.43	0.0108
Oil and grease	30	10	0.199
TSS	38	15	0.399
pH	(3)	(3)	(3)

[1] kg/1000 kkg (pounds per million pounds) of metal poured
[2] These concentrations must be multiplied by the ratio of (4.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(b) *Direct Chill Casting Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.928	0.506
Lead (T)	0.952	0.47
Zinc (T)	1.37	0.518
Oil and grease	36.2	12.1
TSS	45.8	18.1
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.205
Lead (T)	0.79	0.39	0.265
Zinc (T)	1.14	0.43	0.326
Oil and grease	30	10	6.03
TSS	38	15	12.1
pH	(3)	(3)	(3)

[1] kg/1000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (145/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(c) *Dust Collection Scrubber Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.553	0.301
Lead (T)	0.567	0.28
Zinc (T)	0.818	0.309
Total phenols	0.617	0.215
Oil and grease	21.5	7.18
TSS	27.3	10.8
ph	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.122
Lead (T)	0.79	0.39	0.158
Zinc (T)	1.14	0.43	0.194
Total phenols	0.86	0.3	0.144
Oil and grease	30	10	3.59
TSS	38	15	7.18
pH	(3)	(3)	(3)

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.086/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(e) *Investment Casting.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74
Oil and grease	330	110
TSS	419	165
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	
Copper (T)	0.77	0.42	1.87
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.14	0.43	2.97
Oil and grease	30	10	55.1
TSS	38	15	110
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(f) *Melting Furnace Scrubber Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.81	0.988
Lead (T)	1.86	0.918
Zinc (T)	2.68	1.01
Total phenols	2.02	0.706
Oil and grease	70.6	23.5
TSS	89.4	35.3
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	
Copper (T)	0.77	0.42	0.4
Lead (T)	0.79	0.39	0.518
Zinc (T)	1.14	0.43	0.635
Total phenols	0.86	0.3	0.467
Oil and grease	30	10	11.8
TSS	38	15	23.5
pH	(3)	(3)	(3)

1 kg/62.3 million Sm^3 (pound per billion SCF) of air scrubbed.
2 These concentrations must be multiplied by the ratio of (0.282/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(g) *Mold Cooling Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.392	0.214
Lead (T)	0.402	0.199
Zinc (T)	0.58	0.219
Oil and grease	15.3	5.09
TSS	19.3	7.63
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	
Copper (T)	0.77	0.42	0.0865
Lead (T)	0.79	0.39	0.112
Zinc (T)	1.14	0.43	0.137
Oil and grease	30	10	2.54
TSS	38	15	5.09
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (61/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that

non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous discharges, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Quench Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0307	.0168
Lead (T)	0.0211	.0104
Zinc (T)	0.0303	.0116

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.0068
Lead (T)	0.53	0.26	0.006
Zinc (T)	0.76	0.29	0.0072

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (4.8/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(b) *Direct Chill Casting Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.928	0.506
Lead (T)	0.639	0.314
Zinc (T)	0.916	0.35

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.205
Lead (T)	0.53	0.26	0.181
Zinc (T)	0.76	0.29	0.217

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (145/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) *Dust Collection Scrubber Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.553	0.301
Lead (T)	0.38	0.187
Zinc (T)	0.545	0.208
Total phenols	0.617	0.215

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.122
Lead (T)	0.53	0.26	0.108
Zinc (T)	0.76	0.29	0.129
Total phenols	0.86	0.3	0.144

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.

[2] These concentrations must be multiplied by the ratio of (0.086/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(e) *Investment Casting.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	5.84	2.86
Zinc (T)	8.37	3.19

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	1.87
Lead (T)	0.53	0.26	1.65
Zinc (T)	0.76	0.29	1.98

[1] kg/1000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(f) *Melting Furnace Scrubber Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.81	0.988
Lead (T)	1.25	0.612
Zinc (T)	1.79	0.673
Total phenols	2.02	0.706

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.4
Lead (T)	0.53	0.26	0.353
Zinc (T)	0.76	0.29	0.424
Total phenols	0.86	0.3	0.471

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.282/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(g) *Mold Cooling Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.392	0.214
Lead (T)	0.27	0.132
Zinc (T)	0.387	0.148

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.0865
Lead (T)	0.53	0.26	0.0763
Zinc (T)	0.76	0.29	0.0916

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (61/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

§464.24 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

(a) *Casting Quench Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0307	0.0168
Lead (T)	0.0211	0.0104
Zinc (T)	0.0303	0.0116
Oil and grease	1.2	0.399
TSS	0.598	0.479
pH	([1])	([1])

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.0068
Lead (T)	0.53	0.26	0.006
Zinc (T)	0.76	0.29	0.0072
Oil and grease	30	10	0.199
TSS	15	12	0.104
pH	([3])	([3])	([3])

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (4.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(b) *Direct Chill Casting Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.928	0.506
Lead (T)	0.639	0.314
Zinc (T)	0.916	0.35
Oil and grease	36.2	12.1
TSS	18.1	14.5
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	
Copper (T)	0.77	0.42	0.205
Lead (T)	0.53	0.26	0.181
Zinc (T)	0.76	0.29	0.217
Oil and grease	30	10	6.03
TSS	15	12	3.13
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (145/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(c) *Dust Collection Scrubber Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.553	0.301
Lead (T)	0.38	0.187
Zinc (T)	0.545	0.208
Total phenols	0.617	0.215
Oil and grease	21.5	7.18
TSS	10.8	8.61
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	
Copper (T)	0.77	0.42	0.122
Lead (T)	0.53	0.26	0.108
Zinc (T)	0.76	0.29	0.129
Total phenols	0.86	0.3	0.144
Oil and grease	30	10	3.59
TSS	15	12	1.87
pH	(3)	(3)	(3)

1 kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
2 These concentrations must be multiplied by the ratio of (0.086/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(e) *Investment Casting.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per millions pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	5.84	2.86
Zinc (T)	8.37	3.19
Oil and grease	330	110
TSS	165	132
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	mg/l) 2	
Copper (T)	0.77	0.42	1.87
Lead (T)	0.53	0.26	1.65
Zinc (T)	0.76	0.29	1.98
Oil and grease	30	10	55.1
TSS	15	12	28.6
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(f) *Melting Furnace Scrubber Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.81	0.988
Lead (T)	1.25	0.612
Zinc (T)	1.79	0.673
Total phenols	2.02	0.706
Oil and grease	70.6	23.5
TSS	35.3	28.2
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.4
Lead (T)	0.53	0.26	0.353
Zinc (T)	0.76	0.29	0.424
Total phenols	0.86	0.3	0.471
Oil and grease	30	10	11.8
TSS	15	12	6.12
pH	([3])	([3])	([3])

[1] kg/62.3 Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.282/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(g) *Mold Cooling Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.392	0.214
Lead (T)	0.27	0.132
Zinc (T)	0.387	0.148
Oil and grease	15.3	5.09
TSS	7.63	6.11
pH	([1])	([1])

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/1)[2]	(mg/1)[2]	
Copper (T)	0.77	0.42	0.0865
Lead (T)	0.53	0.26	0.0763
Zinc (T)	0.76	0.29	0.0916
Oil and grease	30	10	2.54
TSS	15	12	1.32
pH	([3])	([3])	([3])

[1] kg/1,000 kkg (pounds per million pound) of metal poured.
[2] These concentrations must be multiplied by the ratio of (61/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

§ 464.25 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

(a) *Casting Quench Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0307	0.0168
Lead (T)	0.0211	0.0104
Zinc (T)	0.0303	0.0116
TTO	0.0335	0.0109
Oil and grease (for alternate monitoring)	1.2	0.399

(b) *Direct Chill Casting Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.928	0.506
Lead (T)	0.639	0.314
Zinc (T)	0.916	0.35

(c) *Dust Collection Scrubber Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.552	0.301
Lead (T)	0.38	0.187
Zinc (T)	0.545	0.208
Total phenols	0.617	0.215
TTO	1.65	0.54
Oil and grease (for alternate monitoring)	21.5	7.18

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.

(e) *Investment Casting.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	5.84	2.86
Zinc (T)	8.37	3.19
TTO	25.4	8.29
Oil and grease for alternate monitoring)	330	110

(f) *Melting Furnace Scrubber Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed	
Copper (T)	1.81	0.988
Lead (T)	1.25	0.612
Zinc (T)	1.79	0.673
Total phenols	2.02	0.706
TTO	5.41	1.77
Oil and grease (for alternate monitoring)	70.6	23.5

(g) *Mold Cooling Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.392	0.214
Lead (T)	0.27	0.132
Zinc (T)	0.387	0.148
TTO	0.428	0.14
Oil and grease (for alternate monitoring)	15.3	5.09

§ 464.26 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

(a) *Casting Quench Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0307	0.0168
Lead (T)	0.0211	0.0104
Zinc (T)	0.0303	0.0116
TTO	0.0335	0.0109
Oil and grease (for alternate monitoring)	1.2	0.399

(b) *Direct Chill Casting Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.928	0.506
Lead (T)	0.639	0.314
Zinc (T)	0.916	0.35

(c) *Dust Collection Scrubber Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 Million Sm³ (pounds per billion SCF) of air scrubbed	
Copper (T)	0.552	0.301
Lead (T)	0.38	0.187
Zinc (T)	0.545	0.208
Total Phenols	0.617	0.215
TTO	1.65	0.54
Oil and Grease (for alternate monitoring	21.5	7.18

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.

(e) *Investment Casting.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	5.84	2.86
Zinc (T)	8.37	3.19
TTO	25.4	8.29
Oil and Grease (for alternate monitoring	330	110

(f) *Melting Furnace Scrubber Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.81	0.988
Lead (T)	1.25	0.612
Zinc (T)	1.79	0.673
Total Phenols	2.02	0.706
TTO	5.41	1.77
Oil and Grease (for alternate monitoring	70.6	23.5

(g) *Mold Cooling Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.392	0.214
Lead (T)	0.27	0.132
Zinc (T)	0.387	0.148
TTO	0.428	0.14
Oil and Grease (for alternate monitoring	15.3	5.09

§464.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart C—Ferrous Casting Subcategory

§464.30 Applicability; description of the ferrous casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction of pollutants into publicly owned treatment works resulting from ferrous casting operations as defined in §464.02(c).

§464.31 Specialized definitions.

For the purpose of this subpart:

(a) *Total Toxic Organics (TTO).* TTO is a regulated parameter under PSES (§464.35) and PSNS (§464.36) for the ferrous subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:

(1) Casting Quench (§464.35(b) and §464.36(b)):

23. chloroform (trichloromethane)
34. 2,4-dimethylphenol

(2) Dust Collection Scrubber (§464.35(c) and §464.36(b)):

1. acenaphthene
23. chloroform (trichloromethane)
31. 2,4-dichlorophenol
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
55. naphthalene
64. pentachlorophenol
65. phenol
66. bis(2-ethylhexyl)phthalate
67. butyl benzyl phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
71. dimethyl phthalate
72. benzo (a)anthracene (1,2-benzanthracene)
76. chrysene
77. acenaphthylene
78. anthracene
80. fluorene
81. phenanthrene
84. pyrene

(3) Investment Casting (§464.35(e) and §464.36(e)):

23. chloroform (trichloromethane)
44. methylene chloride (dichloromethane)
66. bis (2-ethylhexyl) phthalate
77. acenaphthylene
84. pyrene

(4) Melting Furnace Scrubber (§464.35(f) and §464.36(f)):

23. chloroform (trichloromethane)
31. 2,4-dichlorophenol
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
55. naphthalene
65. phenol
66. bis (2-ethylhexyl) phthalate
67. butyl benzyl phthalate
68. di-n-butyl phthalate
72. benzo (a)anthracene (1,2-benzanthracene)
76. chrysene
77. acenaphthylene
78. anthracene
80. fluorene
81. phenanthrene
84. pyrene

(5) Mold Cooling (§464.35(g) and §464.36(g)):

23. chloroform (trichloromethane)
34. 2,4-dimethylphenol

(6) Slag Quench (§464.35(h) and §464.36(h)):

34. 2,4-dimethylphenol
71. dimethyl phthalate

(7) Wet Sand Reclamation (§ 464.35(i) and § 464.36(i)):

1. acenaphthene
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
55. naphthalene
65. phenol
66. bis (2-ethylhexyl) phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
71. dimethyl phthalate
72. benzo(a)anthracene (1,2-benzanthracene)
77. acenaphthylene
84. pyrene

(b) *Cast Iron.* An iron containing carbon in excess of the solubility in the austentite that exists in the alloy at the eutectic temperature. Cast iron also is defined here to include any iron-carbon alloys containing 1.2 percent or more carbon by weight.

(c) *Ductile Iron.* A cast iron that has been treated while molten with a master alloy containing an element such as magnesium or cerium to induce the formation of free graphite as nodules or spherules, which imparts a measurable degree of ductility to the cast metal.

(d) *Gray Iron.* A cast iron that gives a gray fracture due to the presence of flake graphite.

(e) *Malleable Iron.* A cast iron made by a prolonged anneal of white cast iron in which decarburization or graphitization, or both, take place to eliminate some or all of the cementite. Graphite is present in the form of temper carbon.

(f) *Steel.* An iron-base alloy containing carbon, manganese, and often other alloying elements. Steel is defined here to include only those iron-carbon alloys containing less than 1.2 percent carbon by weight.

(g) The ''primary metal cast'' shall mean the metal that is poured in the greatest quantity at an individual plant.

(h) *Multiple Ferrous Melting Furnace Scrubber Configuration.* A multiple ferrous melting furnace scrubber configuration is a configuration where two or more discrete wet scrubbing devices are employed in series in a single melting furnace exhaust gas stream. The ferrous melting furnace scrubber mass allowance shall be given to each discrete wet scrubbing device that has an associated wastewater discharge in a multiple ferrous melting furnace scrubber configuration. The mass allowance for each discrete wet scrubber shall be identical and based on the air flow of the exhaust gas stream that passes through the multiple scrubber configuration.

(i) *Discrete Wet Scrubbing Device.* A discrete wet scrubbing device is a distinct, stand-alone device that removes particulates and fumes from a contaminated gas stream by bringing the gas stream into contact with a scrubber liquor, usually water, and from which there is a wastewater discharge. Examples of discrete wet scrubbing devices are: Spray towers and chambers, venturi scrubbers (fixed and variable), wet caps, packed bed scrubbers, quenchers, and orifice scrubbers. Semi-wet scrubbing devices where water is added and totally evaporates prior to dry air pollution control are not considered to be discrete wet scrubbing devices. Ancillary scrubber operations such as fan washes and backwashes are not considered to be discrete wet scrubber devices. These ancillary operations are covered by the mass limitations of the associated scrubber. Aftercoolers are not considered to be discrete wet scrubbing devices, and water discharges from aftercooling are not regulated as a process wastewater in this category.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers,

annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0353	0.0174
Zinc (T)	0.0656	0.025
Oil and grease	1.34	0.446
TSS	1.7	0.67
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.47	0.56	0.0179
Oil and grease	30	10	0.223
TSS	38	15	0.446
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(b) *Casting Quench Operations*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0376	0.0185
Zinc (T)	0.0699	0.0266
Oil and grease	1.43	0.476
TSS	1.81	0.713
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.79	0.39	0.0105
Zinc (T)	1.47	0.56	0.019
Oil and grease	30	10	0.238
TSS	38	15	0.476
pH	(3)	(3)	(3)

1 kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(c) *Dust Collection Scrubber Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.593	0.293
Zinc (T)	1.1	0.421
Total phenols	0.656	0.225
Oil and grease	22.5	7.51
TSS	28.5	11.3
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) 2	(mg/l) 2	(mg/l) 2
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.79	0.39	0.165
Zinc (T)	1.47	0.56	0.3
Total phenols	0.86	0.3	0.15
Oil and grease	30	10	3.76
TSS	38	15	7.51
pH	(3)	(3)	(3)

1 kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
2 These concentrations must be multiplied by the ratio (0.090/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(e) *Investment Casting.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	8.7	4.3
Zinc (T)	16.2	6.17
Oil and grease	330	110
TSS	419	165
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.47	0.56	4.41
Oil and grease	30	10	55.1
TSS	38	15	110
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(f) *Melting Furnace Scrubber Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total phenols	3.01	1.05
Oil and grease	105	35
TSS	133	52.6
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.79	0.39	0.771
Zinc (T)	1.47	0.56	1.4
Total phenols	0.86	0.3	0.701
Oil and grease	30	10	17.5
TSS	38	15	35
pH	(3)	(3)	(3)

[1] kg/62.3 million Sm^3 (pounds per billion SCF) or air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(g) *Mold Cooling Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.117	0.0576
Zinc (T)	0.217	0.0827
Oil and grease	4.43	1.48
TSS	5.61	2.22
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.79	0.39	0.0325
Zinc (T)	1.47	0.56	0.0591
Oil and grease	30	10	0.738
TSS	38	15	1.48
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured
[2] These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(h) *Slag Quench Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Cooper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102
Oil and grease	5.46	1.82
TSS	6.91	2.73
pH	(1)	(1)

[1] Within the range 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.79	0.39	0.04
Zinc (T)	1.47	0.56	0.0728
Oil and grease	30	10	0.909
TSS	38	15	1.82
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wasterwater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(i) *Wet Sand Reclamation Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Cooper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	0.418
Total phenols	0.642	0.224
Oil and grease	22.4	7.47
TSS	28.4	11.2
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Cooper (T)	0.29	0.16	0.0485
Lead (T)	0.79	0.39	0.164
Zinc (T)	1.47	0.56	0.299
Total phenols	0.86	0.3	0.149
Oil and grease	30	10	3.73
TSS	38	15	7.47
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of sand reclaimed.
[2] These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0237	0.0116
Zinc (T)	0.0437	0.0165

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.98	0.37	0.0116

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0353	0.0174
Zinc (T)	0.0656	0.025

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.47	0.56	0.0179

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(b) *Casting Quench Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/100 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0252	0.0124
Zinc (T)	0.0466	0.0176

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.53	0.26	0.0071
Zinc (T)	0.98	0.37	0.0124

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0376	0.0185
Zinc (T)	0.0699	0.0266

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.79	0.39	0.0105
Zinc (T)	1.47	0.56	0.019

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) *Dust Collection Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.398	0.195
Zinc (T)	0.736	0.278
Total phenols	0.646	0.225

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.53	0.26	0.113
Zinc (T)	0.98	0.37	0.195
Total phenols	0.86	0.3	0.15

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.09/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.593	0.293
Zinc (T)	1.1	0.421
Total phenols	0.656	0.225

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.79	0.39	0.165
Zinc (T)	1.47	0.56	0.3
Total phenols	0.86	0.3	0.15

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.

[2] These concentrations must be multiplied by the ratio of (0.09/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(e) *Investment Casting.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	5.84	2.86
Zinc (T)	10.8	4.07

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.53	0.26	1.65
Zinc (T)	0.98	0.37	2.86

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	8.7	4.3
Zinc (T)	16.2	6.17

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.47	0.56	4.41

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(f) *Melting Furnace Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	1.86	0.911
Zinc (T)	3.44	1.3
Total Phenols	3.01	1.05

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.53	0.26	0.526
Zinc (T)	0.98	0.37	0.911
Total Phenols	0.86	0.3	0.701

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed
[2] These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total Phenols	3.01	1.05

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.79	0.39	0.771
Zinc (T)	1.47	0.56	1.4
Total Phenols	0.86	0.3	0.701

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(g) *Mold Cooling Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.0783	0.0384
Zinc (T)	0.145	0.0546

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.53	0.26	0.0222
Zinc (T)	0.98	0.37	0.0384

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.117	0.0576
Zinc (T)	0.217	0.0827

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.79	0.39	0.0325
Zinc (T)	1.47	0.56	0.0591

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(h) *Slag Quench Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.0964	0.0473
Zinc (T)	0.178	0.0673

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.53	0.26	0.0273
Zinc (T)	0.98	0.37	0.0473

[1] Kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.79	0.39	0.04
Zinc (T)	1.47	0.56	0.0728

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(i) *Wet Sand Reclamation Operations.* (1) Applicable to plants that are casting primarily ductible or gray iron and to plants that are casting malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.396	0.194
Zinc (T)	0.732	0.276
Total Phenols	0.642	0.224

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.53	0.26	0.112
Zinc (T)	0.98	0.37	0.194
Total Phenols	0.86	0.3	0.149

[1] kg/1000 kkg (pounds per million pounds) of sand reclaimed.
[2] These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	0.418
Total Phenols	0.642	0.224

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.79	0.39	0.164
Zinc (T)	1.47	0.56	0.299
Total Phenols	0.86	0.3	0.149

[1] kg/1000 kkg (pounds per million pounds) of sand reclaimed.
[2] These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

§ 464.34 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0237	0.0116
Zinc (T)	0.0437	0.0165
Oil and grease	1.34	0.446
TSS	0.67	0.536
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.98	0.37	0.0116
Oil and grease	30	10	0.223
TTS	15	12	0.116
pH	(3)	(3)	(3)

[1] kg/1000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0353	0.0174
Zinc (T)	0.0656	0.025
Oil and grease	1.34	0.446
TSS	1.7	0.67
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.47	0.56	0.0179
Oil and grease	30	10	0.223
TTS	38	15	0.446
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.35/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(b) *Casting Quench Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0252	0.0124
Zinc (T)	0.0466	0.0176
Oil and grease	1.43	0.476
TSS	0.713	0.571
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.53	0.26	0.0071
Zinc (T)	0.98	0.37	0.0124
Oil and grease	30	10	0.238
TSS	15	12	0.124
pH	(3)	(3)	(3)

[1] Kg/1000 kkg (pounds per million pounds) of metal poured.
[2] Within the range of 7.0 to 10.0 at all times.
[3] These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0376	0.0185
Zinc (T)	0.0699	0.0266
Oil and grease	1.43	0.476
TSS	1.81	0.713
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.79	0.39	0.0105
Zinc (T)	1.47	0.56	0.019
Oil and grease	30	10	0.238
TSS	38	15	0.476
pH	(3)	(3)	(3)

[1] Kg/1000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[3] Within the range of 7.0 to 10.0 at all times.

(c) *Dust Collection Scrubber Operations.* (1) Applicable to plants that are casting primarily ductible or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion SCF) of air scrubbed	Sm³ (pounds
Copper (T)	0.218	0.12
Lead (T)	0.398	0.195
Zinc (T)	0.736	0.278
Total Phenols	0.646	0.225
Oil and grease	22.5	7.51
TSS	11.3	9.01
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.53	0.26	0.113
Zinc (T)	0.98	0.37	0.195
Total phenols	0.86	0.3	0.15
Oil and grease	30	10	3.76
TSS	15	12	1.95
pH	(3)	(3)	(3)

[1] kg/62.3 millions Sm³ (pound per billion SCF) of air scrubbed.

[2] Within the range of 7.0 to 10.0 at all times.

[3] These concentrations must be multiplied by the ratio of (0.09/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion SCF) of air scrubbed	Sm³ (pounds
Copper (T)	0.218	0.12
Lead (T)	0.593	0.293
Zinc (T)	1.1	0.421
Total phenols	0.656	0.225
Oil and grease	22.5	7.51
TSS	28.5	11.3
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.79	0.39	0.165
Zinc (T)	1.47	0.56	0.3
Total phenols	0.86	0.3	0.15
Oil and grease	30	10	3.76
TSS	38	15	7.51
pH	(3)	(3)	(3)

[1] kg/62.3 millions Sm³ (pound per billion SCF) of air scrubbed.

[2] Within the range of 7.0 to 10.0 at all times.

[3] These concentrations must be multiplied by the ratio of (0.09/) where is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(e) *Investment Casting.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	5.84	2.86
Zinc (T)	10.8	4.07
Oil and grease	330	110
TSS	165	132
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.53	0.26	1.65
Zinc (T)	0.98	0.37	2.86
Oil and grease	30	10	55.1
TSS	15	12	28.6
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	8.7	4.3
Zinc (T)	16.2	6.17
Oil and grease	330	110
TSS	419	165
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.47	0.56	4.41
Oil and grease	30	10	55.1
TSS	38	15	110
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(f) *Melting Furnace Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm [3] (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	1.86	0.911
Zinc (T)	3.44	1.30
Total phenols	3.01	1.05
Oil and grease	105	35
TSS	52.6	42.1
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.53	0.26	0.526
Zinc (T)	0.98	0.37	0.911
Total phenols	0.86	0.3	0.701
Oil and grease	30	10	17.5
TSS	15	12	9.11
pH	(3)	(3)	(3)

[1] kg/62.3 million Sm [3] (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm [3] (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total phenols	3.01	1.05
Oil and grease	105	35
TSS	133	52.6
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.79	0.39	0.771
Zinc (T)	1.47	0.56	1.4
Total phenols	0.38	0.3	0.701
Oil and grease	30	10	17.5
TSS	38	15	35
pH	(3)	(3)	(3)

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(g) *Mold Cooling Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.0783	0.0384
Zinc (T)	0.0145	0.0546
Oil and grease	4.43	1.48
TSS	2.22	1.77
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[1]	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.53	0.26	0.0222
Zinc (T)	0.98	0.37	0.0384
Oil and grease	30	10	0.738
TSS	15	12	0.384
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million) pounds of metal poured.
[2] These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.117	0.0576
Zinc (T)	0.217	0.0827
Oil and grease	4.43	1.48
TSS	5.61	2.22
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maxium for monthly average	Annual average[1]
	(mg/1)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.79	0.39	0.0325
Zinc (T)	1.47	0.56	0.0591
Oil and grease	30	10	0.738
TSS	38	15	1.48
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million) pounds of metal poured.
[2] These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(h) *Slag Quench Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.0964	0.0473
Zinc (T)	0.178	0.0673
Oil and grease	5.46	1.82
TSS	2.73	2.18
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.53	0.26	0.0273
Zinc (T)	0.98	0.37	0.0473
Oil and grease	30	10	0.909
TSS	15	12	0.473
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.

[2] These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102
Oil and grease	5.46	1.82
TSS	6.91	2.73
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average
	(mg/l)[2]	(mg/1)[2]	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.79	0.39	0.04
Zinc (T)	1.47	0.56	0.0728
Oil and grease	30	10	0.909
TSS	38	15	1.82
pH	(3)	(3)	(3)

[1] kg/1000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(i) *Wet Sand Reclamation Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.396	0.194
Zinc (T)	0.732	0.276
Total phenols	0.642	0.224
Oil and grease	22.4	7.47
TSS	11.2	8.96
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.53	0.26	0.112
Zinc (T)	0.98	0.37	0.194
Total phenols	0.86	0.3	0.149
Oil and grease	30	10	3.73
TSS	15	12	1.94
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of sand reclaimed.
[2] These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	0.418
Total phenols	0.642	0.224
Oil and grease	22.4	7.47
TSS	28.4	11.2
pH	(1)	(1)

[1] Within the range of 7.0 to at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.79	0.39	0.164
Zinc (T)	1.47	0.56	0.299
Total phenols	0.86	0.3	0.149
Oil and grease	30	10	3.73
TSS	38	15	7.47
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of sand reclaimed.
[2] These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

§ 464.35 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject

to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

(a) *Casting Cleaning Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0237	0.0116
Zinc (T)	0.0437	0.0165

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0353	0.0174
Zinc (T)	0.0656	0.025

(b) *Casting Quench Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0252	0.0124
Zinc (T)	0.0466	0.0176
TTO	0.0257	0.00838
Oil and grease (for alternate monitoring)	1.43	0.476

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0376	0.0185
Zinc (T)	0.0699	0.0266
TTO	0.0257	0.00838
Oil and grease (for alternate monitoring)	1.43	0.476

(c) *Dust Collection Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion Sm^3 (pounds SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.398	0.195
Zinc (T)	0.736	0.278
Total Phenols	0.646	0.225
TTO	2.04	0.664
Oil and Grease (for alternate monitoring)	22.5	7.51

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion Sm^3 (pounds SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.593	0.293
Zinc (T)	1.1	0.421
Total Phenols	0.656	0.225
TTO	2.04	0.664
Oil and Grease (for alternate monitoring)	22.5	7.51

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.

(e) *Investment Casting.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	5.84	2.86
Zinc (T)	10.8	4.07
TTO	13.2	4.3
Oil and Grease (for alternate monitoring)	330	110

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	8.7	4.3
Zinc (T)	16.2	6.17
TTO	13.2	4.3
Oil and Grease (for alternate monitoring)	330	110

(f) *Melting Furnace Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion Sm^3 (pounds SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	1.86	0.911
Zinc (T)	3.44	1.30
Total phenols	3.01	1.05
TTO	8.34	2.73
Oil and grease (for alternate monitoring)	105	35

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total phenols	3.01	1.05
TTO	8.34	2.73
Oil and grease (for alternate monitoring)	105	35

(g) *Mold Cooling Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.0783	0.0384
Zinc (T)	0.145	0.0546
TTO	0.0797	0.026
Oil and grease (for alternate monitoring)	4.43	1.48

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.117	0.0576
Zinc (T)	0.217	0.0827
TTO	0.0797	0.026
Oil and grease (for alternate monitoring)	4.43	1.48

(h) *Slag Quench Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.0964	0.0473
Zinc (T)	0.178	0.0673
TTO	0.0257	0.00838
Oil and grease (for alternate monitoring)	5.46	1.82

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102
TTO	0.0257	0.00838
Oil and grease (for alternate monitoring)	5.46	1.82

(i) *West Sand Reclamation Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting gray iron where greater than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.396	0.194
Zinc (T)	0.732	0.276
Total Phenols	0.642	0.224
TTO	1.18	0.386
Oil and grease (for alternate monitoring)	22.4	7.47

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	0.418
Total Phenols	0.642	0.224
TTO	1.18	0.386
Oil and grease (for alternate monitoring)	22.4	7.47

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

§ 464.36 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

(a) *Casting Cleaning Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0237	0.0116
Zinc (T)	0.0437	0.0165

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0353	0.0174
Zinc (T)	0.0656	0.025

(b) *Casting Quench Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0252	0.0124
Zinc (T)	0.0466	0.0176
TTO	0.0257	0.00838
Oil and Grease (for alternate monitoring)	1.43	0.476

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0138	0.0076
Lead (T)	0.0376	0.0185
Zinc (T)	0.0699	0.0266
TTO	0.0257	0.00838
Oil and Grease (for alternate monitoring)	1.43	0.476

(c) *Dust Collection Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.398	0.195
Zinc (T)	0.736	0.278
Total Phenols	0.646	0.225
TTO	2.04	0.664
Oil and Grease (for alternate monitoring)	22.5	7.51

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.593	0.293
Zinc (T)	1.1	0.421
Total Phenols	0.656	0.225
TTO	2.04	0.664
Oil and Grease (for alternate monitoring)	22.5	7.51

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.

(e) *Investment Casting.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	5.84	2.86
Zinc (T)	10.8	4.07
TTO	13.2	4.3
Oil and Grease (for alternate monitoring)	330	110

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	8.7	4.3
Zinc (T)	16.2	6.17
TTO	13.2	4.3
Oil and Grease (for alternate monitoring)	330	110

(f) *Melting Furnace Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	1.86	0.911
Zinc (T)	3.44	1.3
Total Phenols	3.01	1.05
TTO	8.34	2.73
Oil and Grease (for alternate monitoring)	105	35

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total Phenols	3.01	1.05
TTO	8.34	2.73
Oil and Grease (for alternate monitoring)	105	35

(g) *Mold Cooling Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.0783	0.0384
Zinc (T)	0.145	0.0546
TTO	0.0797	0.026
Oil and Grease (for alternate monitoring)	4.43	1.48

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.117	0.0576
Zinc (T)	0.217	0.0827
TTO	0.0797	0.026
Oil and Grease (for alternate monitoring)	4.43	1.48

(h) *Slag Quench Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.0964	0.0473
Zinc (T)	0.178	0.0673
TTO	0.0257	0.00838
Oil and grease (for alternate monitoring)	5.46	1.82

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102
TTO	0.0257	0.00838
Oil and grease (for alternate monitoring)	5.46	1.82

(i) *Wet Sand Reclamation Operations.* (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.396	0.194
Zinc (T)	0.732	0.276
Total phenols	0.642	0.224
TTO	1.18	0.386
Oil and grease (for alternate monitoring)	22.4	7.47

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.10	0.418
Total phenols	0.642	0.224
TTO	1.18	0.386
Oil and grease (for alternate monitoring)	22.4	7.47

§ 464.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart D—Zinc Casting Subcategory

§ 464.40 Applicability; description of the zinc casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction of pollutants into publicly owned treatment works resulting from zinc casting operations as defined in § 464.02(d).

§ 464.41 Specialized definitions.

For the purpose of this subpart:

(a) *Total Toxic Organics* (TTO). TTO is a regulated parameter under PSES (§ 464.45) and PSNS (§ 464.46) for the zinc subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:

(1) Casting Quench (§ 464.45(a) and § 464.46(a)):

21. 2,4,6-trichlorophenol
22. para-chloro meta-cresol
31. 2,4-dichlorophenol
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
65. phenol
66. bis(2-ethylhexyl) phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
85. tetrachloroethylene

(2) Die Casting (§ 465.45(b) and § 464.46(b)):

1. acenaphthene
21. 2,4,6-trichlorophenol
22. para-chloro meta-cresol
24. 2-chlorophenol
34. 2,4-dimethylphenol
44. methylene chloride (dichloromethane)
55. naphthalene
65. phenol
66. bis (2-ethylhexyl) phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
85. tetrachloroethylene
86. toluene
87. trichloroethylene

(3) Melting Furnace Scrubber (§ 464.45(c) and § 464.46(c)):

31. 2,4-dichlorophenol
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
55. naphthalene
65. phenol
66. bis(2-ethylhexyl) phthalate
68. di-n-butyl phthalate
85. tetrachloroethylene
86. toluene
87. trichloroethylene

(4) Mold Cooling (§ 464.45(d) and § 464.46(d)):

21. 2,4,6-trichlorophenol
22. para-chloro meta-cresol
31. 2,4-dichlorophenol
34. 2,4-dimethylphenol
39. fluoranthene
44. methylene chloride (dichloromethane)
65. phenol
66. bis(2-ethylhexyl) phthalate
68. di-n-butyl phthalate
70. diethyl phthalate
85. tetrachloroethylene

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/1) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to noncontinuous dischargers.

(a) *Casting Quench Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0344	0.0187
Lead (T)	0.0353	0.0174
Zinc (T)	0.0509	0.0192
Oil and grease	1.34	0.446
TSS	1.7	0.67
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/1) [2]	(mg/1) [2]	
Copper (T)	0.77	0.42	0.0076
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.14	0.43	0.0121
Oil and grease	30	10	0.223
TSS	38	15	0.446
pH	(3)	(3)	(3)

[1] kg/1000 kkg (pound per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.35/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(b) *Die Casting Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0068	0.0034
Zinc (T)	0.0098	0.0037
Total phenols	0.0074	0.0026
Oil and grease	0.259	0.0864
TTS	0.328	0.13
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.79	0.39	0.0019
Zinc (T)	1.14	0.43	0.0023
Total phenols	0.86	0.3	0.0017
Oil and grease	30	10	0.0432
TSS	38	15	0.0864
pH	(3)	(3)	(3)

[1] kg/1000 kkg (pound per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(c) *Melting Furnace Scrubber Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 millions Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.56	0.852
Lead (T)	1.6	0.791
Zinc (T)	2.31	0.872
Total Phenols	1.74	0.608
Oil and grease	60.8	20.3
TSS	77.1	30.4
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.345
Lead (T)	0.79	0.39	0.446
Zinc (T)	1.14	0.43	0.548
Total Phenols	0.86	0.3	0.406
Oil and grease	30	10	10.1
TSS	38	15	20.3
pH	(3)	(3)	(3)

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.243/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(d) *Mold Cooling Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.304	0.166
Lead (T)	0.311	0.154
Zinc (T)	0.449	0.17
Oil and grease	11.8	3.94
TSS	15	5.91
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
Copper (T)	0.77	0.42	0.067
Lead (T)	0.79	0.39	0.0867
Zinc (T)	1.14	0.43	0.106
Oil and grease	30	10	1.97
TSS	38	15	3.94
pH	([3])	([3])	([3])

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (47.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/1) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Quench Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0344	0.0187
Lead (T)	0.0237	0.0116
Zinc (T)	0.0339	0.0129

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0076
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.76	0.29	0.008

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.34/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(b) *Die Casting Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0046	0.0022
Zinc (T)	0.0066	0.0025
Total phenols	0.0074	0.0026

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.53	0.26	0.0013
Zinc (T)	0.76	0.29	0.0016
Total phenols	0.86	0.3	0.0017

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) *Melting Furnace Scrubber Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.56	0.852
Lead (T)	1.07	0.527
Zinc (T)	1.54	0.588
Total phenolse	1.74	0.608

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
Copper (T)	0.77	0.42	0.345
Lead (T)	0.53	0.26	0.304
Zinc (T)	0.76	0.29	0.365
Total phenols	0.86	0.3	0.406

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.243/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(d) *Mold Cooling Operations.*

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.304	0.166
Lead (T)	0.209	0.103
Zinc (T)	0.3	0.114

	Maximum for any 1 day	Maximum for monthly average	Annual average[1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.067
Lead (T)	0.53	0.26	0.0591
Zinc (T)	0.76	0.29	0.071

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (47.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

§ 464.44 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm^3 or lb/billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

(a) *Casting Quench Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0344	0.0187
Lead (T)	0.0237	0.0116
Zinc (T)	0.0339	0.0129
Oil and grease	1.34	0.446
TSS	0.67	0.536
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.0076
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.76	0.29	0.008
Oil and grease	30	10	0.223
TSS	15	12	0.116
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (5.34/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(b) *Die Casting Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0046	0.0022
Zinc (T)	0.0066	0.0025
Total phenols	0.0074	0.0026
Oil and grease	0.259	0.0864
TSS	0.13	0.104
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.53	0.26	0.0013
Zinc (T)	0.76	0.29	0.0016
Total phenols	0.86	0.3	0.0017
Oil and grease	30	10	0.0432
TSS	15	12	0.0225
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(c) *Melting Furnace Scrubber Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.56	0.852
Lead (T)	1.07	0.527
Zinc (T)	1.54	0.588
Total phenols	1.74	0.608
Oil and grease	60.8	20.3
TSS	30.4	24.3
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l)[2]	(mg/l)[2]	
Copper (T)	0.77	0.42	0.345
Lead (T)	0.53	0.26	0.304
Zinc (T)	0.76	0.29	0.365
Total phenols	0.86	0.3	0.406
Oil and grease	30	10	10.1
TSS	15	12	5.27
pH	(3)	(3)	(3)

[1] kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed.
[2] These concentrations must be multiplied by the ratio of (0.243/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

(d) *Mold Cooling Operations.*

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.304	0.166
Lead (T)	0.209	0.103
Zinc (T)	0.3	0.114
Oil and grease	11.8	3.94
TSS	5.91	4.73
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average [1]
	(mg/l) [2]	(mg/l) [2]	
Copper (T)	0.77	0.42	0.067
Lead (T)	0.53	0.26	0.0591
Zinc (T)	0.76	0.29	0.071
Oil and grease	30	10	1.97
TSS	15	12	1.03
pH	(3)	(3)	(3)

[1] kg/1,000 kkg (pounds per million pounds) of metal poured.
[2] These concentrations must be multiplied by the ratio of (47.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
[3] Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

§ 464.45 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

(a) *Casting Quench Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0344	0.0187
Lead (T)	0.0237	0.0116
Zinc (T)	0.0339	0.0129
TTO	0.093	0.0304
Oil and grease (for alternate monitoring)	1.34	0.446

(b) *Die Casting Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds of metal poured)	
Copper (T)	0.0066	0.0036
Lead (T)	0.0046	0.0022
Zinc (T)	0.0066	0.0025
Total phenols	0.0074	0.0026
TTO	0.0196	0.0064
Oil and grease for alternate monitoring)	0.259	0.0864

(c) *Melting Furnace Scrubber Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.56	0.852
Lead (T)	1.07	0.527
Zinc (T)	1.54	0.588
Total phenols	1.74	0.608
TTO	3.95	1.29
Oil and grease for alternate monitoring)	60.8	20.3

(d) *Mold Cooling Operations.*

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.304	0.166
Lead (T)	0.209	0.103
Zinc (T)	0.3	0.114
TTO	0.821	0.268
Oil and grease for alternate monitoring)	11.8	3.94

§ 464.46 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

(a) *Casting Quench Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0344	0.0187
Lead (T)	0.0237	0.0116
Zinc (T)	0.0339	0.0129
TTO	0.093	0.0304
Oil and grease (for alternate monitoring)	1.34	0.446

(b) *Die Casting Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0046	0.0022
Zinc (T)	0.0066	0.0025
Total phenols	0.0074	0.0026
TTO	0.0196	0.0064
Oil and grease (for alternate monitoring)	0.259	0.0864

(c) *Melting Furnace Scrubber Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm^3 (pounds per billion SCF) of air scrubbed	
Copper (T)	1.56	0.852
Lead (T)	1.07	0.527
Zinc (T)	1.54	0.588
Total phenols	1.74	0.608
TTO	3.95	1.29
Oil and grease (for alternate monitoring)	60.8	20.3

(d) *Mold Cooling Operations.*

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.304	0.166
Lead (T)	0.209	0.103
Zinc (T)	0.3	0.114
TTO	0.821	0.268
Oil and grease (for alternate monitoring)	11.8	3.94

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

§ 464.47 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

PART 465—COIL COATING POINT SOURCE CATEGORY

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465.43 New source performance standards.
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465.45 Pretreatment standards for new sources.
465.46 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 47 FR 54244, Dec. 1, 1982, unless otherwise noted.

GENERAL PROVISIONS

§465.01 Applicability.

This part applies to any coil coating facility or to any canmaking facility that discharges pollutants to waters of the United States or that introduces pollutants to a publicly owned treatment works.

[48 FR 52399, Nov. 17, 1983]

§465.02 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) ''Coil'' means a strip of basis material rolled into a roll for handling.

(b) ''Coil coating '' means the process of converting basis material strip into coated stock. Usually cleaning, conversion coating, and painting are performed on the basis material. This regulation covers processes which perform any two or more of the three operations.

(c) ''Basis material'' means the coiled strip which is processed.

(d) ''Area processed'' means the area actually exposed to process solutions. Usually this includes both sides of the metal strip.

(e) ''Steel basis material'' means cold rolled steel, hot rolled steel, and chrome, nickel and tin coated steel which are processed in coil coating.

(f) ''Galvanized basis material'' means zinc coated steel, galvalum, brass and other copper base strip which is processed in coil coating.

(g) ''Aluminum basis material'' means aluminum, aluminum alloys and aluminum coated steels which are processed in coil coating.

(h) The term ''can'' means a container formed from sheet metal and consisting of a body and two ends or a body and a top.

(i) The term ''canmaking'' means the manufacturing process or processes used to manufacture a can from a basic metal.

(j) The term ''Total Toxic Organics (TTO)'' shall mean the sum of the mass of each of the following toxic organic compounds which are found at a concentration greater than 0.010 mg/1.

1,1,1-Trichloroethane
1,1-Dichloroethane
1,1,2,2-Tetrachloroethane
Bis (2-chloroethyl) ether
Chloroform
1,1-Dichloroethylene
Methylene chloride (dichloromethane)
Pentachlorophenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl-phthalate
Di-N-butyl phthalate
Phenanthrene
Tetrachloroethylene
Toluene

[47 FR 54244, Dec. 1, 1982, as amended at 48 FR 52399, Nov. 17, 1983]

§465.03 Monitoring and reporting requirements.

The following special monitoring requirements apply to all facilities controlled by this regulation.

(a) Periodic analyses for cyanide are not required when both of the following conditions are met:

(1) The first wastewater sample taken in each calendar year has been analyzed and found to contain less than 0.07 mg/l cyanide

(2) The owner or operator of the coil coating facility certifies in writing to the POTW authority or permit issuing authority that cyanide is not used in the coil coating process.

(b) The ''monthly average'' regulatory values shall be the basis for the monthly average discharge limits in direct discharge permits and for pretreatment standards. Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

(c) The following determination method shall be used for the determination of the concentration of oil and grease in wastewater samples from all subcategories of coil coating (Based on Standard Methods, 15th Edition, Methods 503A and 503E). In this method, a partition gravimetric procedure is used to determine hydrocarbon (petroleum based) oil and grease (O&G–E).

(1) *Apparatus.* (i) Separatory funnel, 1 liter, with TFE[1] stopcock.

(ii) Glass stoppered flask, 125 ml.

(iii) Distilling flask, 125 ml.

(iv) Water bath.

(v) Filter paper, 11 cm diameter.[2]

(vi) Glass funnel.

[1] Teflon® or equivalent.

[2] Whatman No. 40 or equivalent.

(vii) Magnetic stirrer and Teflon coated stir bar.

(2) *Reagents.* (i) Hydrochloric acid, HCl, 1+1.

(ii) Trichlorotrifluoroethane.[3] (1,1,2-trichloro-1,2,2-trifluoroethane), boiling point 47°C. The solvent should leave no measurable residue on evaporation; distill if necessary. Do not use any plastic tubing to transfer solvent between containers.

(iii) Sodium sulfate, Na_2SO_4, anhydrous crystal.

(iv) Silica gel, 60 to 200 mesh.[4] Dry at 110°C for 24 hours and store in a tightly sealed container.

(3) *Procedure.* To determine hydrocarbon oil and grease, collect about 1 liter of sample and mark sample level in bottle for later determination of sample volume. Acidify to pH 2 or lower; generally, 5 ml HCl is sufficient. Transfer to a separatory funnel. Carefully rinse sample bottle with 30 ml trichlorotrifluoroethane and add solvent washings to separatory funnel. Preferably shake vigorously for 2 minutes. However, if it is suspected that a stable emulsion will form, shake gently for 5 to 10 minutes. Let layers separate. Drain solvent layer through a funnel containing solvent-moistened filter paper into a tared clean flask. If a clear solvent layer cannot be obtained, add 1g Na_2SO_4 to the filter paper cone and slowly drain emulsified solvent onto the crystals. Add more Na_2SO_4 if necessary. Extract twice more with 30 ml solvent each but first rinse sample container with each solvent portion. Combine extracts in tared flask and wash filter with an additional 10 to 20 ml. solvent. Add 3.0 g silica gel. Stopper flask and stir on a magnetic stirrer for 5 minutes. Filter solution through filter paper and wash silica gel and filter paper with 10 ml solvent and combine with filtrate in tared distilling flask. Distill solvent from distilling flask in a water bath at 70°C. Place flask on a water bath at 70°C for 15 minutes and draw air through it with an applied vacuum for the final 1 minute. Cool in a desiccator for 30 minutes and weigh.

(4) *Calculations—calculation of O&G-E.* If the organic solvent is free of residue the gain in weight of the tared distilling flask is due to hydrocarbon oil and grease. Total gain in weight, E, is the amount of hydrocarbon oil and grease in the sample (mg):

$$\text{mg (hydrocarbon oil and grease)/1} = \frac{E \times 1000}{\text{ml/sample}}$$

(5) *Use of O&G-E.* The value, O&G-E shall be used as the measure of compliance with the oil and grease limitations and standards set forth in this regulation.

(d) The owner or operator of any canmaking facility subject to the provisions of this regulation shall advise the permit issuing authority or POTW authority and the EPA Office of Water Regulations and Standards, Washington, D.C. 20460 whenever it has been decided that the plant will manufacture cans from an aluminum alloy containing less than 1.0 percent manganese. Such notification shall be made in writing, not less than 30 days in advance of the scheduled production and shall provide the chemical analysis of the alloy and the expected period of use.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 54244, Dec. 1, 1982, as amended at 48 FR 52399, Nov. 17, 1983; 49 FR 14104, Apr. 10, 1984; 50 FR 4515, Jan. 31, 1985]

§ 465.04 Compliance date for PSES.

(a) For subparts A, B, and C the compliance date for Pretreatment Standards for Existing Source (PSES) is December 1, 1985.

(b) For subpart D, the compliance date for Pretreatment Standards for Existing Sources will be as soon as possible, but in no case later than November 17, 1986.

[48 FR 52399, Nov. 17, 1983]

[3] Freon or equivalent.

[4] Davidson Grade 950 or equivalent.

Subpart A—Steel Basis Material Subcategory

§465.10 Applicability; description of the steel basis material subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from coil coating of steel basis material coils.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART A

Pollutant or pollutant property	BPT effluent limitations			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	1.16	(0.24)	0.47	(0.096)
Cyanide	0.80	(0.17)	0.33	(0.068)
Zinc	3.66	(0.75)	1.54	(0.32)
Iron	3.39	(0.70)	1.74	(0.36)
Oil and grease	55.1	(11.3)	33.1	(6.77)
TSS	113.0	(23.1)	55.1	(11.3)
pH	(1)	(1)	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

SUBPART A

Pollutant or pollutant property	BAT effluent limitations			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.50	(0.10)	0.20	(0.041)
Cyanide	0.34	(0.07)	0.14	(0.029)
Zinc	1.56	(0.32)	0.66	(0.14)
Iron	1.45	(0.30)	0.74	(0.15)

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

§465.13 New source performance standards.

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:

SUBPART A

Pollutant or pollutant property	NSPS			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.12	(0.024)	0.047	(0.01)
Cyanide	0.063	(0.013)	0.025	(0.005)
Zinc	0.33	(0.066)	0.14	(0.027)
Iron	0.39	(0.086)	0.20	(0.041)
Oil and grease	3.16	(0.65)	3.16	(0.65)
TSS	4.74	(0.97)	3.79	(0.78)
pH	(1)	(1)	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

§465.14 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following retreatment standards for existing sources. The mass of wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

SUBPART A

Pollutant or pollutant property	PSES			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pound per 1 million ft²) of area processed			
Chromium	0.50	(0.10)	0.20	(0.041)
Cyanide	0.34	(0.07)	0.14	(0.029)
Zinc	1.56	(0.32)	0.66	(0.14)

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

§ 465.15 Pretreatment standards for new sources.

Except as provided in CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

SUBPART A

Pollutant or pollutant property	PSNS			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.12	(0.024)	0.047	(0.01)
Cyanide	0.063	(0.013)	0.025	(0.005)
Zinc	0.33	(0.066)	0.14	(0.027)

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

Subpart B—Galvanized Basis Material Subcategory

§ 465.20 Applicability; description of the galvanized basis material subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from coil coating of galvanized basis material coils.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART B

Pollutant or pollutant property	BPT effluent limitations			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	1.10	(0.23)	0.45	(0.091)
Copper	4.96	(1.02)	2.61	(0.54)
Cyanide	0.76	(0.16)	0.32	(0.064)
Zinc	3.47	(0.71)	1.46	(0.30)
Iron	3.21	(0.66)	1.65	(0.34)
Oil and grease	52.2	(10.7)	31.3	(6.42)
TSS	107.0	(21.9)	52.2	(10.7)
pH	(1)	(1)	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

SUBPART B

Pollutant or pollutant property	BAT effluent limitations			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.37	(0.077)	0.16	(0.031)
Copper	1.71	(0.35)	0.90	(0.19)
Cyanide	0.26	(0.053)	0.11	(0.022)
Zinc	1.20	(0.25)	0.51	(0.11)
Iron	1.10	(0.23)	0.57	(0.12)

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

§465.23 New source performance standards.

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:

SUBPART B

Pollutant or pollutant property	NSPS			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.13	(0.027)	0.052	(0.011)
Copper	0.44	(0.090)	0.21	(0.043)
Cyanide	0.07	(0.015)	0.028	(0.006)
Zinc	0.35	(0.08)	0.15	(0.030)
Iron	0.43	(0.09)	0.22	(0.045)
Oil and grease	3.43	(0.71)	3.43	(0.702)
TSS	5.15	(1.06)	4.12	(0.84)
pH	(1)	(1)	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

§465.24 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

SUBPART B

Pollutant or pollutant property	PSES			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.37	(0.077)	0.16	(0.031)
Copper	1.71	(0.35)	0.90	(0.19)
Cyanide	0.26	(0.053)	0.11	(0.022)
Zinc	1.20	(0.25)	0.51	(0.11)

[47 FR 54244, Dec. 1, 1982; 49 FR 33648, Aug. 24, 1984]

§465.25 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values.

SUBPART B

Pollutant or pollutant property	PSNS			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.13	(0.027)	0.052	(0.011)
Copper	0.44	(0.090)	0.21	(0.043)
Cyanide	0.07	(0.015)	0.028	(0.006)
Zinc	0.35	(0.072)	0.15	(0.030)

[47 FR 54244, Dec. 1, 1982; 49 FR 33649, Aug. 24, 1984]

Subpart C—Aluminum Basis Material Subcategory

§465.30 Applicability; description of the aluminum basis material subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from coil coating of aluminum basis material coils.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART C

Pollutant or pollutant property	BPT Effluent limitations			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	1.42	(0.29)	0.58	(0.12)
Cyanide	0.98	(0.20)	0.41	(0.083)
Zinc	4.48	(0.92)	1.89	(0.39)
Aluminum	15.3	(3.14)	6.26.	(1.28)
Oil and grease	67.3	(13.8)	40.4	(8.27)
TSS	138.0	(28.3)	67.3	(13.8)
pH	(1)	(1)	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[47 FR 54244, Dec. 1, 1982; 49 FR 33649, Aug. 24, 1984]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

SUBPART C

Pollutant or pollutant property	BAT Effluent limitations			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.42	(0.085)	0.17	(0.034)
Cyanide	0.29	(0.059)	0.12	(0.024)
Zinc	1.32	(0.27)	0.56	(0.12)
Aluminum	4.49	(0.92)	1.84.	(0.38)

[47 FR 54244, Dec. 1, 1982; 49 FR 33649, Aug. 24, 1984]

§ 465.33 New source performance standards.

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.

SUBPART C

Pollutant or pollutant property	NSPS			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.18	(0.037)	0.072	(0.015)
Cyanide	0.095	(0.020)	0.038	(0.008)
Zinc	0.49	(0.10)	0.20	(0.041)
Aluminum	1.44	(0.30)	0.59	(0.121)
Oil and Grease	4.75	(0.98)	4.75	(0.98)
TSS	7.13	(1.46)	5.70	(1.17)
pH	(1)	(1)	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[47 FR 54244, Dec. 1, 1982; 49 FR 33649, Aug. 24, 1984]

§ 465.34 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

SUBPART C

Pollutant or pollutant property	PSES			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.42	(0.085)	0.17	(0.034)
Cyanide	0.29	(0.059)	0.12	(0.024)
Zinc	1.32	(0.27)	0.56	(0.12)

[47 FR 54244, Dec. 1, 1982; 49 FR 33649, Aug. 24, 1984]

§ 465.35 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in coil coating process wastewater introduced into a POTW shall not exceed the following values:

SUBPART C

Pollutant or pollutant property	PSNS			
	Maximum for any 1 day		Maximum for monthly average	
	mg/m² (pounds per 1 million ft²) of area processed			
Chromium	0.18	(0.037)	0.072	(0.015)
Cyanide	0.095	(0.02)	0.038	(0.008)
Zinc	0.49	(0.10)	0.20	(0.041)

[47 FR 54244, Dec. 1, 1982; 49 FR 33649, Aug. 24, 1984]

Subpart D—Canmaking Subcategory

SOURCE: 48 FR 52399, Nov. 17, 1983, unless otherwise noted.

§ 465.40 Applicability; description of the canmaking subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from the manufacturing of seamless can bodies, which are washed.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART D—BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	g (lbs)/1,000,000 cans manufactured			
Cr	94.60	(0.209)	38.70	(0.085)
Zn	313.90	(0.692)	131.15	(0.289)
Al	1382.45	(3.048)	688.00	(1.517)
F	12792.50	(28.203)	5676.00	(12.514)
P	3590.50	(7.916)	1468.45	(3.237)
O & G	4300.00	(9.480)	2580.00	(5.688)
TSS	8815.00	(19.434)	4192.50	(9.243)
pH		(1)		(1)

[1]Within the range of 7.0 to 10 at all times.

[48 FR 52399, Nov. 17, 1983; 49 FR 14105, Apr. 10, 1984]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

SUBPART D—BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	g (lbs)/1,000,000 cans manufactured			
Cr	36.92	(0.081)	15.10	(0.033)
Zn	122.49	(0.270)	51.18	(0.113)
Al	539.48	(1.189)	268.48	(0.592)
F	4992.05	(11.001)	2214.96	(4.883)
P	1401.13	(3.089)	573.04	(1.263)

§ 465.43 New source performance standards.

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

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	g (lbs)/1,000,000 cans manufactured	
Cr	27.98 (0.062)	11.45 (0.025)
Zn	92.86 (0.205)	38.80 (0.086)
Al	408.95 (0.902)	203.52 (0.449)
F	3784.20 (8.343)	1679.04 (3.702)
P	1062.12 (2.342)	434.39 (0.958)
O & G	1272.00 (2.804)	763.20 (1.683)
TSS	2607.60 (5.749)	1240.20 (2.734)
pH	(1)	(1)

[1]Within the range of 7.0 to 10 at all times.

[48 FR 52399, Nov. 17, 1983; 49 FR 14105, Apr. 10, 1984]

§ 465.44 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for exisitng sources.

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	g (lbs)/1,000,000 cans manufactured	
Cr	36.92 (0.081)	15.10 (0.033)
Cu	159.41 (0.351)	83.90 (0.185)
Zn	122.49 (0.270)	51.18 (0.113)
F	4992.05 (11.001)	2214.96 (4.883)
P	1401.13 (3.089)	573.04 (1.263)
Mn	57.05 (0.126)	24.33 (0.053)
TTO	26.85 (0.059)	12.59 (0.028)
O&G (for alternate monitoring)	1678.00 (3.699)	1006.80 (2.220)

[48 FR 52399, Nov. 17, 1983; 49 FR 14105, Apr. 10, 1984]

§ 465.45 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7 any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	g (lbs)/1,000,000 cans manufactured	
Cr	27.98 (0.0617)	11.45 (0.025)
Cu	120.84 (0.267)	63.60 (0.140)
Zn	92.86 (0.205)	38.80 (0.086)
F	3784.20 (8.345)	1679.04 (3.702)
P	1062.12 (2.342)	434.39 (0.958)
Mn	43.25 (0.095)	18.44 (0.041)
TTO	20.35 (0.045)	9.54 (0.0210)
O&G (for alternate monitoring)	1272.00 (2.804)	763.20 (1.683)

[48 FR 52399, Nov. 17, 1983; 49 FR 14105, Apr. 10, 1984]

§ 465.46 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

PART 466—PORCELAIN ENAMELING POINT SOURCE CATEGORY

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Subpart D—Copper Basis Material Subcategory

466.40 Applicability; description of the copper basis material subcategory.
466.41—466.42 [Reserved]
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466.44 [Reserved]
466.45 Pretreatment standards for new sources.

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e) and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 47 FR 53184, Nov. 24, 1982, unless otherwise noted.

GENERAL PROVISIONS

§466.01 Applicability.

(a) Except as provided in paragraphs (b) and (c) of this section, the provisions of this part apply to any porcelain enameling facility which discharges pollutants to waters of the United States or introduces pollutants into a publicly owned treatment works.

(b) Any existing porcelain enameling facility which prepares or coats less than 1600 m^2/day and which introduces less than 60,000 1/day of wastewater into a publicly owned treatment works is not controlled by the pretreatment standards for existing sources established by this regulation. Such facilities must comply with the provisions of 40 CFR part 403.

(c) This part does not apply to the porcelain enameling on precious metal basis material.

(d) When wastewaters from coating cast iron are cotreated with wastewaters from coating steel, the limitations for coating steel contained in §466.11 may be applied to the entire wastestream.

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36543, Sept. 6, 1985]

§466.02 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) ''Porcelain enameling'' means the entire process of applying a fused vitreous enamel coating to a metal basis material. Usually this includes metal preparation and coating operations.

(b) ''Basis material'' means the metal part or base onto which procelain enamel is applied.

(c) ''Area processed'' means the total basis material area exposed to processing solutions.

(d) ''Area coated'' means the area of basis material covered by each coating of enamel.

(e) ''Coating operations'' means all of the operations associated with preparation and application of the vitreous coating. Usually this includes ballmilling, slip transport, application of slip to the workpieces, cleaning and recovery of faulty parts, and firing (fusing) of the enamel coat.

(f) ''Metal preparation'' means any and all of the metal processing steps preparatory to applying the enamel slip. Usually this includes cleaning, pickling and applying a nickel flash or chemical coating.

(g) The term ''control authority'' is defined as the POTW if it has an approved pretreatment program; in the absence of such a program, the NPDES state if it has an approved pretreatment program or EPA if the State does not have an approved program.

(h) The term ''precious metal'' means gold, silver, or platinum group metals and the principal alloys of those metals.

§ 466.03 Monitoring and reporting requirements.

(a) Periodic analyses for chromium as may be required under part 122 or 403 of this chapter is not required when both of the following conditions are met.

(1) The first wastewater sample of each calendar year has been analyzed and found to contain less than 0.08 mg/l chromium.

(2) The owner or operator of the porcelain enameling facility certifies in writing to the control authority or permit issuing authority that chromium is not contained in the raw materials or process chemicals of that facility and will not be used in the facility.

(b) The ''monthly average'' regulatory values shall be the basis for the monthly average discharge in direct discharge permits and for pretreatment standards. Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

(Approved by the Office of Management and Budget under control number 2040–0033)

[47 FR 53184, Nov. 24, 1982, as amended at 48 FR 31405, July 8, 1983]

§ 466.04 Compliance date for PSES.

The compliance date for pretreatment standards for existing sources is November 25, 1985.

[47 FR 53184, Nov. 24, 1982, as amended at 48 FR 41410, Sept. 15, 1983]

Subpart A—Steel Basis Material Subcategory

§ 466.10 Applicability; description of the steel basis material.

This subpart applies to discharges to waters of the United States, and introduction of pollutants into publicly owned treatment works from porcelain enameling on steel basis materials.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for metal preparation operations and for coating operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

SUBPART A—BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	16.82	3.41	6.81	1.38
Lead	6.01	1.21	5.21	1.06
Nickel	56.46	11.43	40.05	8.11
Zinc	53.26	10.78	22.43	4.54
Aluminum	182.20	36.87	74.47	15.07
Iron	112.12	22.69	56.06	11.34
Oil and grease	800.84	162.10	480.51	97.23
TSS	1642.00	332.20	800.90	162.00
pH	(1)	(1)	(1)	(1)
	English Units—pounds per 1 million ft² of area processed or coated			
Chromium	3.45	0.07	1.40	0.29
Lead	1.23	0.25	1.07	0.22
Nickel	11.57	2.34	8.20	1.66
Zinc	10.91	2.21	4.60	0.93
Aluminum	37.32	7.55	15.26	3.09
Iron	22.96	4.65	11.48	2.32
Oil and grease	164.03	33.19	98.42	19.92
TSS	337.00	68.10	164.00	33.20
pH	(1)	(1)	(1)	(1)

[1] Within the range 7.5 to 10.0 at all times.

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36543, Sept. 6, 1985]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

SUBPART A—BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	16.82	0.53	6.81	0.22
Lead	6.01	0.19	5.21	0.16
Nickel	56.50	1.78	40.05	1.26
Zinc	53.30	1.68	22.43	0.71
Aluminum	182.00	5.74	74.48	2.35
Iron	112.12	3.53	56.06	1.77
	English Units—pounds per 1 million ft² of area processed or coated			
Chromium	3.45	0.11	1.4	0.05
Lead	1.23	0.04	1.07	0.03
Nickel	11.57	0.37	8.20	0.26
Zinc	10.91	0.35	4.60	0.15
Aluminum	37.32	1.18	15.26	0.48
Iron	22.96	0.72	11.48	0.36

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36543, Sept. 6, 1985]

§ 466.13 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards:

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	3.37	0.47	1.5	0.19
Lead	1.0	0.13	0.9	0.11
Nickel	12.0	1.51	6.3	0.79
Zinc	10.2	1.29	4.2	0.53
Aluminum	30.3	3.82	12.4	1.56
Iron	28.0	3.53	14.0	1.77
Oil and grease	100.0	12.60	100.0	12.60
TSS	150.0	18.91	120.0	15.12
pH	(1)	(1)	(1)	(1)
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	0.76	0.10	0.31	0.04
Lead	0.21	0.03	0.19	0.03
Nickel	2.46	0.31	1.29	0.16
Zinc	2.09	0.27	0.86	0.11
Aluminum	6.21	0.78	2.54	0.32
Iron	5.74	0.72	2.87	0.36
Oil and grease	20.48	2.58	20.48	2.58
TSS	30.72	3.87	24.58	3.10
pH	(1)	(1)	(1)	(1)

[1] Within the range 7.5 to 10.0 at all times.

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36543, Sept. 6, 1985]

§ 466.14 Pretreatment standards for existing sources.

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Chromium	0.42	0.17
Lead	0.15	0.13
Nickel	1.41	1.00
Zinc	1.33	0.56

(b) In cases where POTW find it necessary to impose mass effluent pretreatment standards the following equivalent mass standards are provided:

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	16.82	0.53	6.81	0.22
Lead	6.01	0.19	5.21	0.16
Nickel	56.5	1.78	40.1	1.26
Zinc	53.3	1.68	22.5	0.71
	English units—lbs/1 million ft² of area processed or coated			
Chromium	3.45	0.11	1.4	0.05
Lead	1.23	0.04	1.07	0.03
Nickel	11.6	0.37	8.20	0.26
Zinc	10.9	0.35	4.6	0.15

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36543, Sept. 6, 1985]

§ 466.15 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7 and 403.13, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources:

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal prepartion	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	3.7	0.47	1.5	0.19
Lead	1.0	0.13	0.9	0.11
Nickel	12.0	1.51	6.3	0.79
Zinc	10.2	1.29	4.2	0.53
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	0.76	0.10	0.31	0.04
Lead	0.2	0.03	0.19	0.002
Nickel	2.46	0.31	1.29	0.16
Zinc	2.09	0.27	0.86	0.11

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36543, Sept. 6, 1985]

Subpart B—Cast Iron Basis Material Subcategory

§ 466.20 Applicability; description of the cast iron basis material subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from porcelain enameling of cast iron basis materials.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) There shall be no discharge of process wastewater pollutants from metal preparation operations.

(b) The discharge of process wasterwater pollutants from all porcelain enameling coating operations shall not exceed the values set forth below:

SUBPART B—BPT EFFLUENT LIMITATIONS

Pollutant or pollutant Property	Maximum for any 1 day		Maximum for monthly average	
	Mg/m² (pounds per/1million ft²) of Area Coated			
Chromium	0.29	(0.06)	0.12	(0.024)
Lead	0.11	(0.02)	0.09	(0.02)
Nickle	0.98	(0.02)	0.7	(0.15)
Zinc	0.93	(0.19)	0.39	(0.08)
Aluminum	3.16	(0.65)	1.29	(0.27)
Iron	0.86	(0.18)	0.44	(0.09)
Oil and grease	13.86	(2.84)	8.32	(1.71)
TSS	28.42	(5.82)	13.86	(2.84)
pH	(1)	(1)	(1)	(1)

[1] Within the range 7.5 to 10.0 at all times.

§ 466.22 Effluent limitation representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) There shall be no discharge of process wastewater pollutants from metal preparation operations.

(b) The discharge of process wastewater pollutants from all porcelain enameling coating operations shall not exceed the values set forth below:

SUBPART B—BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Mg/m² (pounds per/million ft²) of area coated			
Chromium	0.53	(0.11)	0.22	(0.05)
Lead	0.19	(0.04)	0.16	(0.03)
Nickel	1.78	(0.37)	1.26	(0.26)
Zinc	1.68	(0.35)	0.71	(0.15)
Aluminum	5.74	(1.18)	2.35	(0.48)
Iron	1.55	(0.32)	0.79	(0.16)

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36543, Sept. 6, 1985]

§466.23 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards.

(a) There shall be no discharge of process wastewater pollutants from metal preparation operations.

(b) The discharge of process wastewater pollutants from all porcelain enameling coating operations shall not exceed the values set forth below:

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Mg/m² (pounds per million ft²) of area coated			
Chromium	0.47	(0.10)	0.19	(0.04)
Lead	0.13	(0.03)	0.11	(0.02)
Nickel	0.69	(0.14)	0.47	(0.10)
Zinc	1.29	(0.27)	0.53	(0.11)
Aluminum	3.82	(0.78)	1.56	(0.32)
Iron	1.55	(0.32)	0.79	(0.16)
Oil and grease	12.60	(2.58)	12.60	(2.58)
TSS	18.91	(3.87)	15.12	(3.10)
pH	(1)	(1)	(1)	(1)

[1] Within the range 7.5 to 10.0 at all times.

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36544, Sept. 6, 1985]

§466.24 Pretreatment standards for existing sources.

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

(1) There shall be no discharge of process wastewater pollutants from metal preparation operations.

(2) The discharge of process wastewater pollutants from all porcelain enameling coating operations shall not exceed the values set forth below:

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Chromium	0.42	0.17
Lead	0.15	0.13
Nickel	1.41	1.00
Zinc	1.33	0.56

(b) In cases when POTW find it necessary to impose mass pretreatment standards the following equivalent mass standards are provided.

(1) There shall be no discharge of process wastewater pollutants from metal preparation operations.

(2) The discharge of process watewater pollutants from all porcelain enameling costing operations

shall not exceed the values set forth below:

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metric units—mg/m² (English Units—pounds per million ft²) of area coated			
Chromium	0.53	(0.11)	0.22	(0.05)
Lead	0.19	(0.04)	0.16	(0.03)
Nickel	1.78	(0.37)	1.26	(0.26)
Zinc	1.68	(0.35)	0.71	(0.15)

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36544, Sept. 6, 1985]

§ 466.25 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicy owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

(a) There shall be no discharge of process wastewater pollutants from metal preparation operations.

(b) The discharge of process wastewater pollutants from all porcelain enameling coating operations shall not exceed the values set forth below:

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Mg/m² (pounds per million ft²) of area coated			
Chromium	0.47	(0.10)	0.19	(0.04)
Lead	0.13	(0.03)	0.11	(0.02)
Nickel	0.69	(0.14)	0.47	(0.10)
Zinc	1.29	(0.27)	0.53	(0.11)

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36544, Sept. 6, 1985]

Subpart C—Aluminum Basis Material Subcategory

§ 466.30 Applicability; description of the aluminum basis material subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from porcelain enameling of aluminum basis materials.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART C—BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	16.34	6.32	6.63	2.56
Lead	5.84	2.26	5.06	1.96
Nickel	54.85	21.21	38.90	15.04
Zinc	51.73	20.01	21.79	8.43
Aluminum	176.98	68.44	72.35	27.98
Iron	47.85	18.50	24.51	9.48
Oil and grease	777.92	300.84	466.76	108.50
TSS	1,594.74	616.68	777.92	300.82
pH	(1)	(1)	(1)	(1)
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	3.35	1.30	1.37	0.53
Lead	1.20	0.47	1.04	0.40
Nickel	11.24	4.35	7.97	3.08
Zinc	10.6	4.10	4.46	1.73
Aluminum	36.25	14.02	14.82	5.73
Iron	9.80	3.79	5.02	1.94
Oil and grease	159.33	61.61	95.60	36.97
TSS	326.62	126.33	159.33	61.61
pH	(1)	(1)	(1)	(1)

[1] Within the range 7.5 to 10.0 at all times.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

SUBPART C—BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	16.34	0.53	6.62	0.22
Lead	5.84	0.19	5.06	0.16
Nickel	54.85	1.78	38.90	1.26
Zinc	51.74	1.68	21.79	1.71
Aluminum	176.98	5.74	72.35	2.35
Iron	47.85	1.55	24.51	0.80
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	3.35	0.11	1.36	0.05
Lead	1.20	0.04	1.04	0.03
Nickel	11.24	0.37	7.97	0.26
Zinc	10.60	0.35	4.46	0.35
Aluminum	36.25	1.18	14.82	0.48
Iron	9.80	0.32	5.02	0.16

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36544, Sept. 6, 1985]

§ 466.33 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards:

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	3.60	0.47	1.46	0.19
Lead	0.97	0.13	0.88	0.11
Nickel	5.35	0.69	3.60	0.47
Zinc	9.92	1.29	4.09	0.53
Aluminum	29.46	3.82	12.06	1.56
Iron	11.96	1.55	6.13	0.79
Oil and grease	97.24	12.60	97.24	12.60
TSS	145.86	18.91	116.69	15.12
pH	(1)	(1)	(1)	(1)
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	0.74	0.10	0.30	0.04
Lead	0.20	0.03	0.18	0.20
Nickel	1.10	0.14	0.74	0.10
Zinc	2.03	0.27	0.84	0.11
Aluminum	6.03	0.78	2.47	0.32
Iron	2.45	0.32	1.26	0.16
Oil and grease	19.92	2.58	19.92	2.58
TSS	29.88	3.87	23.90	3.10
pH	(1)	(1)	(1)	(1)

[1] Within the range 7.5 to 10.0 at all times.

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36544, Sept. 6, 1985]

§ 466.34 Pretreatment standards for existing sources.

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Chromium	0.42	0.17
Lead	0.15	0.13
Nickel	1.41	1.00
Zinc	1.33	0.56

(b) In cases where POTW find it necessary to impose mass pretreatment standards the following equivalent mass standards are provided:

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	16.34	0.53	6.62	0.22
Lead	5.84	0.19	5.06	0.16
Nickel	54.85	1.78	38.9	1.26
Zinc	51.74	1.68	21.79	1.71
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	3.35	0.11	1.36	0.05
Lead	1.20	0.04	1.04	0.03
Nickel	11.24	0.37	7.97	0.25
Zinc	10.6	0.35	4.46	0.35

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36544, Sept. 6, 1985]

§ 466.35 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	3.60	0.47	1.46	0.19
Lead	0.97	0.13	0.88	0.11
Nickel	5.35	0.69	3.60	0.47
Zinc	9.92	1.29	4.09	0.53
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	0.74	0.10	0.30	0.04
Lead	0.20	0.03	0.18	0.02
Nickel	1.10	0.14	0.74	0.10
Zinc	2.03	0.27	0.84	0.11

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36545, Sept. 6, 1985]

Subpart D—Copper Basis Material Subcategory

§ 466.40 Applicability; description of the copper basis material subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from porcelain enameling of copper basis materials.

§§ 466.41—466.42 [Reserved]

§ 466.43 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards:

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	6.23	0.46	2.52	0.19
Lead	1.69	0.13	1.52	0.11
Nickel	9.25	0.69	6.23	0.47
Zinc	17.16	1.29	7.07	0.53
Aluminum	50.97	3.82	20.86	1.56
Iron	20.69	1.55	10.60	0.79
Oil and grease	168.23	12.60	168.23	12.60
TSS	252.35	18.91	201.88	15.12
pH	(1)	(1)	(1)	(1)
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	1.28	0.10	0.52	0.04
Lead	0.35	0.03	0.31	0.03
Nickel	1.90	0.14	1.28	0.10
Zinc	3.52	0.27	1.45	0.11
Aluminum	10.44	0.78	4.27	0.32
Iron	4.24	0.32	2.17	0.16
Oil and grease	34.46	2.58	34.46	2.58
TSS	51.69	3.87	41.35	3.10
pH	(1)	(1)	(1)	(1)

[1] Within the range 7.5 to 10.0 at all times.

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36545, Sept. 6, 1985]

§ 466.44 [Reserved]

§ 466.45 Pretreatment standards for new sources.

Any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and

achieve the following pretreatment standards for new sources:

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average	
	Metal preparation	Coating operation	Metal preparation	Coating operation
	Metric units—mg/m² of area processed or coated			
Chromium	6.23	0.46	2.52	0.19
Lead	1.69	0.13	1.52	0.11
Nickel	9.25	0.69	6.23	0.47
Zinc	17.16	1.29	7.07	0.53
	English units—pounds per 1 million ft² of area processed or coated			
Chromium	1.28	0.10	0.52	0.04
Lead	0.35	0.03	0.31	0.02
Nickel	1.90	0.14	1.28	0.10
Zinc	3.52	0.27	1.45	0.11

[47 FR 53184, Nov. 24, 1982, as amended at 50 FR 36545, Sept. 6, 1985]

PART 467—ALUMINUM FORMING POINT SOURCE CATEGORY

GENERAL PROVISIONS

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Subpart A—Rolling With Neat Oils Subcategory

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467.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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467.14 New source performance standards.
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Subpart B—Rolling With Emulsions Subcategory

467.20 Applicability; description of the rolling with emulsions subcategory.
467.21 Specialized definitions.
467.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.24 New source performance standards.
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Subpart C—Extrusion Subcategory

467.30 Applicability; description of the extrusion subcategory.
467.31 Specialized definitions.
467.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
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467.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart D—Forging Subcategory

467.40 Applicability; description of forging subcategory.
467.41 Specialized definitions.
467.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. [Reserved]

467.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. [Reserved]
467.44 New source performance standards.
467.45 Pretreatment standards for existing sources.
467.46 Pretreatment standards for new sources.
467.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart E—Drawing With Neat Oils Subcategory

467.50 Applicability; description of the drawing with neat oils subcategory.
467.51 Specialized definitions.
467.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.54 New source performance standards.
467.55 Pretreatment standards for existing sources.
467.56 Pretreatment standards for new sources.
467.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart F—Drawing With Emulsions or Soaps Subcategory

467.60 Applicability; description of the drawing with emulsions or soaps subcategory.
467.61 Specialized definitions.
467.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
467.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
467.64 New source performance standards.
467.65 Pretreatment standards for existing sources.
467.66 Pretreatment standards for new sources.
467.67 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

AUTHORITY: Secs. 301, 304(b), (c), (e), and (g), 306(b) and (c), 307(b) and (c), 308 and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) and the Water Quality Act of 1987 (the ''Act''); 33 U.S.C. 1311, 1314(b), (c), (e), and (g), 1316(b) and (c), 1317(b) and (c), 1318 and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217; 101 Stat. 7, Pub. L. 100–4.

SOURCE: 48 FR 49149, Oct. 24, 1983, unless otherwise noted.

GENERAL PROVISIONS

§ 467.01 Applicability.

(a) Aluminum forming includes commonly recognized forming operations such as rolling, drawing, extruding, and forging and related operations such as heat treatment, casting, and surface treatments. Surface treatment of aluminum is any chemical or electrochemical treatment applied to the surface of aluminum. Such surface treatment is considered to be a part of aluminum forming whenever it is performed as an integral part of aluminum forming. For the purposes of this regulation, surface treatment of aluminum is considered to be an integral part of aluminum forming whenever it is performed at the same plant site at which aluminum is formed and such operations are not considered for regulation under the Electroplating and Metal Finishing provisions of 40 CFR parts 413 and 433. Casting aluminum when performed as an integral part of aluminum forming and located on-site at an aluminum forming plant is considered an aluminum forming operation and is covered under these guidelines. When aluminum forming is performed on the same site as primary aluminum reduction the casting shall be regulated by the nonferrous metals guidelines if there is no cooling of the aluminum prior to casting. If the aluminum is cooled prior to casting then the casting shall be regulated by the aluminum forming guidelines.

(b) This part applies to any aluminum forming facility, except for plants identified under paragraph (c) of this section, which discharges or may discharge pollutants to waters of the United States or which introduces or may introduce pollutants into a publicly owned treatment works.

(c) This part is applicable to indirect discharging aluminum forming plants that extrude less than 3 million pounds of product per year and draw, with emulsions or soaps, less than 1 million pounds per year.

NOTE: This paragraph is promulgated as an Interim Final Rule.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631, Mar. 27, 1984]

§467.02 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) *Aluminum forming* is a set of manufacturing operations in which aluminum and aluminum alloys are made into semifinished products by hot or cold working.

(b) *Ancillary operation* is a manufacturing operation that has a large flow, discharges significant amounts of pollutants, and may not be present at every plant in a subcategory, but when present is an integral part of the aluminum forming process.

(c) *Contact cooling water* is any wastewater which contacts the aluminum workpiece or the raw materials used in forming aluminum.

(d) *Continuous casting* is the production of sheet, rod, or other long shapes by solidifying the metal while it is being poured through an open-ended mold using little or no contact cooling water. Continuous casting of rod and sheet generates spent lubricants and rod casting also generates contact cooling water.

(e) *Degassing* is the removal of dissolved hydrogen from the molten aluminum prior to casting. Chemicals are added and gases are bubbled through the molten aluminum. Sometimes a wet scrubber is used to remove excess chlorine gas.

(f) *Direct chill casting* is the pouring of molten aluminum into a water-cooled mold. Contact cooling water is sprayed onto the aluminum as it is dropped into the mold, and the aluminum ingot falls into a water bath at the end of the casting process.

(g) *Drawing* is the process of pulling metal through a die or succession of dies to reduce the metal's diameter or alter its shape. There are two aluminum forming subcategories based on the drawing process. In the drawing with neat oils subcategory, the drawing process uses a pure or neat oil as a lubricant. In the drawing with emulsions or soaps subcategory, the drawing process uses an emulsion or soap solution as a lubricant.

(h) *Emulsions* are stable dispersions of two immiscible liquids. In the aluminum forming category this is usually an oil and water mixture.

(i) *Cleaning or etching* is a chemical solution bath and a rinse or series of rinses designed to produce a desired surface finish on the workpiece. This term includes air pollution control scrubbers which are sometimes used to control fumes from chemical solution baths. Conversion coating and anodizing when performed as an integral part of the aluminum forming operations are considered cleaning or etching operations. When conversion coating or anodizing are covered here they are not subject to regulation under the provisions of 40 CFR Part 433, Metal Finishing.

(j) *Extrusion* is the application of pressure to a billet of aluminum, forcing the aluminum to flow through a die orifice. The extrusion subcategory is based on the extrusion process.

(k) *Forging* is the exertion of pressure on dies or rolls surrounding heated aluminum stock, forcing the stock to change shape and in the case where dies are used to take the shape of the die. The forging subcategory is based on the forging process.

(l) *Heat treatment* is the application of heat of specified temperature and duration to change the physical properties of the metal.

(m) Hot water seal is a heated water bath (heated to approximately 180° F) used to seal the surface coating on formed aluminum which has been anodized and coated. In establishing an effluent allowance for this operation, the hot water seal shall be classified as a cleaning or etching rinse.

(n) *In-process control technology* is the conservation of chemicals and water throughout the production operations to reduce the amount of wastewater to be discharged.

(o) *Neat oil* is a pure oil with no or few impurities added. In aluminum

forming its use is mostly as a lubricant.

(p) *Rolling* is the reduction in thickness or diameter of a workpiece by passing it between lubricated steel rollers. There are two subcategories based on the rolling process. In the rolling with neat oils subcategory, pure or neat oils are used as lubricants for the rolling process. In the rolling with emulsions subcategory, emulsions are used as lubricants for the rolling process.

(q) The term *Total Toxic Organics (TTO)* shall mean the sum of the masses or concentrations of each of the following toxic organic compounds which is found in the discharge at a concentration greater than 0.010 mg/1:

p-chloro-m-cresol	tetrachloroethylene
2-chlorophenol	toluene
2,4-dinitrotoluene	trichloroethylene
1,2-diphenylhydrazine	endosulfan sulfate
ethyblenzene	bis(2-ethyl hexyl)phthalate
fluoranthene	diethylphthalate
isophorone	3,4-benzofluoranthene
napthalene	benzo(k)fluoranthene
N-nitro sodi phenyl amine	chrysene
phenol	acenaphthylene
benzo(a) pyrene	anthracene
benzo(ghi)perylene	di-n-butyl phthalate
fluorene	endrin
phenanthrene	endrin aldehyde
dibenzo(a,h) anthracene	PCB–1242, 1254, 1221
indeno(1,2,3-c,d)pyrene	PCB–1232, 1248, 1260, 1016
pyrene	acenaphthene

(r) *Stationary casting* is the pouring of molten aluminum into molds and allowing the metal to air cool.

(s) *Wet scrubbers* are air pollution control devices used to remove particulates and fumes from air by entraining the pollutants in a water spray.

(t) *BPT* means the best practicable control technology currently available under section 304(b)(1) of the Act.

(u) *BAT* means the best available technology economically achievable under section 304(b)(2)(B) of the Act.

(v) *BCT* means the best conventional pollutant control technology, under section 304(b)(4) of the Act.

(w) *NSPS* means new source performance standards under section 306 of the Act.

(x) *PSES* means pretreatment standards for existing sources, under section 307(b) of the Act.

(y) *PSNS* means pretreatment standards for new sources, under section 307(c) of the Act.

(z) The production normalizing mass (/kkg) for each core or ancillary operation is the mass (off-kkg or off-lb) processed through that operation.

(aa) The term *off-kilogram (off-pound)* shall mean the mass of aluminum or aluminum alloy removed from a forming or ancillary operation at the end of a process cycle for transfer to a different machine or process.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631, Mar. 27, 1984, as amended at 53 FR 52369, Dec. 27, 1988]

§ 467.03 Monitoring and reporting requirements.

The following special monitoring and reporting requirements apply to all facilities controlled by this regulation.

(a) Periodic analyses for cyanide as may be required under part 122 or 403 of this chapter are not required when both of the following conditions are met:

(1) The first wastewater sample of each calender year has been analyzed and found to contain less than 0.07 mg/l cyanide.

(2) The owner or operator of the aluminum forming plant certifies in writing to the POTW authority or permit issuing authority that cyanide is not and will not be used in the aluminum forming process.

(b) As an alternative monitoring procedure for pretreatment, the POTW user may measure and limit oil and grease to the levels shown in pretreatment standards in lieu of measuring and regulating total toxic organics (TTO).

(c) The ''monthly average'' regulatory values shall be the basis for the monthly average discharge limits in direct discharge permits and for pretreatment standards. Compliance

with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0033)

[48 FR 49149, Oct. 24, 1983; 49 FR 11631, Mar. 27, 1984, as amended at 50 FR 4515, Jan. 31, 1985]

§467.04 Compliance date for PSES.

The compliance date for Pretreatment Standards for Existing Sources (PSES) is October 24, 1986.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631, Mar. 27, 1984]

§467.05 Removal allowances for pretreatment standards.

Removal allowances pursuant to 40 CFR 403.7(a) may be granted for the toxic metals limited in 40 CFR part 467 when used as indicator pollutants.

[49 FR 11631, Mar. 27, 1984]

Subpart A—Rolling With Neat Oils Subcategory

§467.10 Applicability; description of the rolling with neat oils subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the core and the ancillary operations of the rolling with neat oils subcategory.

§467.11 Specialized definitions.

For the purpose of this subpart:

(a) The ''core'' of the rolling with neat oils subcategory shall include rolling using neat oils, roll grinding, sawing, annealing, stationary casting, homogenizing artificial aging, degreasing, and stamping.

(b) The term ''ancillary operation'' shall mean any operation not previously included in the core, performed on-site, following or preceding the rolling operation. The ancillary operations shall include continuous rod casting, continuous sheet casting, solution heat treatment, cleaning or etching.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the core operation and for the ancillary operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.0360	0.0147
Cyanide	0.0237	0.0098
Zinc	0.119	0.0498
Aluminum	0.525	0.257
Oil and grease	1.634	0.980
Suspended solids	3.348	1.593
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.0244	0.010
Cyanide	0.0161	0.0067
Zinc	0.0808	0.0338
Aluminum	0.356	0.174
Oil and grease	1.11	0.664
Suspended solids	2.27	1.079
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART A

Continuous Sheet Casting Spent Lubricant

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum sheet cast by continuous methods	
Chromium	0.00086	0.00035
Cyanide	0.00057	0.00024
Zinc	0.0029	0.0012
Aluminum	0.0127	0.0063
Oil and grease	0.0393	0.0236
Suspended solids	0.0805	0.0383
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.66
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART A

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.110
Aluminum	1.15	0.573
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART A

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	44.52
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	50.88
Oil and grease	318.00	190.80
Suspended solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11632, Mar. 27, 1984]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. The mass of pollutants in the core and ancillary operations' process wastewater shall not exceed the following values:

SUBPART A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.036	0.015
Cyanide	0.024	0.0098
Zinc	0.119	0.050
Aluminum	0.525	0.257

SUBPART A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.025	0.010
Cyanide	0.016	0.0067
Zinc	0.081	0.034
Aluminum	0.356	0.174

SUBPART A

Continuous Sheet Casting Spent Lubricant

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum sheet cast	
Chromium	0.00086	0.00035
Cyanide	0.00057	0.00024
Zinc	0.00287	0.0012
Aluminum	0.0127	0.0062

SUBPART A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.897	0.367
Cyanide	0.591	0.245
Zinc	2.974	1.243
Aluminum	13.10	6.518

SUBPART A

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.151	0.573

SUBPART A

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.031	0.849
Aluminum	8.944	4.45

SUBPART A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.822	1.179
Aluminum	12.43	6.186

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11632, Mar. 27, 1984]

§ 467.14 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The mass of pollutants in the core and ancillary operations' process wastewater shall not exceed the following values:

SUBPART A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.030	0.0123
Cyanide	0.016	0.0065
Zinc	0.084	0.0343
Aluminum	0.499	0.221
Oil and grease	0.817	0.817
Suspended solids	1.225	0.980
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.021	0.0083
Cyanide	0.011	0.0044
Zinc	0.057	0.023
Aluminum	0.338	0.150
Oil and grease	0.553	0.553
Suspended solids	0.830	0.664
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART A

Continuous Sheet Casting Spent Lubricant

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.00073	0.00029
Cyanide	0.00039	0.00016
Zinc	0.0020	0.00082
Aluminum	0.012	0.0053
Oil and grease	0.0197	0.019
Suspended solids	0.0295	0.022
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART A

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART A

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.70
Oil and grease	13.91	13.91
Suspended solids	20.87	16.69
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.715	0.29
Cyanide	0.387	0.16
Zinc	1.97	0.81
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11632, Mar. 27, 1984]

§467.15 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the following values:

SUBPART A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.036	0.015
Cyanide	0.024	0.010
Zinc	0.119	0.050
TTO	0.057	.....
Oil and grease (alternate monitoring parameter)	4.3	2.1

SUBPART A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.025	0.010
Cyanide	0.016	0.007
Zinc	0.081	0.034
TTO	0.038	.....
Oil and grease (alternate monitoring parameter)	2.9	1.5

SUBPART A

Continuous Sheet Casting Lubricant

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.00086	0.00035
Cyanide	0.00057	0.00024
Zinc	0.0029	0.0012
TTO	0.0014	.....
Oil and grease (alternate monitoring parameter)	0.10	0.052

SUBPART A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	110	53

SUBPART A

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	9.3	4.7

SUBPART A

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	73	36

SUBPART A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	100	50

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11632, Mar. 27, 1984, as amended at 53 FR 52369 and 52370, Dec. 27, 1988]

§ 467.16 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the following values:

SUBPART A

Core With an Annealing Furnace Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.030	0.013
Cyanide	0.017	0.007
Zinc	0.084	0.035
TTO	0.057	.....
Oil and grease (alternate monitoring parameter)	0.817	0.817

SUBPART A

Core Without an Annealing Furnace Scrubber

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with neat oils	
Chromium	0.021	0.009
Cyanide	0.011	0.005
Zinc	0.057	0.024
TTO	0.038	.....
Oil and grease (alternate monitoring parameter)	0.54	0.54

SUBPART A

Continuous Sheet Casting Lubricant

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.00073	0.00029
Cyanide	0.00039	0.00016
Zinc	0.0020	0.00082
TTO	0.0014	.....
Oil and grease (alternate monitoring parameter)	0.020	0.020

SUBPART A

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	20.37	20.37

SUBPART A

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	1.79	1.79

SUBPART A

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	13.91	13.91

SUBPART A

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	19.33	19.33

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11632, Mar. 27, 1984]

§467.17 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart B—Rolling With Emulsions Subcategory

§467.20 Applicability; description of the rolling with emulsions subcategory.

This subpart applies to dischargers of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core and the ancillary operations of the rolling with emulsions subcategory.

§467.21 Specialized definitions.

For the purpose of this subpart:

(a) The ''core'' of the rolling with emulsions subcategory shall include rolling using emulsions, roll grinding, stationary casting, homogenizing, artificial aging, annealing, and sawing.

(b) The term ''ancillary operation'' shall mean any operation not previously included in the core, performed on-site, following or preceding the rolling operation. The ancillary operations shall include direct chill casting, solution heat treatment, cleaning or etching, and degassing.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

SUBPART B

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with emulsions	
Chromium	0.057	0.024
Cyanide	0.038	0.016
Zinc	0.19	0.079
Aluminum	0.84	0.416
Oil and grease	2.60	1.56
Suspended solids	5.33	2.53
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
Aluminum	8.55	4.26
Oil and grease	26.58	15.95
Suspended solids	54.49	25.92
pH	(1)	(1)

1 The pH shall be maintained within the range of 7.0 to 10.0 at all times except for those situations when this waste stream is discharged separately and without commingling with any other wastewater in which case the pH shall be within the range of 6.0 to 10.0 at all times.

SUBPART B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.66
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART B

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.15	0.573
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART B

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	44.52
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	50.88
Oil and grease	318.00	190.80
Suspended solids	651.90	310.05
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11632, Mar. 27, 1984, as amended at 53 FR 52370, Dec. 27, 1988]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. The discharge of process wastewater pollutants from the core shall not exceed the values set forth below:

SUBPART B

Core

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with emulsions	
Chromium	0.057	0.024
Cyanide	0.038	0.016
Zinc	0.19	0.079
Aluminum	0.84	0.42

SUBPART B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
Aluminum	8.55	4.26

SUBPART B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
Aluminum	13.10	6.52

SUBPART B

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.109
Aluminum	1.15	0.573

SUBPART B

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
Aluminum	8.95	4.45

SUBPART B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
Aluminum	12.43	6.19

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11633, Mar. 27, 1984]

§ 467.24 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of process wastewater pollutants from the core shall not exceed the values set forth below:

SUBPART B

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with emulsions	
Chromium	0.048	0.020
Cyanide	0.026	0.011
Zinc	0.133	0.055
Aluminum	0.80	0.35
Oil and grease	1.30	1.30
Suspended solids	1.95	1.56
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast by semicontinuous methods	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
Aluminum	8.12	3.60
Oil and grease	13.29	13.29
Suspended solids	19.94	15.95
pH	(1)	(1)

1 The pH shall be maintained within the range of 7.0 to 10.0 at all times except for those situations when this waste stream is discharged separately and without commingling with any other wastewater in which case the pH shall be within the range of 6.0 to 10.0 at all times.

SUBPART B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART B

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART B

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.77
Oil and grease	13.91	13.91
Suspended solids	20.87	16.70
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11633, Mar. 27, 1984, as amended at 53 FR 52370, Dec. 27, 1988]

§467.25 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the following values:

SUBPART B

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with emulsions	
Chromium	0.057	0.024
Cyanide	0.038	0.016
Zinc	0.190	0.079
TTO	0.090	.....
Oil and grease (alternate monitoring parameter)	6.8	3.4

SUBPART B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast by semi-continuous methods	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
TTO	0.92	.....
Oil and grease (alternate monitoring parameter)	69	35

SUBPART B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	110	53

SUBPART B

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	9.3	4.7

SUBPART B

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.61	0.25
Cyanide	0.41	0.17
Zinc	2.03	0.85
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	73	36

SUBPART B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.83	1.18
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	100	50

[48 FR 49149, Oct. 24, 1983; 49 FR 11631, 11632, and 11633, Mar. 27, 1984, as amended at 53 FR 52369 and 52370, Dec. 27, 1988]

§ 467.26 Pretreatment standards for new sources.

Except as provided in § 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of process wastewater pollutants from the core and ancillary operations introduced into a POTW shall not exceed the values set forth below:

SUBPART B

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rolled with emulsions	
Chromium	0.048	0.020
Cyanide	0.026	0.011
Zinc	0.133	0.055
TTO	0.090	.....
Oil and grease (alternate monitoring parameter)	1.30	1.30

SUBPART B

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast by semicontinuous methods	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
TTO	0.92	.....
Oil and grease (alternate monitoring parameter)	13.29	13.29

SUBPART B

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	20.37	20.37

SUBPART B

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	1.79	1.79

SUBPART B

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	13.91	13.91

SUBPART B

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	19.33	19.33

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11632, Mar. 27, 1984]

§467.27 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart C—Extrusion Subcategory

§467.30 Applicability; description of the extrusion subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core and the ancillary operations of the extrusion subcategory.

§467.31 Specialized definitions.

For the purpose of this subpart:

(a) The ''core'' of the extrusion subcategory shall include extrusion die

cleaning, dummy block cooling, stationary casting, artificial aging, annealing, degreasing, and sawing.

(b) The term ''extrusion die cleaning'' shall mean the process by which the steel dies used in extrusion of aluminum are cleaned. The term includes a dip into a concentrated caustic bath to dissolve the aluminum followed by a water rinse. It also includes the use of a wet scrubber with the die cleaning operation.

(c) The term ''ancillary operation'' shall mean any operation not previously included in the core, performed on-site, following or preceding the extrusion operation. The ancillary operations shall include direct chill casting, press or solution heat treatment, cleaning or etching, degassing, and extrusion press hydraulic fluid leakage.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART C

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.16	0.066
Cyanide	0.11	0.044
Zinc	0.53	0.22
Aluminum	2.34	1.16
Oil and grease	7.32	4.39
Suspended solids	15.0	7.13
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Extrusion Press Leakage

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.65	0.27
Cyanide	0.43	0.18
Zinc	2.16	0.90
Aluminum	9.51	4.73
Oil and grease	29.56	17.74
Suspended solids	60.60	28.82
pH	(1)	(1)

[1] With the range of 7.0 to 10.0 at all times.

SUBPART C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
Aluminum	8.55	4.26
Oil and grease	26.58	15.95
Suspended solids	54.49	25.92
pH	(1)	(1)

[1] The pH shall be maintained within the range of 7.0 to 10.0 at all times except for those situations when this waste stream is discharged separately and without commingling with any other wastewater in which case the pH shall be within the range of 6.0 to 10.0 at all times.

SUBPART C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.66
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.66
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.109
Aluminum	1.15	0.573
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	44.52
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	50.88
Oil and grease	318.00	190.80
Suspended solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Degassing Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum degassed	
Chromium	1.15	0.47
Cyanide	0.76	0.32
Zinc	3.81	1.59
Aluminum	16.78	8.35
Oil and grease	52.18	31.31
Suspended solids	106.97	50.88
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11631 and 11633, Mar. 27, 1984, as amended at 53 FR 52370, Dec. 27, 1988]

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

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

(b) There shall be no discharge allowance for wastewater pollutants from the degassing operation.

(c) The discharge of wastewater pollutants from the core and ancillary operation except those in (b) of this section, shall not exceed the values set forth below:

SUBPART C

Core

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.15	0.061
Cyanide	0.098	0.041
Zinc	0.49	0.21
Aluminum	2.19	1.09

SUBPART C

Extrusion Press Leakage

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.65	0.27
Cyanide	0.43	0.18
Zinc	2.16	0.90
Aluminum	9.51	4.73

SUBPART C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
Aluminum	8.55	4.26

SUBPART C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
Aluminum	13.10	6.52

SUBPART C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
Aluminum	13.10	6.52

SUBPART C

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.15	0.58

SUBPART C

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	1.7	0.7
Cyanide	1.2	0.5
Zinc	5.7	2.4
Aluminum	25	13

SUBPART C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
Aluminum	12.43	6.19

[48 FR 49149, Oct. 24, 1983; 49 FR 11631, 11633, and 11634, Mar. 27, 1984, as amended at 53 FR 52370, Dec. 27, 1988]

§ 467.34 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards.

(a) There shall be no discharge allowance for wastewater pollutants from the degassing operation.

(b) The discharge of wastewater pollutants from the core and ancillary operations except those listed in paragraph (a) shall not exceed the values set forth below:

SUBPART C

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.13	0.051
Cyanide	0.068	0.027
Zinc	0.35	0.14
Aluminum	2.07	0.92
Oil and grease	3.39	3.39
Suspended solids	5.10	4.07
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Extrusion Press Leakage

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum extruded	
Chromium	0.11	0.045
Cyanide	0.060	0.024
Zinc	0.31	0.126
Aluminum	1.82	0.81
Oil and grease	2.98	2.98
Suspended solids	4.47	3.58
pH	(1)	(1)

[1] Within the range of 7.0 to 10.0 at all times.

SUBPART C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast by semicontinuous methods	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
Aluminum	8.12	3.60
Oil and grease	13.29	13.29
Suspended solids	19.94	15.95
pH	(1)	(1)

[1] The pH shall be maintained within the range of 7.0 to 10.0 at all times except for those situations when this waste stream is discharged separately and without commingling with any other wastewater in which case the pH shall be within the range of 6.0 to 10.0 at all times.

SUBPART C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART C

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART C

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.77
Oil and grease	13.91	13.91
Suspended solids	20.87	16.70
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11633 and 11634, Mar. 27, 1984, as amended at 53 FR 52370, Dec. 27, 1988]

§ 467.35 Pretreatment standards for existing sources.

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

(b) There shall be no discharge allowance for wastewater pollutants from the degassing operation.

(c) The mass of wastewater pollutants from the core and ancillary operations except those identified in paragraph (b), introduced into a POTW shall not exceed the following values:

SUBPART C

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of extruded	
Chromium	0.15	0.061
Cyanide	0.098	0.041
Zinc	0.49	0.21
TTO	0.23	.....
Oil and grease (alternate monitoring parameter)	18	8.8

SUBPART C

Extrusion Press Leakage

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of extruded	
Chromium	0.65	0.27
Cyanide	0.43	0.18
Zinc	2.16	0.90
TTO	1.02	.....
Oil and grease (alternate monitoring parameter)	77	39

SUBPART C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.59	0.24
Cyanide	0.39	0.16
Zinc	1.94	0.81
TTO	0.92	.....
Oil and grease (alternate monitoring parameter)	69	35

SUBPART C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	110	53

SUBPART C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.90	0.37
Cyanide	0.59	0.25
Zinc	2.98	1.25
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	110	53

SUBPART C

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.109
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	9.3	4.7

SUBPART C

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	1.7	0.7
Cyanide	1.2	0.5
Zinc	5.7	2.4
TTO	2.7	.....
Oil & Grease (alternate monitoring parameter)	200	100

SUBPART C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.35
Cyanide	0.56	0.23
Zinc	2.82	1.18
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	100	50

[48 FR 49149, Oct. 24, 1983; 49 FR 11632, 11633 and 11634, Mar. 27, 1984, as amended at 53 FR 52369–52371, Dec. 27, 1988]

§ 467.36 Pretreatment standards for new sources.

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

(b) There shall be no discharge allowance for wastewater pollutants from the degassing operation.

(c) The mass of wastewater pollutants from the core and ancillary operations except those identified in paragraph (b) introduced into a POTW shall not exceed the values set forth below:

SUBPART C

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of extruded	
Chromium	0.13	0.05
Cyanide	0.07	0.03
Zinc	0.35	0.15
TTO	0.24	.....
Oil and grease (alternate monitoring parameter)	3.40	3.40

SUBPART C

Extrusion Press Leakage

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of hard alloy aluminum extruded	
Chromium	0.11	0.05
Cyanide	0.06	0.03
Zinc	0.31	0.13
TTO	0.21	.....
Oil and grease (alternate monitoring parameter)	2.98	2.98

SUBPART C

Direct Chill Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.49	0.20
Cyanide	0.27	0.11
Zinc	1.36	0.56
TTO	0.92	.....
Oil and grease (alternate monitoring parameter)	13.29	13.29

SUBPART C

Press Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	20.37	20.37

SUBPART C

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million-off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.17
Zinc	2.08	0.86
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	20.37	20.37

SUBPART C

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million-off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	1.79	1.79

SUBPART C

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million-off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	13.91	13.91

SUBPART C

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million-off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.81
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	19.33	19.33

[48 FR 49149, Oct. 24, 1983; 49 FR 11632, 11633, and 11634, Mar. 27, 1984]

§467.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart D—Forging Subcategory

§467.40 Applicability; description of the forging subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core of the forging subcategory and the ancillary operations.

§467.41 Specialized definitions.

For the purpose of this subpart:

(a) The ''core'' of the forging subcategory shall include forging, artificial aging, annealing, degreasing, and sawing.

(b) The term ''ancillary operation'' shall mean any operation not previously included in the core, performed on-site, following or preceding the forging operation. The ancillary operations shall include forging air pollution scrubbers, solution heat treatment, and cleaning or etching.

§ 467.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. [Reserved]

§ 467.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. [Reserved]

§ 467.44 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of wastewater pollutants from the core shall not exceed the values set forth below:

SUBPART D

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
Aluminum	0.305	0.135
Oil and grease	0.50	0.50
Suspended solids	0.75	0.60
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART D

Forging Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.035	0.014
Cyanide	0.019	0.008
Zinc	0.096	0.04
Aluminum	0.576	0.256
Oil and grease	0.943	0.95
Suspended solids	1.42	1.13
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART D

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.163
Zinc	2.08	0.86
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART D

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART D

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
Aluminum	8.5	3.77
Oil and grease	13.91	13.91
Suspended solids	20.87	16.69
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART D

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.155
Zinc	1.97	0.812
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11633 and 11635, Mar. 27, 1984]

§ 467.45 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduced pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

SUBPART D

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.022	0.009
Cyanide	0.015	0.006
Zinc	0.073	0.031
TTO	0.035	.....
Oil and grease (alternate monitoring parameter)	2.6	1.3

SUBPART D

Forging Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.042	0.017
Cyanide	0.028	0.011
Zinc	0.14	0.058
TTO	0.065	.....
Oil and grease (alternate monitoring parameter)	4.9	2.5

SUBPART D

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.897	0.37
Cyanide	0.591	0.25
Zinc	2.98	1.24
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	110	53

SUBPART D

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.11
TTO	0.123	.....
Oil and grease (alternate monitoring parameter)	9.3	4.7

SUBPART D

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mb/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	1.7	0.7
Cyanide	1.2	0.5
Zinc	5.7	2.4
TTO	2.7	.....
Oil and grease (alternate monitoring parameter)	200	100

SUBPART D

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.35
Cyanide	0.561	0.23
Zinc	2.82	1.18
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	100	50

[48 FR 49149, Oct. 24, 1983; 49 FR 11632, 11633, and 11635, Mar. 27, 1984, as amended at 53 FR 52369–52371, Dec. 27, 1988]

§ 467.46 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

SUBPART D

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
TTO	0.035	.....
Oil and grease (alternate monitoring parameter)	0.50	0.50

SUBPART D

Forging Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum forged	
Chromium	0.035	0.014
Cyanide	0.019	0.008
Zinc	0.096	0.040
TTO	0.065	.....
Oil and grease (alternate monitoring parameter)	0.95	0.95

SUBPART D

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.31
Cyanide	0.41	0.16
Zinc	2.08	0.86
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	20.37	20.37

SUBPART D

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	1.79	1.79

SUBPART D

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	13.91	13.91

SUBPART D

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.812
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	19.33	19.33

[48 FR 49149, Oct. 24, 1983; 49 FR 11632 and 11633, Mar. 27, 1984]

§467.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart E—Drawing With Neat Oils Subcategory

§467.50 Applicability; description of the drawing with neat oils subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introductions of pollutants into publicly owned treatment works from the core of the drawing with neat oils subcategory and the ancillary operations.

§467.51 Specialized definitions.

For the purpose of this subpart:

(a) The ''core'' of the drawing with neat oils subcategory shall include drawing using neat oils, stationary casting, artificial aging, annealing, degreasing, sawing, and swaging.

(b) The term ''ancillary operation'' shall mean any operation not previously included in the core, performed on-site, following or preceding the drawing operation. The ancillary operation shall include continuous rod casting, solution heat treatment, and cleaning or etching.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable technology currently available:

SUBPART E

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/per million off-lbs) of aluminum drawn with neat oils	
Chromium	0.022	0.0090
Cyanide	0.015	0.0050
Zinc	0.073	0.031
Aluminum	0.32	0.160
Oil and grease	0.97	0.598
Suspended solids	2.04	0.972
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART E

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.00086	0.00035
Cyanide	0.00057	0.00024
Zinc	0.00287	0.0012
Aluminum	0.0127	0.0063
Oil and grease	0.0393	0.0236
Suspended solids	0.0805	0.0383
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.684	0.28
Cyanide	0.451	0.187
Zinc	2.271	0.949
Aluminum	10.00	4.976
Oil and grease	31.10	18.66
Suspended solids	63.76	30.322
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.66
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART E

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.26	0.11
Aluminum	1.150	0.57
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART E

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	44.52
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

1 Within the range of 7.0 to 10 at all times.

SUBPART E

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	50.88
Oil and grease	318.00	190.8
Suspended solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11633 and 11635, Mar. 27, 1984]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. The discharge of wastewater pollutants from the core and ancillary operations shall not exceed the values set forth below:

SUBPART E

Core

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with neat oils	
Chromium	0.022	0.009
Cyanide	0.015	0.006
Zinc	0.073	0.031
Aluminum	0.321	0.16

SUBPART E

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.00086	0.0004
Cyanide	0.0006	0.0002
Zinc	0.0029	0.0012
Aluminum	0.0127	0.0063

SUBPART E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.086	0.035
Cyanide	0.056	0.024
Zinc	0.283	0.118
Aluminum	1.247	0.621

SUBPART E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.896	0.367
Cyanide	0.591	0.245
Zinc	2.974	1.243
Aluminum	13.10	6.519

SUBPART E

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.151	0.563

SUBPART E

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.031	0.849
Aluminum	8.944	4.451

SUBPART E

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.179
Aluminum	12.43	6.19

[48 FR 49149, Oct. 24, 1983; 49 FR 11633 and 11635, Mar. 27, 1984]

§ 467.54 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of wastewater pollutants from the core and ancillary operations shall not exceed the values set forth below:

SUBPART E

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with neat oils	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
Aluminum	0.304	0.135
Oil and grease	0.498	0.498
Suspended solids	0.747	0.598
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART E

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0008	0.0003
Cyanide	0.0004	0.0002
Zinc	0.002	0.0008
Aluminum	0.012	0.006
Oil and grease	0.02	0.02
Suspended solids	0.03	0.024
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.072	0.029
Cyanide	0.039	0.016
Zinc	0.198	0.082
Aluminum	1.185	0.526
Oil and grease	1.939	1.939
Suspended solids	2.909	2.327
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.754	0.306
Cyanide	0.408	0.163
Zinc	2.08	0.856
Aluminum	12.45	5.52
Oil and grease	20.37	20.37
Suspended solids	30.56	24.45
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART E

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.485
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART E

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.515	0.209
Cyanide	0.278	0.111
Zinc	1.42	0.584
Aluminum	8.50	3.77
Oil and grease	13.91	13.91
Suspended solids	20.87	16.70
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART E

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.715	0.290
Cyanide	0.387	0.155
Zinc	1.97	0.812
Aluminum	11.81	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11633 and 11635, Mar. 27, 1984]

§467.55 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

SUBPART E

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with neat oils	
Chromium	0.022	0.009
Cyanide	0.015	0.006
Zinc	0.073	0.031
TTO	0.035	.....
Oil and grease (alternate monitoring parameter)	2.6	1.3

SUBPART E

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0009	0.0004
Cyanide	0.0006	0.0003
Zinc	0.0029	0.0012
TTO	0.0014	.....
Oil and grease (alternate monitoring parameter)	0.10	0.052

SUBPART E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.086	0.035
Cyanide	0.057	0.023
Zinc	0.283	0.118
TTO	0.133	.....
Oil and grease (alternate monitoring parameter)	10	5.1

SUBPART E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.896	0.367
Cyanide	0.591	0.245
Zinc	2.98	1.24
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	110	53

SUBPART E

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.033
Cyanide	0.052	0.022
Zinc	0.262	0.109
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	9.3	4.7

SUBPART E

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.17
Zinc	2.03	0.85
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	73	36

SUBPART E

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.18
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	100	50

[48 FR 49149, Oct. 24, 1983; 49 FR 11632, 11633, and 11635, Mar. 27, 1984, as amended at 53 FR 52369–52372, Dec. 27, 1988]

§ 467.56 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart

which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

SUBPART E

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with neat oils	
Chromium	0.019	0.008
Cyanide	0.010	0.004
Zinc	0.051	0.021
TTO	0.035	.....
Oil and grease (alternate monitoring parameter)	0.50	0.50

SUBPART E

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0007	0.0003
Cyanide	0.0004	0.0002
Zinc	0.0020	0.0008
TTO	0.0014	.....
Oil and grease (alternate monitoring parameter)	0.020	0.020

SUBPART E

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.072	0.029
Cyanide	0.039	0.016
Zinc	0.198	0.134
TTO	.....	0.082
Oil and grease (alternate monitoring parameter)	1.94	1.94

SUBPART E

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.306
Cyanide	0.41	0.163
Zinc	2.08	0.856
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	20.37	20.37

SUBPART E

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	1.79	1.79

SUBPART E

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	13.91	13.91

SUBPART E

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.29
Cyanide	0.39	0.16
Zinc	1.97	0.812
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	19.33	19.33

[48 FR 49149, Oct. 24, 1983; 49 FR 11632, 11633, and 11635, Mar. 27, 1984]

§ 467.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart F—Drawing With Emulsions or Soaps Subcategory

§ 467.60 Applicability; description of the drawing with emulsions or soaps subcategory.

This subpart applies to discharges of pollutants to waters of the United States and introduction of pollutants into publicly owned treatment works from the core and the ancillary operations of the drawing with emulsions or soaps subcategory.

§ 467.61 Specialized definitions.

For the purpose of this subpart:

(a) The ''core'' of the drawing with emulsions or soaps subcategory shall include drawing using emulsions or soaps, stationary casting, artificial aging, annealing, degreasing, sawing, and swaging.

(b) The term ''ancillary operation'' shall mean any operation not previously included in the core, performed on-site, following or preceding the drawing operation. The ancillary operations shall include continuous rod casting, solution heat treatment and cleaning or etching.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

SUBPART F

Core

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.205	0.084
Cyanide	0.135	0.056
Zinc	0.680	0.285
Aluminum	3.00	1.50
Oil and grease	9.33	5.60
Suspended solids	19.12	9.10
pH	(1)	(1)

[1]Within the range of 7.0 to 10 at all times.

SUBPART F

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.0009	0.0004
Cyanide	0.0006	0.0003
Zinc	0.0029	0.001
Aluminum	0.013	0.007
Oil and grease	0.040	0.024
Suspended solids	0.081	0.039
pH	(1)	(1)

[1]Within the range of 7.0 to 10 at all times.

SUBPART F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cast	
Chromium	0.684	0.28
Cyanide	0.450	0.187
Zinc	2.27	0.949
Aluminum	10.00	4.976
Oil and grease	31.10	18.66
Suspended solids	63.76	30.323
pH	(1)	(1)

[1]Within the range of 7.0 to 10 at all times.

SUBPART F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	3.39	1.39
Cyanide	2.24	0.93
Zinc	11.25	4.70
Aluminum	49.55	24.66
Oil and grease	154.10	92.46
Suspended solids	315.91	150.25
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART F

Cleaning or Etching Bath

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.109
Aluminum	1.15	0.573
Oil and grease	3.58	2.15
Suspended solids	7.34	3.49
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART F

Cleaning or Etching Rinse

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	6.12	2.51
Cyanide	4.04	1.67
Zinc	20.31	8.49
Aluminum	89.46	44.519
Oil and grease	278.24	166.95
Suspended solids	570.39	271.29
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

SUBPART F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	7.00	2.86
Cyanide	4.61	1.91
Zinc	23.22	9.70
Aluminum	102.24	50.88
Oil and grease	318.00	190.80
Suspended solids	651.90	310.05
pH	(1)	(1)

[1] Within the range of 7.0 to 10 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11633 and 11635, Mar. 27, 1984]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. The discharge of wastewater pollutants from the core shall not exceed the volumes set forth below:

SUBPART F

Core

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.205	0.084
Cyanide	0.135	0.056
Zinc	0.681	0.285
Aluminum	3.00	1.49

SUBPART F

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0009	0.0004
Cyanide	0.0006	0.0003
Zinc	0.0029	0.0012
Aluminum	0.013	0.0063

SUBPART F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.086	0.035
Cyanide	0.056	0.024
Zinc	0.283	0.118
Aluminum	1.25	0.62

SUBPART F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.897	0.37
Cyanide	0.591	0.25
Zinc	2.98	1.24
Aluminum	13.10	6.52

SUBPART F

Cleaning or Etching Bath

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.11
Aluminum	1.15	0.57

SUBPART F

Cleaning or Etching Rinse

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.03	0.849
Aluminum	8.95	4.45

SUBPART F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.85	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.18
Aluminum	12.43	6.19

[48 FR 49149, Oct. 24, 1983; 49 FR 11633, 11635, and 11636, Mar. 27, 1984]

§ 467.64 New source performance standards.

Any new source subject to this subpart must achieve the following performance standards. The discharge of wastewater pollutants from the core shall not exceed the values set forth below:

SUBPART F

Core

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.173	0.070
Cyanide	0.094	0.038
Zinc	0.476	0.196
Aluminum	2.85	1.27
Oil and grease	4.67	4.67
Suspended solids	7.00	5.60
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART F

Continuous Rod Casting Spent Lubricant

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0008	0.0003
Cyanide	0.0004	0.0002
Zinc	0.0020	0.0008
Aluminum	0.012	0.0053
Oil and grease	0.020	0.020
Suspended solids	0.030	0.024
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.072	0.029
Cyanide	0.039	0.016
Zinc	0.198	0.081
Aluminum	1.184	0.526
Oil and grease	1.940	1.940
Suspended solids	2.91	2.33
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.754	0.31
Cyanide	0.408	0.16
Zinc	2.08	0.86
Aluminum	12.450	5.52
Oil and grease	20.37	20.37
Suspended solids	20.56	24.45
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART F

Cleaning or Etching Bath

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.066	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
Aluminum	1.094	0.49
Oil and grease	1.79	1.79
Suspended solids	2.69	2.15
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART F

Cleaning or Etching Rinse

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.515	0.21
Cyanide	0.278	0.11
Zinc	1.42	0.59
Aluminum	8.50	3.77
Oil and grease	13.91	13.91
Suspended solids	20.87	16.70
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

SUBPART F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.72	0.290
Cyanide	0.387	0.155
Zinc	1.97	0.812
Aluminum	1.18	5.24
Oil and grease	19.33	19.33
Suspended solids	29.00	23.20
pH	(1)	(1)

1 Within the range of 7.0 to 10.0 at all times.

[48 FR 49149, Oct. 24, 1983; 49 FR 11633 and 11636, Mar. 27, 1984]

§ 467.65 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources. The mass of wastewater pollutants in aluminum forming process wastewater introduced into a POTW shall not exceed the values set forth below:

SUBPART F

Core

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.205	0.084
Cyanide	0.135	0.056
Zinc	0.681	0.285
TTO	0.32	.....
Oil and grease (alternate monitoring parameter)	25	12

SUBPART F

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0009	0.0004
Cyanide	0.0006	0.0003
Zinc	0.0029	0.0012
TTO	0.0014	.....
Oil and grease (alternate monitoring parameter)	0.10	0.052

SUBPART F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.086	0.035
Cyanide	0.056	0.024
Zinc	0.283	0.119
TTO	0.134	.....
Oil and grease (alternate monitoring parameter	10	5.1

SUBPART F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.896	0.367
Cyanide	0.591	0.245
Zinc	2.98	1.25
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	110	53

SUBPART F

Cleaning or Etching Bath

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.079	0.032
Cyanide	0.052	0.022
Zinc	0.262	0.11
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	9.3	4.7

SUBPART F

Cleaning or Etching Rinse

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.612	0.251
Cyanide	0.404	0.167
Zinc	2.03	0.849
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	73	36

SUBPART F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Maximum for monthy average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.851	0.348
Cyanide	0.561	0.232
Zinc	2.82	1.18
TTO	1.33	.....
Oil and grease (alternate monitoring parameter)	100	50

[48 FR 49149, Oct. 24, 1983; 49 FR 11632 and 11636, Mar. 27, 1984, as amended at 53 FR 52369–52372, Dec. 27, 1988]

§ 467.66 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart

which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in aluminum forming process wastewaters introduced into a POTW shall not exceed the values set forth below:

SUBPART F

Core

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum drawn with emulsions or soaps	
Chromium	0.173	0.070
Cyanide	0.094	0.038
Zinc	0.48	0.196
TTO	0.32	.....
Oil and grease (alternate monitoring parameter)	4.67	4.67

SUBPART F

Continuous Rod Casting Lubricant

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.0008	0.0003
Cyanide	0.0004	0.0002
Zinc	0.0020	0.0008
TTO	0.0014	.....
Oil and grease (alternate monitoring parameter)	0.020	0.020

SUBPART F

Continuous Rod Casting Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum rod cast	
Chromium	0.072	0.029
Cyanide	0.039	0.016
Zinc	0.198	0.082
TTO	0.134	.....
Oil and grease (alternate monitoring parameter)	1.94	1.94

SUBPART F

Solution Heat Treatment Contact Cooling Water

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum quenched	
Chromium	0.76	0.306
Cyanide	0.41	0.163
Zinc	2.08	0.856
TTO	1.41	.....
Oil and grease (alternate monitoring parameter)	20.37	20.37

SUBPART F

Cleaning or Etching Bath

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.067	0.027
Cyanide	0.036	0.015
Zinc	0.183	0.075
TTO	0.124	.....
Oil and grease (alternate monitoring parameter)	1.79	1.79

SUBPART F

Cleaning or Etching Rinse

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.52	0.21
Cyanide	0.28	0.11
Zinc	1.42	0.59
TTO	0.96	.....
Oil and grease (alternate monitoring parameter)	13.91	13.91

SUBPART F

Cleaning or Etching Scrubber Liquor

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (lb/million off-lbs) of aluminum cleaned or etched	
Chromium	0.715	0.290
Cyanide	0.387	0.155
Zinc	1.97	0.812
TTO	1.34	.....
Oil and grease (alternate monitoring parameter)	19.33	19.33

[48 FR 49149, Oct. 24, 1983; 49 FR 11632, 11633, and 11636, Mar. 27, 1984]

§ 467.67 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

PART 468—COPPER FORMING POINT SOURCE CATEGORY

GENERAL PROVISIONS

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Subpart A—Copper Forming Subcategory

468.10 Applicability; description of the copper forming subcategory.
468.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
468.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available control technology economically achievable.
468.13 New source performance standards (NSPS).
468.14 Pretreatment standards for existing sources (PSES).
468.15 Pretreatment standards for new sources (PSNS).
468.16 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT). [Reserved]

Subpart B—Beryllium Copper Forming Subcategory

468.20 Applicability; description of the beryllium copper forming subcategory.

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 48 FR 36957, Aug. 15, 1983, unless otherwise noted.

GENERAL PROVISIONS

§ 468.01 Applicability.

(a) The provisions of this part are applicable to discharges resulting from the manufacture of formed copper and copper alloy products. The forming operations covered are hot rolling, cold rolling, drawing, extrusion and forging. This part does not regulate the forming of precious metals. (See 40 CFR part 471). The casting of copper and copper alloys is not covered by this part. (See 40 CFR part 464).

(b) The discharge allowance for drawing spent lubricant of 40 CFR 468.11(c), 468.14(c), and 468.15(c) are applicable only to those plants that actually discharge the drawing spent lubricant waste stream at copper forming sites. No discharge allowance is applicable or allowable where these wastewaters are hauled off-site for disposal or are otherwise not discharged at copper forming sites.

[51 FR 22521, June 20, 1986]

§ 468.02 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136, the following definitions apply to this part:

(a) The term ''alkaline cleaning bath'' shall mean a bath consisting of an alkaline cleaning solution through which a workpiece is processed.

(b) The term ''alkaline cleaning rinse'' shall mean a rinse following an alkaline cleaning bath through which a workpiece is processed. A rinse consisting of a series of rinse tanks is considered as a single rinse.

(c) The term ''ancillary operation'' shall mean any operation associated with a primary forming operation. These ancillary operations include surface and heat treatment, hydrotesting, sawing, and surface coating.

(d) The term ''annealing with oil'' shall mean the use of oil to quench a workpiece as it passes from an annealing furnace.

(e) The term ''annealing with water'' shall mean the use of a water spray or bath, of which water is the major constituent, to quench a workpiece as it passes from an annealing furnace.

(f) The term ''cold rolling'' shall mean the process of rolling a workpiece below the recrystallization temperature of the copper or copper alloy.

(g) The term ''drawing'' shall mean pulling the workpiece through a die or succession of dies to reduce the diameter or alter its shape.

(h) The term ''extrusion'' shall mean the application of pressure to a copper workpiece, forcing the copper to flow through a die orifice.

(i) The term ''extrusion heat treatment'' shall mean the spray application of water to a workpiece immediately following extrusions for the purpose of heat treatment.

(j) The term ''heat treatment'' shall mean the application or removal of heat to a workpiece to change the physical properties of the metal.

(k) The term ''pickling bath'' shall mean any chemical bath (other than alkaline cleaning) through which a workpiece is processed.

(l) The term ''pickling fume scrubber'' shall mean the process of using an air pollution control device to remove particulates and fumes from air above a pickling bath by entraining the pollutants in water.

(m) The term ''pickling rinse'' shall mean a rinse, other than an alkaline cleaning rinse, through which a workpiece is processed. A rinse consisting of a series of rinse tanks is considered as a single rinse.

(n) The term ''off-kilogram (off-pound)'' shall mean the mass of copper or copper alloy removed from a forming or ancillary operation at the end of a process cycle for transfer to a different machine or process.

(o) The term ''rolling'' shall mean the reduction in the thickness or diameter of a workpiece by passing it between rollers.

(p) The term ''solution heat treatment'' shall mean the process introducing a workpiece into a quench bath for the purpose of heat treatment following rolling, drawing or extrusion.

(q) The term ''spent lubricant'' shall mean water or an oil-water mixture which is used in forming operations to reduce friction, heat and wear and ultimately discharged.

(r) The term ''Total Toxic Organics (TTO)'' shall mean the sum of the masses or concentrations of each of the following toxic organic compounds which is found at a concentration greater than 0.010 mg/l.

Benzene
1,1,1-Trichloroethane chloroform
2,6-Dinitrotoluene ethylbenzene methylene chloride napthalene
N-nitrosodiphenylamine anthracene phenanthrene toluene trichloroethylene

(s) The term ''alkaline cleaning rinse for forged parts'' shall mean a rinse following an alkaline cleaning bath through which a forged part is processed. A rinse consisting of a series of rinse tanks is considered as a single rinse.

(t) The term ''pickling rinse for forged parts'' shall mean a rinse, other than an alkaline cleaning rinse, through which forged parts are processed. A rinse consisting of a series of rinse tanks is considered as a single rinse.

(u) The term ''tumbling or burnishing'' shall mean the process of polishing, deburring, removing sharp

corners, and generally smoothing parts for both cosmetic and functional purposes, as well as the process of washing the finished parts and cleaning the abrasion media.

(v) The term ''surface coating'' shall mean the process of coating a copper workpiece as well as the associated surface finishing and flattening.

(w) The term ''miscellaneous waste stream'' shall mean the following additional waste streams related to forming copper: hydrotesting, sawing, surface milling, and maintenance.

(x) The term ''precious metals'' shall mean gold, platinum, palladium and silver and their alloys. Any alloy containing 30 or greater percent by weight of precious metals is considered a precious metal.

(y) The term ''beryllium copper alloy'' shall mean any copper alloy that is alloyed to contain 0.10 percent or greater beryllium.

[48 FR 36957, Aug. 15, 1983; 48 FR 50718, Nov. 3, 1983, as amended at 50 FR 34334, Aug. 23, 1985; 51 FR 7571, Mar. 5, 1986]

§ 468.03 Monitoring and reporting requirements.

The following special monitoring requirements apply to all facilities controlled by this regulation.

(a) The ''monthly average'' regulatory values shall be the basis for the monthly average discharge in direct discharge permits and for pretreatment standards. Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

(b) As an alternate monitoring procedure for TTO, indirect dischargers may monitor for oil and grease and meet the alternate monitoring standards for oil and grease established for PSES and PSNS. Any indirect discharger meeting the alternate monitoring oil and grease standards shall be considered to meet the TTO standard.

§ 468.04 Compliance date for PSES.

The compliance date for pretreatment standards for existing sources is August 15, 1986.

[48 FR 36957, Aug. 15, 1983, as amended at 48 FR 41410, Sept. 15, 1983]

Subpart A—Copper Forming Subcategory

§ 468.10 Applicability; description of the copper forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introduction of pollutants into publicly owned treatment works from the forming of copper and copper alloys except beryllium copper alloys.

[51 FR 7571, Mar. 5, 1986]

§ 468.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

(a) Subpart A—Hot Rolling Spent Lubricant BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy hot rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy hot rolled	
Chromium	0.045	0.018
Copper	0.195	0.103
Lead	0.015	0.013
Nickel	0.197	0.130
Zinc	0.150	0.062
Oil and grease	2.060	1.236
TSS	4.223	2.008
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) Subpart A—Cold Rolling Spent Lubricant BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy cold rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy cold rolled	
Chromium	0.166	0.068
Copper	0.720	0.379
Lead	0.056	0.049
Nickel	0.727	0.481
Zinc	0.553	0.231
Oil and grease	7.580	4.548
TSS	15.539	7.390
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(c) Subpart A—Drawing Spent Lubricant BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy drawn English units—pounds per 1,000,000 off-pounds of copper or copper alloy drawn	
Chromium	0.037	0.015
Copper	0.161	0.085
Lead	0.012	0.011
Nickel	0.163	0.107
Zinc	0.124	0.051
Oil and grease	1.700	1.020
TSS	3.485	1.657
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(d) Subpart A—Solution Heat Treatment BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated	
Chromium	1.118	0.457
Copper	4.827	2.541
Lead	0.381	0.330
Nickel	4.878	3.227
Zinc	3.709	1.550
Oil and grease	50.820	30.492
TSS	104.181	49.549
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(e) Subpart A—Extrusion Heat Treatment BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated on an extrusion press English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated on an extrusion press	
Chromium	0.00088	0.00036
Copper	0.003	0.002
Lead	0.0003	0.00026
Nickel	0.003	0.002
Zinc	0.002	0.001
Oil and grease	0.040	0.024
TSS	0.082	0.039
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) Subpart A—Annealing With Water BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper annealed with water English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with water	
Chromium	2.493	1.020
Copper	10.767	5.667
Lead	0.850	0.736
Nickel	10.880	7.197
Zinc	8.273	3.456
Oil and grease	113.340	68.004
TSS	232.347	110.506
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(g) Subpart A—Annealing With Oil BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with oil English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
Oil and grease	0	0
TSS	0	0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(h) Subpart A—Alkaline Cleaning Rinse BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy alkaline cleaned	
Chromium	1.854	0.758
Copper	8.006	4.214
Lead	0.632	0.547
Nickel	8.090	5.351
Zinc	6.152	2.570
Oil and grease	84.280	50.568
TSS	172.774	82.173
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(i) Subpart A—Alkaline Cleaning Rinse for Forged Parts BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts alkaline cleaned	
Chromium	5.562	2.275
Copper	24.019	12.642
Lead	1.896	1.643
Nickel	24.272	16.055
Zinc	18.457	7.711
Oil and grease	252.840	151.704
TSS	518.322	246.519
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(j) Subpart A—Alkaline Cleaning Bath BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy parts alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts alkaline cleaned	
Chromium	0.020	0.0084
Copper	0.089	0.046
Lead	0.0070	0.0060
Nickel	0.089	0.059
Zinc	0.068	0.028
Oil and grease	0.93	0.56
TSS	1.91	0.91
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(k) Subpart A—Pickling Rinse BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per/1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	1.593	0.651
Copper	6.881	3.622
Lead	0.543	0.470
Nickel	6.954	4.599
Zinc	5.288	2.209
Oil and grease	72.440	43.464
TSS	148.502	70.629
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(l) Subpart A—Pickling Rinse for Forged Parts BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts pickled English units—pounds per/1,000,000 off-pounds of copper or copper alloy forged parts pickled	
romium	1.723	0.705
Copper	7.444	3.918
Lead	0.587	0.509
Nickel	7.522	4.975
Zinc	5.720	2.389
Oil and grease	78.360	47.016
TSS	160.638	76.401
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(m) Subpart A—Pickling Bath BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickle	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070
Oil and grease	2.320	1.392
TSS	4.756	2.262
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(n) Subpart A—Pickling Fume Scrubber BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381
Oil and grease	12.520	7.512
TSS	25.666	12.207
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(o) Subpart A—Tumbling or Burnishing BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy tumbled or burnished English units—pounds per 1,000,000 off-pounds of copper or copper alloy tumbled or burnished	
Chromium	0.256	0.104
Copper	1.107	0.583
Lead	0.087	0.075
Nickel	1.119	0.740
Zinc	0.851	0.355
Oil and grease	11.660	6.996
TSS	23.903	11.368
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(p) Subpart A—Surface Coating BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy surface coated English units—pounds per 1,000,000 off-pounds of copper or copper alloy surface coated	
Chromium	0.326	0.133
Copper	1.411	0.743
Lead	0.111	0.096
Nickel	1.426	0.943
Zinc	1.084	0.453
Oil and grease	14.680	8.916
TSS	30.463	14.488
ph	([1])	([1])

[1] Within the range of 7.5 to 10.0 at all times.

(q) Subpart A—Miscellaneous Waste Streams BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy formed English units—pounds per 1,000,000 off-pounds of copper or copper alloy formed	
Chromium	0.009	0.003
Copper	0.041	0.021
Lead	0.003	0.002
Nickel	0.041	0.027
Zinc	0.031	0.013
Oil and grease	0.436	0.261
TSS	0.893	0.425
pH	([1])	([1])

[1] Within the range of 7.5 to 10.0 at all times.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) Subpart A—Hot Rolling Spent Lubricant BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy hot rolled English Units—pounds per 1,000,000 off-pounds of copper or copper alloy hot rolled	
Chromium	0.045	0.018
Copper	0.195	0.103
Lead	0.015	0.013
Nickel	0.197	0.130
Zinc	0.150	0.062

(b) Subpart A—Cold Rolling Spent Lubricant BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy cold rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy cold rolled	
Chromium	0.166	0.068
Copper	0.720	0.379
Lead	0.056	0.049
Nickel	0.727	0.481
Zinc	0.553	0.231

(c) Subpart A—Drawing Spent Lubricant BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy drawn English units—pounds per 1,000,000 off-pounds of copper or copper alloy drawn	
Chromium	0.037	0.015
Copper	0.161	0.085
Lead	0.012	0.011
Nickel	0.163	0.107
Zinc	0.124	0.051

(d) Subpart A—Solution Heat Treatment BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated	
Chromium	0.284	0.116
Copper	1.227	0.646
Lead	0.096	0.083
Nickel	1.240	0.820
Zinc	0.943	0.394

(e) Subpart A—Extrusion Heat Treatment BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric Units—mg/off-kg of copper or copper alloy heat treated on an extrusion press English Units—pounds per/1,000,000 off-pounds of copper or copper alloy heat treated on an extrusion press	
Chromium	0.00088	0.00036
Copper	0.003	0.0020
Lead	0.0003	0.00026
Nickel	0.003	0.002
Zinc	0.002	0.001

(f) Subpart A—Annealing with Water BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric Units—mg/off-kg of copper or copper alloy annealed with water English Units—pounds per/1,000,000 off-pounds of copper or copper alloy annealed with water	
Chromium	0.545	0.223
Copper	2.356	1.240
Lead	0.186	0.161
Nickel	2.380	1.574
Zinc	1.810	0.756

(g) Subpart A—Annealing with Oil BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with oil English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0

(h) Subpart A—Alkaline Cleaning Rinse BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy alkaline cleaned	
Chromium	1.854	0.758
Copper	8.006	4.214
Lead	0.632	0.547
Nickel	8.090	5.351
Zinc	6.152	2.570

(i) Subpart A—Alkaline Cleaning Rinse for Forged Parts BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric Units—mg/off-kg of copper or copper alloy forged parts alkaline cleaned English Units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts alkaline cleaned	
Chromium	5.562	2.275
Copper	24.019	12.642
Lead	1.896	1.643
Nickel	24.272	16.055
Zinc	18.457	7.711

(j) Subpart A—Alkaline Cleaning Bath BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric Units—mg/off-kg of copper or copper alloy alkaline cleaned English Units—pounds per 1,000,000 off-pounds of copper or copper alloy alkaline cleaned	
Chromium	0.020	0.0084
Copper	0.088	0.046
Lead	0.0070	0.0060
Nickel	0.089	0.059
Zinc	0.068	0.028

(k) Subpart A—Pickling Rinse BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric Units—mg/off-kg of copper or copper alloy pickled English Units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.574	0.235
Copper	2.481	1.306
Lead	0.195	0.169
Nickel	2.507	1.658
Zinc	1.906	0.796

(l) Subpart A—Pickling Rinse for Forged Parts BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric Units—mg/off-kg of copper or copper alloy forged parts pickled English Units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts pickled	
Chromium	1.723	0.705
Copper	7.444	3.918
Lead	0.587	0.509
Nickel	7.522	4.975
Zinc	5.720	2.389

(m) Subpart A—Pickling Bath BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070

(n) Subpart A—Pickling Fume Scrubber BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381

(o) Subpart A—Tumbling or Burnishing BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy tumbled or burnished English units—pound per 1,000,000 off-pounds of copper or copper alloy tumbled or burnished	
Chromium	0.256	0.104
Copper	1.107	0.583
Lead	0.087	0.075
Nickel	1.119	0.740
Zinc	0.851	0.355

(p) Subpart A—Surface Coating BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy surface coated English units—pound per 1,000,000 off-pounds of copper or copper alloy surface coated	
Chromium	0.326	0.133
Copper	1.411	0.743
Lead	0.111	0.096
Nickel	1.426	0.943
Zinc	1.084	0.453

(q) Subpart A—Miscellaneous Waste Streams BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy formed English units—pounds per 1,000,000 off-pounds of copper or copper alloy formed	
Chromium	0.009	0.003
Copper	0.041	0.021
Lead	0.003	0.002
Nickel	0.041	0.027
Zinc	0.031	0.013

§ 468.13 New source performance standards (NSPS).

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) Subpart A—Hot Rolling Spent Lubricant NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy hot rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy hot rolled	
Chromium	0.038	0.015
Copper	0.131	0.062
Lead	0.010	0.0092
Nickel	0.056	0.038
Zinc	0.105	0.043
Oil and grease	1.030	1.030
TSS	1.545	1.236
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) Subpart A—Cold Rolling Spent Lubricant NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy cold rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy cold rolled	
Chromium	0.140	0.056
Copper	0.485	0.231
Lead	0.037	0.034
Nickel	0.208	0.140
Zinc	0.386	0.159
Oil and grease	3.790	3.790
TSS	5.685	4.548
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) Subpart A—Drawing Spent Lubricant NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy drawn English units—pounds per 1,000,000 off-pounds of copper or copper alloy drawn	
Chromium	0.031	0.012
Copper	0.108	0.051
Lead	0.0085	0.0076
Nickel	0.046	0.031
Zinc	0.086	0.035
Oil and grease	0.85	0.85
TSS	1.275	1.020
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) Subpart A—Solution Heat Treatment NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy drawn English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated	
Chromium	0.239	0.096
Copper	0.826	0.394
Lead	0.064	0.058
Nickel	0.355	0.239
Zinc	0.658	0.271
Oil and grease	6.460	6.460
TSS	9.690	7.752
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(e) Subpart A—Extrusion Heat Treatment NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated on an extrusion press English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated on and extrusion press	
Chromium	0.00074	0.00030
Copper	0.0020	0.0010
Lead	0.00020	0.00018
Nickel	0.0010	0.00074
Zinc	0.0020	0.00084
Oil and grease	0.020	0.020
TSS	0.030	0.024
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) Subpart A—Annealing with Water NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with water English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with water	
Chromium	0.458	0.186
Copper	1.587	0.756
Lead	0.124	0.111
Nickel	0.682	0.458
Zinc	1.264	0.520
Oil and grease	12.400	12.400
TSS	18.600	14.880
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(g) Subpart A—Annealing with Oil NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with oil English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
Oil and grease	0	0
TSS	0	0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(h) Subpart A—Alkaline Cleaning Rinse NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy alkaline cleaned	
Chromium	1.559	0.632
Copper	5.393	2.570
Lead	0.421	0.379
Nickel	2.317	1.559
Zinc	4.298	1.769
Oil and grease	42.140	42.140
TSS	63.210	50.568
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(i) Subpart A—Alkaline Cleaning Rinse for Forged Parts NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts alkaline cleaned	
	English units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts alkaline cleaned	
Chromium	4.677	1.896
Copper	16.181	7.711
Lead	1.264	1.137
Nickel	6.953	4.677
Zinc	12.894	5.309
Oil and grease	126.420	126.420
TSS	189.630	151.704
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(j) Subpart A—Alkaline Cleaning Bath NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned	
	English units—pounds per 1,000,000 off-pounds of copper or copper alloy alkaline cleaned	
Chromium	0.017	0.0070
Copper	0.059	0.028
Lead	0.0046	0.0042
Nickel	0.025	0.017
Zinc	0.047	0.019
Oil and grease	0.46	0.46
TSS	0.70	0.56
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(k) Subpart A—Pickling Rinse NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled	
	English units—pounds per/1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.216	0.087
Copper	0.748	0.356
Lead	0.058	0.052
Nickel	0.321	0.216
Zinc	0.596	0.245
Oil and grease	5.850	5.850
TSS	8.775	7.020
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(l) Subpart A—Pickling Rinse for Forged Parts NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts pickled	
	English units—pounds per/1,000,000 off-pounds of copper or copper alloy forged parts pickled	
Chromium	0.649	0.263
Copper	2.246	1.070
Lead	0.175	0.157
Nickel	0.965	0.649
Zinc	1.790	0.737
Oil and grease	17.550	17.550
TSS	26.325	21.060
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(m) Subpart A—Pickling Bath NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled	
	English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.042	0.017
Copper	0.148	0.070
Lead	0.011	0.010
Nickel	0.063	0.042
Zinc	0.118	0.048
Oil and grease	1.160	1.160
TSS	1.740	1.392
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(n) Subpart A—Pickling Fume Scrubber NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled. English units-pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.231	0.093
Copper	0.801	0.381
Lead	0.062	0.056
Nickel	0.344	0.231
Zinc	0.638	0.262
Oil and grease	6.260	6.260
TSS	9.390	7.512
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(o) Subpart A—Tumbling or Burnishing NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper tumbled or burnished English units—pounds per 1,000,000 off-pounds of copper or copper alloy tumbled or burnished	
Chromium	0.215	0.087
Copper	0.746	0.355
Lead	0.058	0.052
Nickel	0.320	0.215
Zinc	0.594	0.244
Oil and grease	5.830	5.830
TSS	8.745	6.996
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(p) Subpart A—Surface Coating NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy surface coated English units—pounds per 1,000,000 off-pounds of copper or copper alloy surface coated	
Chromium	0.274	0.111
Copper	0.951	0.453
Lead	0.074	0.066
Nickel	0.408	0.274
Zinc	0.757	0.312
Oil and grease	7.430	7.430
TSS	11.145	8.916
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) Subpart A—Miscellaneous Waste Streams NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy formed English units—pounds/1,000,000 off-pounds of copper or copper alloy formed	
Chromium	0.008	0.003
Copper	0.027	0.013
Lead	0.0021	0.0019
Nickel	0.011	0.008
Zinc	0.022	0.009
Oil and grease	0.218	0.218
TSS	0.327	0.261
pH	(1)	(1)

Within the range of 7.5 to 10.0 at all times.

[48 FR 36957, Aug. 15, 1983; 48 FR 50718, Nov. 3, 1983]

§ 468.14 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources:

(a) Subpart A—Hot Rolling Spent Lubricant PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy hot rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy hot rolled	
Chromium	0.045	0.018
Copper	0.195	0.103
Lead	0.015	0.013
Nickel	0.197	0.130
Zinc	0.150	0.062
TTO	0.066	0.035
Oil and grease [1]	2.060	1.236

[1] For alternate monitoring.

(b) Subpart A—Cold Rolling Spent Lubricant PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy cold rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy cold rolled	
Chromium	0.166	0.068
Copper	0.720	0.379
Lead	0.056	0.049
Nickel	0.727	0.481
Zinc	0.553	0.231
TTO	0.246	0.128
Oil and grease [1]	7.580	4.548

[1] For alternate monitoring

(c) Subpart A—Drawing Spent Lubricant PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy drawn English units—pounds per 1,000,000 off-pounds of copper or copper alloy drawn	
Chromium	0.037	0.015
Copper	0.161	0.085
Lead	0.012	0.011
Nickel	0.163	0.107
Zinc	0.124	0.051
TTO	0.055	0.028
Oil and grease [1]	1.700	1.020

[1] For alternate monitoring.

(d) Subpart A—Solution Heat Treatment PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated	
Chromium	0.284	0.116
Copper	1.227	0.646
Lead	0.096	0.083
Nickel	1.240	0.820
Zinc	0.943	0.394
TTO	0.419	0.219
Oil and grease [1]	12.920	7.752

[1] For alternate monitoring.

(e) Subpart A—Extrusion Heat Treatment PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated on an extrusion press English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated on an extrusion press	
Chromium	0.00088	0.00036
Copper	0.0030	0.0020
Lead	0.00030	0.00026
Nickel	0.0030	0.0020
Zinc	0.0020	0.0010
TTO	0.0010	0.00068
Oil and grease [1]	0.040	0.024

[1] For alternate monitoring.

(f) Subpart A—Annealing with Water PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with water English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with water	
Chromium	0.545	0.223
Copper	2.356	1.240
Lead	0.186	0.161
Nickel	2.380	1.574
Zinc	1.810	0.756
TTO	0.806	0.421
Oil and grease [1]	24.800	14.880

[1] For alternate monitoring.

(g) Subpart A—Annealing With Oil PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with oil English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
TTO	0	0
Oil and grease [1]	0	0

[1] For alternate monitoring.

(h) Subpart A—Alkaline Cleaning Rinse PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned English units—pounds per 1,000,000-off pounds of copper or copper alloy alkaline cleaned	
Chromium	1.854	0.758
Copper	8.006	4.214
Lead	0.632	0.547
Nickel	8.090	5.351
Zinc	6.152	2.570
TTO	2.739	1.432
Oil and grease [1]	84.280	50.568

[1] For alternate monitoring.

(i) Subpart A—Alkaline Cleaning Rinse for Forged Parts PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts alkaline cleaned English units—pounds per 1,000,000 off—pounds of copper or copper alloy forged parts alkaline cleaned	
Chromium	5.562	2.275
Copper	24.019	12.642
Lead	1.896	1.643
Nickel	24.272	16.055
Zinc	18.457	7.711
TTO	8.217	4.298
Oil and grease [1]	252.840	151.704

[1] For alternate monitoring.

(j) Subpart A—Alkaline Cleaning Bath PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned English units—pounds per 1,000,000 off—pounds of copper or copper alloy alkaine cleaned	
Chromium	0.020	0.0084
Copper	0.088	0.046
Lead	0.0070	0.0060
Nickel	0.089	0.059
Zinc	0.068	0.028
TTO	0.030	0.015
Oil and grease [1]	0.93	0.56

[1] For alternate monitoring.

(k) Subpart A—Pickling Rinse PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 of pounds of copper or copper alloy pickled	
Chromium	0.574	0.235
Copper	2.481	1.306
Lead	0.195	0.169
Nickel	2.507	1.658
Zinc	1.906	0.796
TTO	0.848	0.444
Oil and grease [1]	26.120	15.672

[1] For alternate monitoring.

(l) Subpart A—Pickling Rinse for Forged Parts PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts pickled	
Chromium	1.723	0.705
Copper	7.444	3.918
Lead	0.587	0.509
Nickel	7.522	4.975
Zinc	5.720	2.389
TTO	2.546	1.332
Oil and grease [1]	78.360	47.016

[1] For alternate monitoring.

(m) Subpart A—Pickling Bath PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070
TTO	0.075	0.039
Oil and grease [1]	2.320	1.392

[1] For alternate monitoring.

(n) Subpart A—Pickling Fume Scrubber PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381
TTO	0.406	0.212
Oil and grease [1]	12.520	7.512

[1] For alternate monitoring.

(o) Subpart A—Tumbling or Burnishing PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy tumbled or burnished English units—pounds per 1,000,000 off-pounds of copper or copper alloy tumbled or burnished	
Chromium	0.256	0.104
Copper	1.107	0.583
Lead	0.087	0.075
Nickel	1.119	0.740
Zinc	0.851	0.355
TTO	0.378	0.198
Oil and grease [1]	11.660	6.996

[1] For alternate monitoring.

(p) Subpart A—Surface Coating PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy surface coated English units—pounds per 1,000,000 off-pounds of copper or copper alloy surface coated	
Chromium	0.326	0.133
Copper	1.411	0.743
Lead	0.111	0.096
Nickel	1.426	0.943
Zinc	1.084	0.453
TTO	0.482	0.252
Oil and grease [1]	14.860	8.916

[1] For alternate monitoring.

(q) Subpart A—Miscellaneous Waste Streams PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy formed English units—pounds per 1,000,000 off pounds of copper or copper alloy formed	
Chromium	0.009	0.003
Copper	0.041	0.021
Lead	0.003	0.002
Nickel	0.041	0.027
Zinc	0.031	0.013
TTO	0.014	0.007
Oil and grease [1]	0.436	0.261

[1] For alternate monitoring.

[48 FR 36957, Aug. 15, 1983, as amended at 51 FR 22521, June 20, 1986]

§ 468.15 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment sources for new sources:

(a) Subpart A—Hot Rolling Spent Lubricant PSNS.

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy hot rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy hot rolled	
Chromium	0.038	0.015
Copper	0.131	0.062
Lead	0.010	0.0092
Nickel	0.056	0.038
Zinc	0.105	0.043
TTO	0.035	0.035
Oil and grease [1]	1.030	1.030

[1] For alternate monitoring.

(b) Subpart A—Cold Rolling Spent Lubricant PSNS.

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy cold rolled English units—pounds per 1,000,000 off-pounds of copper or copper alloy cold rolled	
Chromium	0.140	0.056
Copper	0.485	0.231
Lead	0.037	0.034
Nickel	0.208	0.140
Zinc	0.386	0.159
TTO	0.128	0.128
Oil and grease [1]	3.790	3.790

[1] For alternate monitoring.

(c) Subpart A—Drawing Spent Lubricant PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy drawn English units—pounds per 1,000,000 off-pounds of copper or copper alloy drawn	
Chromium	0.031	0.012
Copper	0.108	0.051
Lead	0.0085	0.0076
Nickel	0.046	0.031
Zinc	0.086	0.035
TTO	0.028	0.028
Oil and grease [1]	0.850	0.850

[1] For alternate monitoring.

(d) Subpart A—Solution Heat Treatment PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated	
Chromium	0.239	0.096
Copper	0.826	0.394
Lead	0.064	0.058
Nickel	0.355	0.239
Zinc	0.658	0.271
TTO	0.219	0.219
Oil and grease [1]	6.460	6.460

[1] For alternate monitoring.

(e) Subpart A—Extrusion Heat Treatment PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy heat treated on an extrusion press English units—pounds per 1,000,000 off-pounds of copper or copper alloy heat treated on an extrusion press	
Chromium	0.00074	0.00030
Copper	0.0020	0.0010
Lead	0.00020	0.00018
Nickel	0.0010	0.00074
Zinc	0.0020	0.00084
TTO	0.00068	0.00068
Oil and grease [1]	0.020	0.020

[1] For alternate monitoring.

(f) Subpart A—Annealing with Water PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with water English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with water	
Chromium	0.458	0.186
Copper	1.587	0.756
Lead	0.124	0.111
Nickel	0.682	0.458
Zinc	1.264	0.520
TTO	0.421	0.421
Oil and grease [1]	12.400	12.400

[1] For alternate monitoring.

(g) Subpart A—Annealing With Oil PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy annealed with oil English units—pounds per 1,000,000 off-pounds of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
TTO	0	0
Oil and grease [1]	0	0

[1] For alternate monitoring.

(h) Subpart A—Alkaline Cleaning Rinse PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy alkaline cleaned	
Chromium	1.559	0.632
Copper	5.393	2.570
Lead	0.421	0.379
Nickel	2.317	1.559
Zinc	4.298	1.769
TTO	1.432	1.432
Oil and grease [1]	42.140	42.140

[1] For alternate monitoring.

(i) Subpart A—Alkaline Cleaning Rinse for Forged Parts PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts alkaline cleaned	
Chromium	4.677	1.896
Copper	16.181	7.711
Lead	1.264	1.137
Nickel	6.953	4.677
Zinc	12.894	5.309
TTO	4.298	4.298
Oil and grease [1]	126.420	126.420

[1] For alternate monitoring.

(j) Subpart A—Alkaline Cleaning Bath PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy alkaline cleaned English units—pounds per 1,000,000 off-pounds of copper or copper alloy alkaline cleaned	
Chromium	0.017	0.0070
Copper	0.059	0.028
Lead	0.0046	0.0042
Nickel	0.025	0.017
Zinc	0.047	0.019
TTO	0.015	0.015
Oil and grease [1]	0.46	0.46

[1] For alternate monitoring.

(k) Subpart A—Pickling Rinse PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.216	0.087
Copper	0.748	0.356
Lead	0.058	0.052
Nickel	0.321	0.216
Zinc	0.596	0.245
TTO	0.198	0.198
Oil and grease [1]	5.850	5.850

[1] For alternate monitoring.

(l) Subpart A—Pickling Rinse for Forged Parts PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy forged parts pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy forged parts pickled	
Chromium	0.649	0.263
Copper	2.246	1.070
Lead	0.175	0.157
Nickel	0.965	0.649
Zinc	1.790	0.737
TTO	0.596	0.596
Oil and grease [1]	17.550	17.550

[1] For alternate monitoring.

(m) Subpart A—Pickling Bath PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.042	0.017
Copper	0.148	0.070
Lead	0.011	0.010
Nickel	0.063	0.042
Zinc	0.118	0.048
TTO	0.039	0.039
Oil and grease [1]	1.160	1.160

[1] For alternate monitoring.

(n) Subpart A—Pickling Fume Scrubber PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy pickled English units—pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.231	0.093
Copper	0.801	0.381
Lead	0.062	0.056
Nickel	0.344	0.231
Zinc	0.638	0.262
TTO	0.212	0.212
Oil and grease [1]	6.260	6.260

[1] For alternate monitoring.

(o) Subpart A—Tumbling or Burnishing PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy tumbled or burnished English units—pounds per 1,000,000 off-pounds of copper or copper alloy tumbled or burnished	
Chromium	0.215	0.087
Copper	0.746	0.355
Lead	0.058	0.052
Nickel	0.320	0.215
Zinc	0.594	0.244
TTO	0.198	0.198
Oil and grease [1]	5.830	5.830

[1] For alternate monitoring.

(p) Subpart A—Surface Coating PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy surface coated English units—pounds per 1,000,000 off-pounds of copper or copper alloy surface coated	
Chromium	0.274	0.111
Copper	0.951	0.453
Lead	0.074	0.066
Nickel	0.408	0.274
Zinc	0.757	0.312
TTO	0.252	0.252
Oil and grease [1]	7.430	7.430

[1] For alternate monitoring.

(q) Subpart A—Miscellaneous Waste Streams PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/off-kg of copper or copper alloy formed English units—pounds per 1,000,000 off-pounds of copper or copper alloy formed	
Chromium	0.008	0.003
Copper	0.027	0.013
Lead	0.0021	0.0019
Nickel	0.011	0.008
Zinc	0.022	0.009
TTO	0.007	0.007
Oil and grease [1]	0.218	0.218

[1] For alternate monitoring.

[48 FR 36957, Aug. 15, 1983; 48 FR 50719, Nov. 3, 1983]

§ 468.16 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT). [Reserved]

Subpart B—Beryllium Copper Forming Subcategory

§ 468.20 Applicability; description of the beryllium copper forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introduction of pollutants into publicly owned treatment works from the forming of beryllium copper alloys.

[51 FR 7571, Mar. 5, 1986]

PART 469—ELECTRICAL AND ELECTRONIC COMPONENTS POINT SOURCE CATEGORY

Subpart A—Semiconductor Subcategory

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Subpart B—Electronic Crystals Subcategory

469.20 Applicability.
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Subpart C—Cathode Ray Tube Subcategory

469.30 Applicability.
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469.35 New source performance standards (NSPS).
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Subpart D—Luminescent Materials Subcategory

469.40 Applicability.
469.41 Specialized definitions.
469.42 New source performance standards (NSPS).
469.43 Pretreatment standards for new sources (PSNS).

AUTHORITY: Secs. 301, 304, 306, 307, 308, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. 1311, 1314, 1316, 1317, 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217, unless otherwise noted.

SOURCE: 48 FR 15394, Apr. 8, 1983, unless otherwise noted.

Subpart A—Semiconductor Subcategory

§ 469.10 Applicability.

The provisions of this subpart are applicable to discharges resulting from all process operations associated with the manufacture of semiconductors, except sputtering, vapor deposition, and electroplating.

§ 469.11 Compliance dates.

The compliance deadline for the BAT fluoride limitation shall be as soon as possible as determined by the permit writer, but no later than November 8, 1985. The compliance deadline for the BAT and BCT limitations for total toxic organics (TTO) and pH, respectively, is as soon as possible as determined by the permit writer, but in no event later than July 1, 1984. The compliance date for PSES for TTO is July 1, 1984.

§ 469.12 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term ''total toxic organics (TTO)'' means the sum of the concentrations for each of the following

toxic organic compounds which is found in the discharge at a concentration greater than ten (10) micrograms per liter:

1,2,4 Trichlorobenzene chloroform
1,2 Dichlorobenzene
1,3, Dichlorobenzene
1,4, Dichlorobenzene ethylbenzene
1,1,1 Trichloroethane methylene chloride naphthalene
2 Nitrophenol phenol bis (2-ethylhexyl) phthalate tetrachloroethylene toluene trichloroethylene
2 Chlorophenol
2,4 Dichlorophenol
4 Nitrophenol pentachlorophenol di-n-butyl phthalate anthracene
1,2 Diphenylhydrazine isophorone butyl benzyl pthalate
1,1 Dichloroethylene
2,4,6 Trichlorophenol carbon tetrachloride
1,2 Dichloroethane
1,1,2 Trichloroethane dichlorobromomethane

(b) The term ''semiconductors'' means solid state electrical devices which perform functions such as information processing and display, power handling, and interconversion between light energy and electrical energy.

(c) The term ''manufacture of semiconductors'' means those processes, beginning with the use of crystal wafers, which lead to or are associated with the manufacture of semiconductor devices.

[48 FR 15394, Apr. 8, 1983, as amended at 48 FR 45250, Oct. 4, 1983]

§469.13 Monitoring.

(a) In lieu of monitoring for TTO, the permitting authority may allow direct dischargers to include the following certification as a ''comment'' on the Discharge Monitoring Report required by §122.44 (i), formerly §122.62(i): ''Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the permitting authority.''

(b) In requesting that no monitoring of TTO be required, the direct discharger shall submit a solvent management plan that specifies to the permitting authority's satisfaction the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for assuring that toxic organics do not routinely spill or leak into the wastewater. The permitting authority shall incorporate the plan as a provision of the permit.

(c) In lieu of monitoring for TTO, the control authority may allow industrial users of POTWs to make the following certification as a comment to the periodic reports required by §403.12(e): ''Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the control authority.''

(d) In requesting that no monitoring be required, industrial users of POTWs shall submit a solvent management plan that specifies to the control authority's satisfaction the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for assuring that toxic organics do not routinely spill or leak into the wastewater.

(Approved by the Office of Management and Budget under control number 2040–0074)

[48 FR 15394, Apr. 8, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§469.14 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32 any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

SUBPART A—SEMICONDUCTOR BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	([2])
pH	([3])	([3])

[1] Total toxic organics.
[2] Not applicable.
[3] Within the range of 6.0 to 9.0.

§ 469.15 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32 any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

SUBPART A—SEMICONDUCTOR BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	([2])
Fluoride (T)	32.0	17.4

[1] Total toxic organics.
[2] Not applicable.

§ 469.16 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

(a)

SUBPART A—SEMICONDUCTOR PSES EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	([2])

[1] Total toxic organics.
[2] Not applicable.

(b) An existing source submitting a certification in lieu of monitoring pursuant to § 469.13 (c) and (d) of this regulation must implement the solvent management plan approved by the control authority.

§ 469.17 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS).

SUBPART A—SEMICONDUCTOR NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	([2])
Fluoride (T)	32.0	17.4
pH	([2])	([3])

[1] Total toxic organics.
[2] Not applicable.
[3] Within the range of 6.0 to 9.0.

§ 469.18 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

(a)

SUBPART A—SEMICONDUCTOR PSNS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO[1]	1.37	([2])

[1] Total toxic organics.
[2] Not applicable.

(b) A new source submitting a certification in lieu of monitoring pursuant to §469.13 (c) and (d) of this regulation must implement the solvent management plan approved by the control authority.

§469.19 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT):

SUBPART A—SEMICONDUCTOR BCT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
pH	([1])	([1])

[1] Within the range 6.0 to 9.0.

Subpart B—Electronic Crystals Subcategory

§469.20 Applicability.

(a) The provisions of this subpart are applicable to discharges resulting from the manufacture of electronic crystals.

§469.21 Compliance dates.

The compliance date for the BAT fluoride limitation is as soon as possible as determined by the permit writer but in no event later than November 8, 1985. The compliance date for PSES for total toxic organics (TTO) is July 1, 1984 and for arsenic is November 8, 1985.

[48 FR 45250, Oct. 4, 1983, as amended at 49 FR 5923, Feb. 16, 1984]

§469.22 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term ''total toxic organics (TTO)'' means the sum of the concentrations for each of the following toxic organic compounds which is found in the discharge at a concentration greater than ten (10) micrograms per liter:

1,2,4 Trichlorobenzene chloroform
1,2 Dichlorobenzene
1,3, Dichlorobenzene
1,4, Dichlorobenzene ethylbenzene
1,1,1 Trichloroethane methylene chloride naphthalene
2 Nitrophenol phenol bis (2-ethylhexyl) phthalate tetrachloroethylene toluene trichloroethylene
2 Chlorophenol
2,4 Dichlorophenol
4 Nitrophenol pentachlorophenol di-n-butyl phthalate anthracene
1,2 Diphenylhydrazine isophorone butyl benzyl pthalate
1,1 Dichloroethylene
2,4,6 Trichlorophenol carbon tetrachloride
1,2 Dichloroethane
1,1,2 Trichloroethane dichlorobromomethane

(b) The term ''electronic crystals'' means crystals or crystalline material which because of their unique structural and electronic properties are used in electronic devices. Examples of these crystals are crystals comprised of quartz, ceramic, silicon, gallium arsenide, and idium arsenide.

(c) The term ''manufacture of electronic crystals'' means the growing of crystals and/or the production of crystal wafers for use in the manufacture of electronic devices.

[48 FR 15394, Apr. 8, 1983, as amended at 48 FR 45250, Oct. 4, 1983]

§469.23 Monitoring.

The certification alternative to monitoring for Total Toxic Organics (TTO) described in §469.13 (a), (b), (c), and (d) is applicable to this subpart.

(Approved by the Office of Management and Budget under control number 2040–0074)

[48 FR 15394, Apr. 8, 1983, as amended at 50 FR 4515, Jan. 31, 1985]

§ 469.24 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

SUBPART B—ELECTRONIC CRYSTALS BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	([3])
Arsenic (T) [2]	2.09	0.83
Fluoride (T)	32.0	17.4
TSS	61.0	23.0
pH	([4])	([4])

[1] Total toxic organics.
[2] The arsenic (T) limitation only applies to manufacturers of gallium or indium arsenide crystals.
[3] Not applicable.
[4] Within the range of 6.0 to 9.0.

§ 469.25 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically available (BAT):

SUBPART B—ELECTRONIC CRYSTALS BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	([3])
Arsenic [2]	2.09	0.83
Fluoride	32.0	17.4

[1] Total toxic organics.
[2] The arsenic limitation only applies to manufacturers of gallium or indium arsenide crystals.
[3] Not applicable.

§ 469.26 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

SUBPART B—ELECTRONIC CRYSTALS PSES EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO [1]	1.37	([2])
Arsenic (T) [3]	2.09	0.83

[1] Total toxic organics.
[2] Not applicable.
[3] The arsenic (T) limitation only applies to manufacturers of gallium or indium arsenide crystals.

(b) An existing source submitting a certification in lieu of monitoring pursuant to § 469.13 (c) and (d) of this regulation must implement the solvent management plan approved by the control authority.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

§ 469.27 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

SUBPART B—ELECTRONIC CRYSTALS NSPS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter(mg/l)	
TTO [1]	1.37	([2])
Arsenic(T) [3]	2.09	0.83
Fluoride(T)	32.0	17.4
TSS	61.0	23.0
pH	([4])	([4])

[1] Total toxic organics.
[2] Not applicable.
[3] The arsenic(T) limitation only applies to manufacturers of gallium or indium arsenide crystals.
[4] Within the range of 6.0 to 9.0.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

§469.28 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

(a)

SUBPART B—ELECTRONIC CRYSTALS PSNS EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TTO[1]	1.37	([2])
Arsenic (T)[3]	2.09	0.83

[1] Total toxic organics.
[2] Not applicable.
[3] The arsenic (T) limitation only applies to manufacturers of gallium or indium arsenide crystals.

(b) A new source submitting a certification in lieu of monitoring pursuant to §469.13(c) and (d) of this regulation must implement the solvent management plan approved by the control authority.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

§469.29 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT).

Except as provided in 40 CFR 125.30 through 32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollution control technology (BCT):

SUBPART B—ELECTRONIC CRYSTALS BCT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Milligrams per liter (mg/l)	
TSS	61.0	23.0
pH	([1])	([1])

[1] Within the range of 6.0 to 9.0.

[48 FR 15394, Apr. 8, 1983. Redesignated at 48 FR 45250, Oct. 4, 1983]

Subpart C—Cathode Ray Tube Subcategory

AUTHORITY: Secs. 301, 304, 306, 307, 308, 309, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. 1311, 1314, 1316, 1317, 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217).

SOURCE: 48 FR 55704, Dec. 14, 1983, unless otherwise noted.

§469.30 Applicability.

(a) The provisions of this subpart are applicable to discharges resulting from the manufacture of cathode ray tubes.

(b) The compliance deadline for PSES shall be no later than July 14, 1986.

[48 FR 55704, Dec. 14, 1983; 49 FR 1056, Jan. 9, 1984]

§469.31 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term ''cathode ray tubes'' means electronic devices in which electrons focus through a vacuum to generate a controlled image on a luminescent surface. This definition does not include receiving and transmitting tubes.

(b) The term ''total toxic organics (TTO)'' means the sum of the concentrations for each of the following toxic organic compounds which is found in the discharge at a concentration greater than ten (10) micrograms per liter:

1,1,1 Chloroform
Trichloroethane
Methylene chloride
Bis (2–ethylhexyl) phthalate
Toluene
Trichloroethylene

§469.32 Monitoring requirements.

The certification alternative to monitoring for TTO specified in §469.13 (a),

(b), (c) and (d), is applicable to this subpart.

(Approved by the Office of Management and Budget under control number 2040–0074)

[48 FR 55704, Dec. 14, 1983, as amended at 49 FR 34823, Sept. 4, 1984]

§ 469.34 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
TTO [1]	1.58	.....
Cadmium	0.06	0.03
Chromium	0.65	0.30
Lead	1.12	0.41
Zinc	1.38	0.56
Fluoride	35.0	18.0

[1] Total toxic organics.

§ 469.35 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
pH	([2])	([2])
TTO [1]	1.58	.....
Cadmium	0.06	0.03
Chromium	0.56	0.26
Lead	0.72	0.27
Zinc	0.80	0.33
Fluoride	35.0	18.0
TSS	46.0	24.0

[1] Total toxic organics.
[2] Within the range of 6.0 to 9.0.

§ 469.36 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
TTO [1]	1.58	.....
Cadmium	0.06	0.03
Chromium	0.56	0.26
Lead	0.72	0.27
Zinc	0.80	0.33
Fluoride	35.0	18.0

[1] Total toxic organics.

Subpart D—Luminescent Materials Subcategory

AUTHORITY: Secs. 301, 304, 306, 307, 308, 309, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. 1311, 1314, 1316, 1317, 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217).

SOURCE: 48 FR 55704, Dec. 14, 1983, unless otherwise noted.

§ 469.40 Applicability.

The provisions of this subpart are applicable to discharges resulting from the manufacture of luminescent materials.

§ 469.41 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term ''luminescent materials'' shall mean materials that emit light upon excitation by such energy sources as photons, electrons, applied voltage, chemical reactions or mechanical energy and which are specifically used as coatings in fluorescent lamps and cathode ray tubes. Luminescent materials include, but are not limited to, calcium halophosphate, yttrium oxide, zinc sulfide, and zinc-cadmium sulfide.

§ 469.42 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
pH	(1)	(1)
Cadmium	0.55	0.26
Antimony	0.10	0.04
Zinc	1.64	0.67
Fluoride	35.0	18.0
TSS	60.0	31.0

[1] Within the range of 6.0 to 9.0.

§ 469.43 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

Pollutant property	For any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium	0.55	0.26
Antimony	0.10	0.04
Zinc	1.64	0.67
Fluoride	35.0	18.0

PART 471—NONFERROUS METALS FORMING AND METAL POWDERS POINT SOURCE CATEGORY

GENERAL PROVISIONS

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471.01 Applicability.
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Subpart A—Lead-Tin-Bismuth Forming Subcategory

471.10 Applicability; description of the lead-tin-bismuth forming subcategory.
471.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.13 New source performance standards (NSPS).
471.14 Pretreatment standards for existing sources (PSES).
471.15 Pretreatment standards for new sources (PSNS).
471.16 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart B—Magnesium Forming Subcategory

471.20 Applicability; description of the magnesium forming subcategory.
471.21 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.23 New source performance standards (NSPS).
471.24 Pretreatment standards for existing sources (PSES).
471.25 Pretreatment standards for new sources (PSNS).
471.26 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart C—Nickel-Cobalt Forming Subcategory

471.30 Applicability; description of the nickel-cobalt forming subcategory.
471.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.33 New source performance standards (NSPS).
471.34 Pretreatment standards for existing sources (PSES).
471.35 Pretreatment standards for new sources (PSNS).
471.36 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart D—Precious Metals Forming Subcategory

471.40 Applicability; description of the precious metals forming subcategory.

471.41 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.43 New source performance standards (NSPS).
471.44 Pretreatment standards for existing sources (PSES).
471.45 Pretreatment standards for new sources (PSNS).
471.46 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart E—Refractory Metals Forming Subcategory

471.50 Applicability; description of the refractory metals forming subcategory.
471.51 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.53 New source performance standards (NSPS).
471.54 Pretreatment standards for existing sources (PSES).
471.55 Pretreatment standards for new sources (PSNS).
471.56 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart F—Titanium Forming Subcategory

471.60 Applicability; description of the titanium forming subcategory.
471.61 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.63 New source performance standards (NSPS).
471.64 Pretreatment standards for existing sources (PSES).
471.65 Pretreatment standards for new sources (PSNS).
471.66 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart G—Uranium Forming Subcategory

471.70 Applicability; description of the uranium forming subcategory.
471.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.73 New source performance standards (NSPS).
471.74 Pretreatment standards for existing sources (PSES). [Reserved]
471.75 Pretreatment standards for new sources (PSNS).
471.76 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart H—Zinc Forming Subcategory

471.80 Applicability; description of the zinc forming subcategory.
471.81 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.83 New source performance standards (NSPS).
471.84 Pretreatment standards for existing sources (PSES). [Reserved]
471.85 Pretreatment standards for new sources (PSNS).
471.86 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart I—Zirconium-Hafnium Forming Subcategory

471.90 Applicability; description of the zirconium-hafnium forming subcategory.

471.91 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.93 New source performance standards (NSPS).
471.94 Pretreatment standards for existing sources (PSES).
471.95 Pretreatment standards for new sources (PSNS).
471.96 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart J—Metal Powders Subcategory

471.100 Applicability; description of the metal powders subcategory.
471.101 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
471.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
471.103 New source performance standards (NSPS).
471.104 Pretreatment standards for existing sources (PSES).
471.105 Pretreatment standards for new sources (PSNS).
471.106 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

AUTHORITY: Secs. 301, 304(b), (c), (e), and (g), 306(b) and (c), 307, 308, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972 as amended by the Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314(b), (c), (e), and (g), 1316(b) and (c), and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 50 FR 34270, Aug. 23, 1985, unless otherwise noted.

GENERAL PROVISIONS

§ 471.01 Applicability.

(a) This part applies to discharges of pollutants to waters of the United States and introduction of pollutants into a publicly owned treatment works from the forming of nonferrous metals (including nonferrous metal alloys), except beryllium, copper, and aluminum and their alloys. Aluminum alloys are defined as any alloy in which aluminum is the major constituent in percent by weight. Copper alloys are defined as any alloy in which copper is the major constituent in percent by weight except when copper is alloyed with precious metals. Any copper-precious metal alloy containing 30 percent or greater precious metal is considered a precious metal alloy for the purposes of this part. Beryllium alloys are any alloy in which beryllium is present at 0.1 percent or greater. This part applies to:

(1) Forming operations, including rolling (both hot and cold), extruding, forging, drawing, swaging, cladding, and tube reducing, and

(2) Ancillary operations performed as an integral part of the forming of these metals, including casting for subsequent forming, heat treatment, surface treatment, alkaline cleaning, solvent degreasing, product testing, surface coating, sawing, grinding, tumbling, burnishing, and wet air pollution control.

(b) This part also applies to discharges of pollutants to waters of the United States and introduction of pollutants into a publicly owned treatment works from mechanical metal powder production operations, forming of parts from metal powders, and associated ancillary operations (listed in paragraph (a)(2) of this section) of:

(1) Iron, copper, and aluminum, and their alloys; and

(2) The nonferrous metals and their alloys described in paragraph (a) of this section. This part does not regulate the production of metal powders by chemical means such as precipitation. The production of metal powder as the final step in refining metal is regulated under the Nonferrous Metals Manufacturing Point Source Category regulation, 40 CFR part 421.

(c) Surface treatment includes any chemical or electrochemical treatment applied to the surface of the metal. For the purposes of this regulation, surface treatment of metals is considered to be an integral part of the forming of metals whenever it is performed at the

same plant site at which the metals are formed. Such surface treatment operations are not regulated under the Electroplating or Metal Finishing Point Source Category regulations, 40 CFR part 413 or 433, respectively.

(d) Casting is covered by this part when it is performed as an integral part of the metal forming process and takes place at the same plant site at which metals are formed. Such casting will not be regulated under the provisions of Metal Molding and Casting Point Source Category regulations, 40 CFR part 464.

(e) This part does not apply to the forming of the metals cadmium, chromium, gallium, germanium, indium, lithium, manganese, neodymium, or praseodymium.

§ 471.02 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) ''Nonferrous metal'' is any pure metal other than iron or any metal alloy for which a metal other than iron is its major constituent in percent by weight.

(b) ''Forming'' is a set of manufacturing operations in which metals and alloys are made into semifinished products by hot or cold working.

(c) ''Alkaline cleaning'' uses a solution (bath), usually detergent, to remove lard, oil, and other such compounds from a metal surface. Alkaline cleaning is usually followed by a water rinse. The rinse may consist of single or multiple stage rinsing. For the purposes of this part, an alkaline cleaning operation is defined as a bath followed by a rinse, regardless of the number of rinse stages. Each alkaline cleaning bath and rinse combination is entitled to a discharge allowance.

(d) ''Atomization'' is the process in which a stream of water or gas impinges upon a molten metal stream, breaking it into droplets which solidify as powder particles.

(e) ''Burnishing'' is a surface finishing process in which minute surface irregularities are displaced rather than removed.

(f) ''Casting'' is pouring molten metal into a mold to produce an object of desired shape.

(g) ''Cladding'' or ''metal cladding'' is the art of producing a composite metal containing two or more layers that have been metallurgically bonded together by roll bonding (co-rolling), solder application (or brazing), or explosion bonding.

(h) ''Contact cooling water'' is any wastewater which contacts the metal workpiece or the raw materials used in forming metals for the purpose of removing heat from the metal.

(i) ''Continuous casting'' is the production of sheet, rod, or other long shapes by solidifying the metal while it is being poured through an open-ended mold.

(j) ''Degreasing'' is the removal of oils and greases from the surface of the metal workpiece. This process can be accomplished with detergents as in alkaline cleaning or by the use of solvents.

(k) ''Direct chill casting'' is the pouring of molten nonferrous metal into a water-cooled mold. Contact cooling water is sprayed onto the metal as it is dropped into the mold, and the metal ingot falls into a water bath at the end of the casting process.

(l) ''Drawing'' is the process of pulling a metal through a die or succession of dies to reduce the metal's diameter or alter its cross-sectional shape.

(m) ''Dye penetrant testing'' is a nondestructive method for finding discontinuities that are open to the surface of the metal. A dye is applied to the surface of metal and the excess is rinsed off. Dye that penetrates surface discontinuities will not be rinsed away thus marking these discontinuities.

(n) ''Emulsions'' are stable dispersions of two immiscible liquids. In the Nonferrous Metals Forming and Metal Powders Point Source category, this is usually an oil and water mixture.

(o) ''Electrocoating'' is the electrodeposition of a metallic or nonmetallic coating onto the surface of a workpiece.

(p) ''Extrusion'' is the application of pressure to a billet of metal, forcing the metal to flow through a die orifice.

(q) ''Forging'' is deforming metal, usually hot, with compressive force into desired shapes, with or without dies. Where dies are used, the metal is forced to take the shape of the die.

(r) ''Grinding'' is the process of removing stock from a workpiece by the use of a tool consisting of abrasive grains held by a rigid or semi-rigid grinder. Grinding includes surface finishing, sanding, and slicing.

(s) ''Heat treatment'' is the application of heat of specified temperature and duration to change the physical properties of the metal.

(t) ''Hot pressing'' is forming a powder metallurgy compact at a temperature high enough to effect concurrent sintering.

(u) ''Hydrotesting'' is the testing of piping or tubing by filling with water and pressurizing to test for integrity.

(v) ''Impregnation'' is the process of filling pores of a formed powder part, usually with a liquid such as a lubricant, or mixing particles of a nonmetallic substance in a matrix of metal powder.

(w) ''In-process control technology'' is the conservation of chemicals and water throughout the production operations to reduce the amount of wastewater to be discharged.

(x) ''Metal powder production'' operations are mechanical process operations which convert metal to a finely divided form.

(y) ''Milling'' is the mechanical treatment of a nonferrous metal to produce powder, or to coat one component of a powder mixture with another.

(z) ''Neat oil'' is a pure oil with no or few impurities added. In nonferrous metals forming, its use is mostly as a lubricant.

(aa) ''Powder forming'' includes forming and compressing powder into a fully dense finished shape, and is usually done within closed dies.

(bb) ''Precious metals'' include gold, platinum, palladium, and silver and their alloys. Any alloy containing 30 or greater percent by weight of precious metals is considered a precious metal alloy.

(cc) ''Product testing'' includes operations such as dye penetrant testing, hydrotesting, and ultrasonic testing.

(dd) ''Refractory metals'' includes the metals of columbium, tantalum, molybdenum, rhenium, tungsten and vanadium and their alloys.

(ee) ''Rolling'' is the reduction in thickness or diameter of a workpiece by passing it between lubricated steel rollers.

(ff) ''Roll bonding'' is the process by which a permanent bond is created between two metals by rolling under high pressure in a bonding mill (co-rolling).

(gg) ''Sawing'' is cutting a workpiece with a band, blade, or circular disc having teeth.

(hh) ''Shot casting'' is the production of shot by pouring molten metal in finely divided streams to form spherical particles.

(ii) ''Stationary casting'' is the pouring of molten metal into molds and allowing the metal to cool.

(jj) ''Surface treatment'' is a chemical or electrochemical treatment applied to the surface of a metal. Such treatments include pickling, etching, conversion coating, phosphating, and chromating. Surface treatment baths are usually followed by a water rinse. The rinse may consist of single or multiple stage rinsing. For the purposes of this part, a surface treatment operation is defined as a bath followed by a rinse, regardless of the number of stages. Each surface treatment bath, rinse combination is entitled to discharge allowance.

(kk) ''Swaging'' is a process in which a solid point is formed at the end of a tube, rod, or bar by the repeated blows of one or more pairs of opposing dies.

(ll) ''Tube reducing'' is an operation which reduces the diameter and wall thickness of tubing with a mandrel and a pair of rolls with tapered grooves.

(mm) ''Tumbling'' or ''barrel finishing'' is an operation in which castings, forgings, or parts pressed from metal powder are rotated in a barrel with ceramic or metal slugs or abrasives to remove scale, fins, or burrs. It may be done dry or with an aqueous solution.

(nn) ''Ultrasonic testing'' is a nondestructive test which applies sound, at a frequency above about 20 HJz, to metal, which has been immersed in liquid (usually water) to locate inhomogeneities or structural discontinuities.

(oo) ''Wet air pollution control scrubbers'' are air pollution control devices used to remove particulates and fumes from air by entraining the pollutants in a water spray.

(pp) ''Grab sample'' is a single sample which is collected at a time and place most representative of total discharge.

(qq) ''Composite sample'' is a sample composed of no less than eight grab samples taken over the compositing period.

(rr) A ''flow proportional composite sample'' is composed of grab samples collected continuously or discretely in proportion to the total flow at time of collection or to the total flow since collection of the previous grab sample. The grab volume or frequency of grab collection may be varied in proportion to flow.

(ss) The term ''control authority'' is defined as the POTW if it has an approved pretreatment program; in the absence of such a program, the NPDES State if it has an approved pretreatment program or EPA if the State does not have an approved program.

(tt) ''Continuous operations'' means that the industrial user introduces regulated wastewaters to the POTW throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

(uu) ''Intermittent operations'' means the industrial users does not have a continuous operation.

(vv) The term ''off-kg (off-lb)'' means the mass of metal or metal alloy removed from a forming operation at the end of a process cycle for transfer to a different machine or process.

§ 471.03 Compliance date for PSES.

The compliance date for PSES under this regulation is August 23, 1988.

Subpart A—Lead-Tin-Bismuth Forming Subcategory

§ 471.10 Applicability; description of the lead-tin-bismuth forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the lead-tin-bismuth forming subcategory.

§ 471.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent emulsions.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions	
Antimony	0.068	0.030
Lead	0.010	0.005
Oil and grease	0.468	0.281
TSS	0.960	0.457
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) *Rolling spent soap solutions.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pound) of lead-tin-bismuth rolled with soap solutions	
Antimony	0.125	0.055
Lead	0.019	0.009
Oil and grease	0.860	0.520
TSS	1.80	0.840
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent neat oils—Subpart A—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions	
Antimony	0.076	0.034
Lead	0.011	0.005
Oil and grease	0.526	0.316
TSS	1.08	0.513
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(e) *Drawing spent soap solutions.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions	
Antimony	0.022	0.010
Lead	0.003	0.002
Oil and grease	0.149	0.090
TSS	0.306	0.146
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds of lead-tin-bismuth heat treated	
Antimony	4.14	1.850
Lead	0.605	0.288
Oil and grease	28.80	17.30
TSS	59.10	28.10
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded	
Antimony	0.158	0.071
Lead	0.023	0.011
Oil and grease	1.10	0.660
TSS	2.26	1.07
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Continuous strip casting contact cooling water.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method	
Antimony	0.003	0.001
Lead	0.0004	0.0002
Oil and grease	0.020	0.012
TSS	0.041	0.020
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth ingot cast by the sem-continuous method	
Antimony	0.085	0.038
Lead	0.013	0.006
Oil and grease	0.588	0.353
TSS	1.21	0.574
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Shot casting contact cooling water.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast	
Antimony	0.107	0.048
Lead	0.016	0.008
Oil and grease	0.746	0.448
TSS	1.53	0.728
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed	
Antimony	1.69	0.753
Lead	0.247	0.118
Oil and grease	11.8	7.06
TSS	24.1	11.5
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Alkaline cleaning spent baths.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.345	0.154
Lead	0.051	0.024
Oil and grease	2.40	1.44
TSS	4.92	2.34
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(m) *Alkaline cleaning rinse.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	6.78	3.02
Lead	0.991	0.472
Oil and grease	47.2	28.4
TSS	96.8	46.0
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(n) *Swaging spent emulsions.*

SUBPART A—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion	
Antimony	0.005	0.002
Lead	0.0007	0.0004
Oil and grease	0.036	0.022
TSS	0.073	0.034
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(o) *Degreasing spent solvents—Subpart A—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent emulsions.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsion	
Antimony	0.067	0.030
Lead	0.010	0.005

(b) *Rolling spent soap solutions.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions	
Antimony	0.120	0.055
Lead	0.018	0.009

(c) *Drawing spent neat oils—Subpart A—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions	
Antimony	0.080	0.034
Lead	0.011	0.005

(e) *Drawing spent soap solutions.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions	
Antimony	0.022	0.010
Lead	0.003	0.002

(f) *Extrusion press and solution heat treatment contact colling water.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds/per million off-pounds) of lead-tin-bismuth heat treated	
Antimony	0.414	0.185
Lead	0.061	0.030

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds/per million off-pounds) of lead-tin-bismuth extruded	
Antimony	0.158	0.071
Lead	0.023	0.011

(h) Continuous strip casting contact cooling water.

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method	
Antimony	0.003	0.001
Lead	0.0004	0.0002

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method	
Antimony	0.009	0.004
Lead	0.001	0.0006

(j) *Shot casting contact cooling water.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast	
Antimony	0.107	0.048
Lead	0.016	0.008

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed	
Antimony	0.169	0.076
Lead	0.025	0.012

(l) *Alkaline cleaning spent baths.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.345	0.154
Lead	0.051	0.024

(m) *Alkaline cleaning rinse.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.678	0.302
Lead	0.099	0.047

(n) *Swaging spent emulsions.*

SUBPART A—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion	
Antimony	0.005	0.002
Lead	0.0008	0.0004

(o) *Degreasing spent solvents—Subpart A—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.13 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards. The mass of pollutants in the lead-tin-bismuth forming operations' process wastewater shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions	
Antimony	0.067	0.030
Lead	0.010	0.005
Oil and grease	0.468	0.281
TSS	0.960	0.457
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) *Rolling spent soap solutions.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions	
Antimony	0.120	0.055
Lead	0.018	0.009
Oil and grease	0.860	0.520
TSS	1.80	0.840
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent neat oils—Subpart A—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions	
Antimony	0.076	0.034
Lead	0.011	0.005
Oil and grease	0.526	0.316
TSS	1.087	0.513
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(e) *Drawing spent soap solutions.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions	
Antimony	0.022	0.010
Lead	0.003	0.002
Oil and grease	0.149	0.090
TSS	0.306	0.146
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated	
Antimony	0.414	0.185
Lead	0.061	0.030
Oil and grease	2.80	1.72
TSS	5.91	2.81
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded	
Antimony	0.158	0.071
Lead	0.023	0.011
Oil and grease	1.10	0.660
TSS	2.26	1.07
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Continuous strip casting contact cooling water.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method	
Antimony	0.003	0.001
Lead	0.0004	0.0002
Oil and grease	0.020	0.012
TSS	0.041	0.020
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth ingot cast by the semi-continuous method	
Antimony	0.009	0.004
Lead	0.001	0.0006
Oil and grease	0.059	0.036
TSS	0.121	0.058
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Shot casting contact cooling water.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast	
Antimony	0.107	0.048
Lead	0.016	0.008
Oil and grease	0.746	0.448
TSS	1.53	0.728
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed	
Antimony	0.169	0.076
Lead	0.025	0.012
Oil and grease	1.18	0.706
TSS	2.41	1.15
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Alkaline cleaning spent baths.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.345	0.154
Lead	0.051	0.024
Oil and grease	2.40	1.44
TSS	4.92	2.34
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(m) *Alkaline cleaning rinse.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.678	0.302
Lead	0.099	0.047
Oil and grease	4.72	2.84
TSS	9.68	4.60
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(n) *Swaging spent emulsions.*

SUBPART A—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion	
Antimony	0.005	0.002
Lead	0.0008	0.0004
Oil and grease	0.036	0.022
TSS	0.073	0.035
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(o) *Degreasing spent solvents—Subpart A—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.14 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1988, achieve the pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in lead-tin-bismuth forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions	
Antimony	0.067	0.030
Lead	0.010	0.005

(b) *Rolling spent soap solutions.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions	
Antimony	0.120	0.055
Lead	0.018	0.009

(c) *Drawing spent neat oils—Subpart A—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions	
Antimony	0.076	0.034
Lead	0.011	0.005

(e) *Drawing spent soaps solutions.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap olutions	
Antimony	0.022	0.010
Lead	0.003	0.002

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated	
Antimony	0.414	0.185
Lead	0.061	0.029

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded	
Antimony	0.158	0.071
Lead	0.023	0.011

(h) *Continuous strip casting contact cooling water.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method	
Antimony	0.003	0.001
Lead	0.0004	0.0002

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the semi-continuous strip method	
Antimony	0.009	0.004
Lead	0.001	0.0006

(j) *Shot casting contact cooling water.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast	
Antimony	0.107	0.048
Lead	0.016	0.008

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed	
Antimony	0.169	0.076
Lead	0.025	0.012

(l) *Alkaline Cleaning Spent Baths.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.345	0.154
Lead	0.051	0.024

(m) *Alkaline cleaning rinse.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.678	0.302
Lead	0.099	0.047

(n) *Swaging spent emulsions.*

SUBPART A—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion	
Antimony	0.005	0.002
Lead	0.0008	0.0004

(o) *Degreasing spent solvents—Subpart A—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.15 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new sources subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in lead-tin-bismuth forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions	
Antimony	0.067	0.030
Lead	0.010	0.005

(b) *Rolling spent soap solutions.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions	
Antimony	0.120	0.055
Lead	0.018	0.009

(c) *Drawing spent neat oils—Subpart A—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions	
Antimony	0.076	0.034
Lead	0.011	0.005

(e) *Drawing spent soap solutions.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions	
Antimony	0.022	0.010
Lead	0.003	0.002

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated	
Antimony	0.414	0.185
Lead	0.061	0.029

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded	
Antimony	0.158	0.071
Lead	0.023	0.011

(h) *Continuous strip casting contact cooling water.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method	
Antimony	0.003	0.001
Lead	0.0004	0.0002

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth ingot cast by the semi-continuous method	
Antimony	0.009	0.004
Lead	0.001	0.0006

(j) *Shot casting contact cooling water.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast	
Antimony	0.107	0.048
Lead	0.016	0.008

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed	
Antimony	0.169	0.076
Lead	0.025	0.012

(l) *Alkaline cleaning spent baths.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.345	0.154
Lead	0.051	0.024

(m) *Alkaline cleaning rinse.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned	
Antimony	0.678	0.302
Lead	0.099	0.047

(n) *Swaging spent emulsions.*

SUBPART A—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion	
Antimony	0.005	0.003
Lead	0.0008	0.0004

(o) *Degreasing spent solvents—Subpart A—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.16 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart B—Magnesium Forming Subcategory

§ 471.20 Applicability; description of the magnesium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the magnesium forming subcategory.

§ 471.21 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent emulsions.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions	
Chromiun	0.033	0.014
Zinc	0.109	0.046
Ammonia	9.95	4.37
Fluoride	4.440	1.97
Oil and grease	1.49	0.895
TSS	3.06	1.46
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) *Forging spent lubricants—Subpart B—BPT.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged magnesium cooled with water	
Chromium	1.27	0.520
Zinc	4.22	1.77
Ammonia	385	170
Fluoride	172	76.3
Oil and grease	57.8	34.7
TSS	119	56.4
pH	.....	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) *Forging equipment cleaning wastewater.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium forged	
Chromium	0.018	0.007
Zinc	0.059	0.025
Ammonia	5.32	2.34
Fluoride	2.38	1.06
Oil and grease	0.798	0.479
TSS	1.64	0.778
pH		(1)

1 Within the range of 7.5 to 10.0 at all times.

(e) *Direct chill casting contact cooling water.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods	
Chromium	1.74	0.711
Zinc	5.77	2.41
Ammonia	527	232
Fluoride	235	105
Oil and grease	79.0	47.4
TSS	162	77.1
pH		(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) *Surface treatment spent baths.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromium	0.205	0.084
Zinc	0.681	0.285
Ammonia	62.1	27.3
Fluoride	27.8	12.3
Oil and grease	9.32	5.59
TSS	19.1	9.09
pH		(1)

1 Within the range of 7.5 to 10.0 at all times.

(g) *Surface treatment rinse.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromium	8.32	3.4
Zinc	27.6	11.5
Ammonia	2520	1110
Fluoride	1130	499
Oil and grease	378	227
TSS	775	369
pH		(1)

1 Within the range of 7.5 to 10.0 at all times.

(h) *Sawing or grinding spent emulsions.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground	
Chromium	0.009	0.004
Zinc	0.029	0.012
Ammonia	2.60	1.15
Fluoride	1.16	0.515
Oil and grease	0.390	0.234
TSS	0.800	0.381
pH		(1)

1 Within the range of 7.5 to 10.0 at all times.

(i) *Degreasing spent solvents—Subpart B—BPT.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged	
Chromium	0.273	0.112
Zinc	0.904	0.378
Ammonia	82.5	36.3
Fluoride	36.9	16.4
Oil and grease	12.4	7.43
TSS	25.4	12.1
pH		(1)

1 Within the range of 7.5 to 10.0 at all times.

§ 471.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent emulsions.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions	
Chromium	0.033	0.014
Zinc	0.109	0.046
Ammonia	9.95	4.37
Fluoride	4.44	1.97

(b) *Forging spent lubricants*—Subpart B—BAT. There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged magnesium cooled with water	
Chromium	0.127	0.052
Zinc	0.422	0.177
Ammonia	38.5	17.0
Fluoride	17.2	7.63

(d) *Forging equipment cleaning wastewater.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium forged	
Chromium	0.002	0.0007
Zinc	0.006	0.003
Ammonia	0.532	0.234
Fluoride	0.238	0.106

(e) *Direct chill casting contact cooling water.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods	
Chromium	1.74	0.711
Zinc	5.77	2.41
Ammonia	527	232
Fluoride	235	105

(f) *Surface treatment spent baths.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromium	0.205	0.084
Zinc	0.681	0.285
Ammonia	62.1	27.3
Fluoride	27.8	12.3

(g) *Surface treatment rinse.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromium	0.832	0.340
Zinc	2.76	1.16
Ammonia	252	111
Fluoride	113	49.9

(h) *Sawing or grinding spent emulsions.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground	
Chromium	0.009	0.004
Zinc	0.029	0.012
Ammonia	2.60	1.15
Fluoride	1.16	0.515

(i) *Degreasing spent solvents—Subpart B—BAT.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged	
Chromium	0.273	0.112
Zinc	0.904	0.378
Ammonia	82.5	36.3
Fluoride	36.9	16.4

§ 471.23 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards. The mass of pollutants in the magnesium forming process wastewater shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off/kg (pounds per million off-pounds) of magnesium rolled with emulsions	
Chromium	0.028	0.011
Zinc	0.076	0.032
Ammonia	9.95	4.37
Fluoride	4.44	1.97
Oil and grease	0.746	0.746
TSS	1.12	0.895
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(b) *Forging spent lubricants—Subpart B—NSPS.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off/kg (pounds per million off-pounds) of forged magnesium cooled with water	
Chromium	0.107	0.044
Zinc	0.295	0.122
Ammonia	38.5	17.0
Fluoride	17.2	7.63
Oil and grease	2.89	2.89
TSS	4.34	3.47
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(d) *Forging equipment cleaning wastewater.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off/kg (pounds per million off-pounds) of magnesium forged	
Chromium	0.002	0.0006
Zinc	0.004	0.002
Ammonia	0.532	0.234
Fluoride	0.238	0.106
Oil and grease	0.040	0.040
TSS	0.060	0.048
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(e) *Direct chill casting contact cooling water.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods	
Chromium	1.46	0.593
Zinc	4.03	1.66
Ammonia	527	232
Fluoride	235	105
Oil and grease	39.5	39.5
TSS	59.3	47.4
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) *Surface treatment spent baths.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromium	0.173	0.070
Zinc	0.476	0.196
Ammonia	62.1	27.3
Fluoride	27.8	12.3
Oil and grease	4.66	4.66
TSS	6.99	5.60
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times

(g) *Surface treatment rinse.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pound pers million off-pounds) of magnesium surface treated	
Chromium	0.700	0.284
Zinc	1.93	0.794
Ammonia	252	111
Fluoride	113	49
Oil and grease	18.9	18.9
TSS	28.4	22.7
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times

(h) *Sawing or grinding spent emulsions.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground	
Chromium	0.007	0.003
Zinc	0.020	0.008
Ammonia	2.60	1.15
Fluoride	1.16	0.515
Oil and grease	0.195	0.195
TSS	0.293	0.234
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(i) *Degreasing spent Solvents—Subpart B—NSPS.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged	
Chromium	0.229	0.093
Zinc	0.632	0.260
Ammonia	82.5	36.3
Fluoride	36.9	16.4
Oil and grease	6.19	6.19
TSS	9.29	7.43
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.24 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in magnesium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions	
Chromium	0.033	0.014
Zinc	0.109	0.046
Ammonia	9.95	4.37
Fluoride	4.44	1.97

(b) *Forging spent lubricants—Subpart B—PSE.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium cooled with water	
Chromium	0.127	0.052
Zinc	0.422	0.177
Ammonia	38.5	17.0
Fluoride	17.2	7.63

(d) *Forging equipment cleaning wastewater.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium forged	
Chromium	0.002	0.0007
Zinc	0.006	0.003
Ammonia	0.532	0.234
Fluoride	0.238	0.106

(e) *Direct chill casting contact cooling water.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods	
Chromiun	1.74	0.711
Zinc	5.77	2.41
Ammonia	527	232
Fluoride	235	105

(f) *Surface treatment spent baths.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromiun	0.205	0.084
Zinc	0.681	0.285
Ammonia	62.1	27.3
Fluoride	27.8	12.3

(g) *Surface treatment rinse.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromiun	0.832	0.340
Zinc	2.76	1.16
Ammonia	252	111
Fluoride	113	49.9

(h) *Sawing or grinding spent emulsions.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground	
Chromiun	0.009	0.004
Zinc	0.029	0.012
Ammonia	2.60	1.15
Fluoride	1.16	0.515

(i) *Degreasing Spent Solvents—Subpart B—PSES.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged	
Chromium	0.273	0.112
Zinc	0.904	0.378
Ammonia	8.25	36.3
Fluoride	36.9	16.4

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.25 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The

mass of wastewater pollutants in magnesium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions	
Chromium	0.028	0.011
Zinc	0.076	0.032
Ammonia	9.95	4.37
Fluoride	4.44	1.97

(b) *Forging spent lubricants—Subpart B—PSNS.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged magnesium cooled with water	
Chromium	0.107	0.044
Zinc	0.295	0.122
Ammonia	38.5	17.0
Fluoride	17.2	7.63

(d) *Forging equipment cleaning wastewater.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium forged	
Chromium	0.002	0.0006
Zinc	0.004	0.002
Ammonia	0.532	0.234
Fluoride	0.238	0.106

(e) *Direct chill casting contact cooling water.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods	
Chromium	1.46	0.593
Zinc	4.03	1.66
Ammonia	527	232
Fluoride	235	105

(f) *Surface treatment spent baths.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromium	0.173	0.070
Zinc	0.476	0.196
Ammonia	62.1	27.3
Fluoride	27.8	12.3

(g) *Surface treatment rinse.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium surface treated	
Chromium	0.700	0.284
Zinc	1.93	0.794
Ammonia	252	111
Fluoride	113	49.9

(h) *Sawing or grinding spent emulsions.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground	
Chromium	0.007	0.003
Zinc	0.020	0.008
Ammonia	2.60	1.15
Fluoride	1.16	0.515

(i) *Degreasing spent solvents—Subpart B—PSNS.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged	
Chromium	0.229	0.093
Zinc	0.632	0.260
Ammonia	82.5	36.3
Fluoride	36.9	16.4

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.26 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart C—Nickel-Cobalt Forming Subcategory

§ 471.30 Applicability; description of the nickel-cobalt forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the nickel-cobalt forming subcategory.

§ 471.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30–125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—Subpart C—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions	
Chromium	0.075	0.031
Nickel	0.327	0.216
Fluoride	10.1	4.49
Oil and grease	3.4	2.04
TSS	6.97	3.32
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Rolling contact cooling water.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water	
Chromium	1.66	0.679
Nickel	7.24	4.79
Fluoride	225	99.6
Oil and grease	75.4	45.3
TSS	155	73.5
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) *Tube Reducing Spent Lubricant—Subpart C—BPT.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain

any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—Subpart C—BPT.* There shall be no discharge of process wastewater pollutants

(f) *Drawing spent emulsions.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions	
Chromium	0.042	0.017
Nickel	0.183	0.121
Fluoride	5.68	2.52
Oil and grease	1.91	1.15
TSS	3.91	1.86
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Extrusion spent lubricants—Subpart C—BPT.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt heat treated	
Chromium	0.037	0.015
Nickel	0.160	0.106
Fluoride	4.95	2.20
Oil and grease	1.67	0.999
TSS	3.41	1.63
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded	
Chromium	0.102	0.042
Nickel	0.446	0.295
Fluoride	13.8	6.13
Oil and grease	4.64	2.79
TSS	9.51	4.53
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Forging equipment cleaning wastewater.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.018	0.007
Nickel	0.077	0.051
Fluoride	2.38	1.06
Oil and grease	0.800	0.480
TSS	1.640	0.780
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(k) *Forging contact cooling water.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water	
Chromium	0.209	0.086
Nickel	0.910	0.602
Flouride	28.2	12.5
Oil and grease	9.48	5.69
TSS	19.5	9.25
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.083	0.034
Nickel	0.359	0.238
Fluoride	11.2	4.94
Oil and grease	3.74	2.25
TSS	7.67	3.65
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(m) *Forging spent lubricants—Subpart C—BPT.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary casting methods	
Chromium	5.33	2.18
Nickel	23.3	15.4
Fluoride	720	320
Oil and grease	242	145
TSS	496	236
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(o) *Vacuum melting steam condensate—Subpart C—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized	
Chromium	1.16	0.472
Nickel	5.03	3.33
Fluoride	156	69.2
Oil and grease	52.4	31.5
TSS	108	51.1
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) *Annealing and solution heat treatment contact cooling water—Subpart C—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.357	0.146
Nickel	1.56	1.03
Fluoride	48.2	21.4
Oil and grease	16.2	9.72
TSS	33.2	15.8
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(s) *Surface treatment spent baths.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.412	0.169
Nickel	1.80	1.19
Fluoride	55.7	24.7
Oil and grease	18.7	11.2
TSS	38.4	18.3
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(t) *Surface treatment rinse.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	10.4	4.25
Nickel	45.3	30.0
Fluoride	1410	623
Oil and grease	472	283
TSS	968	460
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(u) *Alkaline cleaning spent baths.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.015	1.52
Nickel	16.2	10.7
Fluoride	502	223
Oil and grease	169	101
TSS	346	165
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(v) *Alkaline cleaning rinse.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	1.03	0.420
Nickel	4.48	2.96
Fluoride	139	61.5
Oil and grease	46.6	28.0
TSS	95.6	45.5
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(w) *Molten salt rinse.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt	
Chromium	3.72	1.52
Nickel	16.2	10.7
Fluoride	502	223
Oil and grease	169	101
TSS	346	165
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(x) *Ammonia rinse.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution	
Chromium	0.007	0.003
Nickel	0.029	0.019
Fluoride	0.881	0.391
Oil and grease	0.296	0.178
TSS	0.607	0.289
pH	.....	(1)

1 Within the range of 7.5 to 10.0 at all times.

(y) *Sawing or grinding spent emulsions.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions	
Chromium	0.018	0.007
Nickel	0.076	0.050
Fluoride	2.35	1.04
Oil and grease	0.788	0.473
TSS	1.62	0.769
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(z) *Sawing or grinding rinse.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed	
Chromium	0.797	0.326
Nickel	3.48	2.30
Fluoride	108	47.8
Oil and grease	36.2	21.7
TSS	74.2	35.3
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(aa) *Steam Cleaning Condensate.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned	
Chromium	0.013	0.006
Nickel	0.058	0.039
Fluoride	1.79	0.795
Oil and grease	0.602	0.361
TSS	1.24	0.587
pH		(1)

[1] Within the range of 7.5 to 10.0 at all times.

(bb) *Hydrostatic tube testing and ultrasonic testing wastewater—Subpart C—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(cc) *Degreasing spent solvents—Subpart C—BPT.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye penetrant testing wastewater.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method	
Chromium	0.094	0.039
Nickel	0.409	0.271
Fluoride	12.7	5.63
Oil and grease	4.26	2.56
TSS	8.74	4.16
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(ee) *Electrocoating rinse.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated	
Chromium	1.48	0.607
Nickel	6.47	4.28
Fluoride	201	89.0
Oil and grease	67.4	40.5
TSS	138	65.7
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(ff) *Miscellaneous wastewater sources.*

SUBPART C—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.108	0.044
Nickel	0.473	0.313
Fluoride	14.7	6.50
Oil and grease	4.92	2.95
TSS	10.1	4.80
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986, as amended at 54 FR 11348, Mar. 17, 1989]

§ 471.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must

achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent neat oils—Subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions	
Chromium	0.063	0.026
Nickel	0.094	0.063
Fluoride	10.1	4.49

(c) *Rolling contact cooling water.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water	
Chromium	0.028	0.011
Nickel	0.042	0.028
Fluoride	4.49	1.99

(d) *Tube Reducing Spent Lubricant—Subpart C—BAT.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in subparagraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under subparagraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the

levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—Subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions	
Chromium	0.036	0.015
Nickel	0.053	0.036
Fluoride	5.68	2.52

(g) *Extrusion spent lubricants—Subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated	
Chromium	0.031	0.013
Nickel	0.046	0.031
Fluoride	4.95	2.20

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded	
Chromium	0.086	0.034
Nickel	0.128	0.086
Fluoride	13.8	6.13

(j) *Forging equipment cleaning wastewater.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.002	0.0006
Nickel	0.002	0.002
Fluoride	0.238	0.106

(k) *Forging contact cooling water.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water	
Chromium	0.018	0.007
Nickel	0.026	0.018
Fluoride	2.82	1.25

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.069	0.028
Nickel	.103	0.069
Fluoride	11.2	4.94

(m) *Forging spent lubricants—Subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary casting methods	
Chromium	0.448	0.182
Nickel	.666	.448
Fluoride	72.0	32.0

(o) *Vacuum melting steam condensate—Subpart C—BAT.* There shall be no allowance for the discharge of wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized	
Chromium	0.970	0.393
Nickel	1.44	.970
Fluoride	156	69.2

(q) *Annealing and solution heat treatment contact cooling water—Subpart C—BAT.* There shall be no allowance for the discharge of wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.300	0.122
Nickel	.446	.300
Fluoride	48.2	21.4

(s) *Surface treatment spent baths.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.346	0.141
Nickel	.514	.346
Fluoride	55.7	24.7

(t) *Surface treatment rinse.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.873	0.354
Nickel	1.30	.873
Fluoride	141	62.3

(u) *Alkaline cleaning spent baths.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.013	0.005
Nickel	0.019	0.013
Fluoride	2.02	0.895

(v) *Alkaline cleaning rinse.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.086	0.035
Nickel	0.128	0.086
Fluoride	13.9	6.15

(w) *Molten salt rinse.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly averge
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt	
Chromium	0.312	0.127
Nickel	0.464	0.312
Fluoride	50.2	22.3

(x) *Ammonia rinse.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution	
Chromium	0.006	0.002
Nickel	0.008	0.006
Fluoride	0.881	0.391

(y) *Sawing or grinding spent emulsions.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions	
Chromium	0.015	0.006
Nickel	0.022	0.015
Fluoride	2.35	1.04

(z) *Sawing or grinding rinse.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed	
Chromium	0.067	0.027
Nickel	0.100	0.067
Fluoride	10.8	4.78

(aa) *Steam cleaning condensate.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned	
Chromium	0.011	0.005
Nickel	0.017	0.011
Fluoride	1.79	0.795

(bb) *Hydrostatic tube testing and ultrasonic testing wastewater—Subpart C—BAT.* There shall be no allowance for the discharge of process wastewater pollutants.

(cc) *Degreasing spent solvents—Subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye penetrant testing wastewater.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method	
Chromium	0.079	0.032
Nickel	0.117	0.079
Fluoride	12.7	5.63

(ee) *Electrocoating rinse.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated	
Chromium	1.25	0.506
Nickel	1.86	1.25
Fluoride	201	89.0

(ff) *Miscellaneous wastewater sources.*

SUBPART C—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.091	0.037
Nickel	0.136	0.091
Fluoride	14.7	6.50

[50 FR 34270, Aug. 23, 1985; 51 FR 2885, Jan. 22, 1986, as amended at 54 FR 11348, Mar. 17, 1989; 54 FR 13606, Apr. 4, 1989]

§ 471.33 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutants in the nickel-cobalt forming process wastewater shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions	
Chromium	0.063	0.026
Nickel	0.094	0.063
Fluoride	10.1	4.49
Oil and grease	1.70	1.70
TSS	2.55	2.04
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Rolling contact cooling water.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water	
Chromium	0.028	0.012
Nickel	0.042	0.028
Fluoride	4.49	1.99
Oil and grease	0.754	0.754
TSS	1.13	0.905
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) *Tube Reducing Spent Lubricant—Subpart C—NSPS.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—Subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions	
Chromium	0.036	0.015
Nickel	0.053	0.036
Fluoride	5.68	2.52
Oil and grease	0.954	0.954
TSS	1.43	1.15
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Extrusion spent lubricants—Subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated	
Chromium	0.031	0.013
Nickel	0.046	0.031
Fluoride	4.95	2.20
Oil and grease	0.832	0.832
TSS	1.25	0.999
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded	
Chromium	0.086	0.035
Nickel	0.128	0.086
Fluoride	13.8	6.13
Oil and grease	2.32	2.32
TSS	3.48	2.79
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Forging equipment cleaning wastewater.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.002	0.00006
Nickel	0.002	0.002
Fluoride	0.238	0.106
Oil and grease	0.040	0.040
TSS	0.060	0.048
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Forging contact cooling water.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water	
Chromium	0.018	0.007
Nickel	0.026	0.018
Fluoride	2.82	1.25
Oil and grease	0.474	0.474
TSS	0.711	0.569
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.069	0.028
Nickel	0.103	0.069
Fluoride	11.2	4.94
Oil and grease	1.87	1.87
TSS	2.81	2.25
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(m) *Forging spent lubricants—Subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary casting methods	
Chromium	0.448	0.182
Nickel	0.666	0.448
Fluoride	72.0	32.0
Oil and grease	12.1	12.1
TSS	18.2	14.5
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(o) *Vacuum melting steam condensate—Subpart C—NSPS.* There shall be no allowance for the discharge of process wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized	
Chromium	0.970	0.393
Nickel	1.44	0.970
Fluoride	156	69.2
Oil and grease	26.2	26.2
TSS	39.3	31.5
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(q) *Annealing and solution heat treatment contact cooling water—Subpart C—NSPS.* There shall be no allowance for the discharge of process wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.300	0.122
Nickel	0.450	0.300
Fluoride	48.2	21.4
Oil and grease	8.1	8.1
TSS	12.2	9.72
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(s) *Surface treatment spent baths.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.346	0.141
Nickel	0.515	0.346
Fluoride	55.7	24.7
Oil and grease	9.35	9.35
TSS	14.1	11.2
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(t) *Surface treatment rinse.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.874	0.354
Nickel	1.30	0.873
Fluoride	141	62.3
Oil and grease	23.6	23.6
TSS	35.4	28.3
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(u) *Alkaline cleaning spent baths.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.013	0.005
Nickel	0.019	0.013
Fluoride	2.02	0.895
Oil and grease	0.339	0.339
TSS	0.509	0.407
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(v) *Alkaline cleaning rinse.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.086	0.035
Nickel	.128	.086
Fluoride	13.9	6.15
Oil and grease	2.33	2.33
TSS	3.50	2.80
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(w) *Molten salt rinse.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt	
Chromium	0.312	0.127
Nickel	0.464	0.312
Fluoride	50.2	22.3
Oil and grease	8.44	8.44
TSS	12.7	10.1
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(x) *Ammonia rinse.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution	
Chromium	0.006	0.002
Nickel	.008	.006
Fluoride	.881	.391
Oil and grease	.148	.148
TSS	222	178
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(y) *Sawing or grinding spent emulsions.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground	
Chromium	0.015	0.006
Nickel	.002	.015
Fluoride	2.35	1.04
Oil and grease	.394	.394
TSS	591	473
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(z) *Sawing or grinding rinse.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed	
Chromium	0.067	0.027
Nickel	0.100	0.067
Fluoride	10.8	4.78
Oil and grease	1.81	1.81
TSS	2.72	217
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(aa) *Steam cleaning condensate.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned	
Chromium	0.011	0.005
Nickel	0.017	0.011
Fluoride	1.79	0.795
Oil and grease	0.301	0.301
TSS	0.452	0.361
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(bb) *Hydrostatic tube testing and ultrasonic testing wastewater—Subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(cc) *Degreasing spent solvents.—Subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye penetrant testing wastewater.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method	
Chromium	0.079	0.032
Nickel	0.117	0.079
Fluoride	12.7	5.63
Oil and grease	2.13	2.13
TSS	3.20	2.56
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(ee) *Electrocoating rinse.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated	
Chromium	1.25	0.506
Nickel	1.86	1.25
Fluoride	201	89.0
Oil and grease	33.7	33.7
TSS	50.6	40.5
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(ff) *Miscellaneous wastewater sources.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.091	0.037
Nickel	0.136	0.091
Fluoride	14.7	6.50
Oil and grease	2.46	2.46
TSS	3.69	2.95
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

[50 FR 34270, Aug. 23, 1985; 51 FR 2885, Jan. 22, 1986, as amended at 54 FR 11349, Mar. 17, 1989; 54 FR 13606, Apr. 4, 1989]

§ 471.34 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in nickel-cobalt forming wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions	
Chromium	0.063	0.026
Nickel	0.094	0.063
Fluoride	10.1	4.49

(c) *Rolling contact cooling water.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water	
Chromium	0.028	0.011
Nickel	0.042	0.028
Fluoride	4.49	1.99

(d) *Tube Reducing Spent Lubricant—Subpart C—PSES.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be

made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—Subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions	
Chromium	0.036	0.014
Nickel	0.053	0.036
Fluoride	5.68	2.52

(g) *Extrusion spent lubricants—Subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated	
Chromium	0.031	0.013
Nickel	0.046	0.031
Fluoride	4.95	2.20

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded	
Chromium	0.086	0.034
Nickel	0.128	0.086
Fluoride	13.8	6.13

(j) *Forging equipment cleaning wastewater.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.002	0.0006
Nickel	0.002	0.002
Fluoride	0.238	0.106

(k) *Forging contact cooling water.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water	
Chromium	0.018	0.007
Nickel	0.026	0.018
Fluoride	2.82	1.25

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.069	0.028
Nickel	0.103	0.069
Fluoride	11.2	4.94

(m) *Forging spent lubricants—Subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary methods	
Chromium	0.448	0.182
Nickel	0.666	0.448
Fluoride	72.0	32.0

(o) *Vacuum melting steam condensate—Subpart C—PSES.* There shall be no allowance for the discharge of wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized	
Chromium	0.970	0.393
Nickel	1.44	0.970
Fluoride	156	69.2

(q) *Annealing and solution heat treatment contact cooling water—Subpart C—PSES.* There shall be no allowance for the discharge of wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.300	0.122
Nickel	0.446	0.300
Fluoride	48.2	21.4

(s) *Surface treatment spent baths.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.346	0.141
Nickel	0.514	0.346
Fluoride	55.7	24.7

(t) *Surface treatment rinse.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.873	0.354
Nickel	1.30	0.873
Fluoride	141	62.3

(u) *Alkaline cleaning spent baths.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.013	0.005
Nickel	0.019	0.013
Fluoride	2.02	0.895

(v) *Alkaline cleaning rinse.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.086	0.035
Nickel	0.128	0.086
Fluoride	13.9	6.15

(w) *Molten salt rinse.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt	
Chromium	0.312	0.127
Nickel	0.464	0.312
Fluoride	50.2	22.3

(x) *Ammonia rinse.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution	
Chromium	0.006	0.002
Nickel	0.008	0.006
Fluoride	0.881	0.391

(y) *Sawing or grinding spent emulsions.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions	
Chromium	0.015	0.006
Nickel	0.022	0.015
Fluoride	2.35	1.04

(z) *Sawing or grinding rinse.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed	
Chromium	0.067	0.027
Nickel	0.100	0.067
Fluoride	10.8	4.78

(aa) *Steam cleaning condensate.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned	
Chromium	0.011	0.005
Nickel	0.017	0.011
Fluoride	1.79	0.795

(bb) *Hydrostatic Tube Testing and Ultrasonic Testing Wastewater—Subpart C—PSES.* There shall be no allowance for the discharge of process wastewater pollutants.

(cc) *Degreasing Spent Solvents—Subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye Penetrant Testing Wastewater.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method	
Chromium	0.079	0.032
Nickel	0.117	0.079
Fluoride	12.7	5.63

(ee) *Electrocoating rinse.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated	
Chromium	1.25	0.506
Nickel	1.86	1.25
Fluoride	201	89.0

(ff) *Miscellaneous wastewater sources.*

SUBPART C—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.091	0.037
Nickel	0.136	0.091
Fluoride	14.7	6.50

[50 FR 34270, Aug. 23, 1985; 51 FR 2885, Jan. 22, 1986, as amended at 54 FR 11349, Mar. 17, 1989; 54 FR 13606, Apr. 4, 1989]

§ 471.35 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in nickel-cobalt forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions	
Chromium	0.063	0.026
Nickel	0.094	0.063
Fluoride	10.1	4.49

(c) *Rolling contact cooling water.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water	
Chromium	0.028	0.012
Nickel	0.042	0.028
Fluoride	4.49	1.99

(d) *Tube Reducing Spent Lubricant—Subpart C—PSNS.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under subparagraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per

quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section (2); or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in subparagraph (2) above and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—Subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions	
Chromium	0.036	0.015
Nickel	0.053	0.036
Fluoride	5.68	2.52

(g) *Extrusion spent lubricants—Subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated	
Chromium	0.031	0.013
Nickel	0.046	0.031
Fluoride	4.95	2.20

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded	
Chromium	0.086	0.034
Nickel	0.128	0.086
Fluoride	13.8	6.13

(j) *Forging equipment cleaning wastewater.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.002	0.0006
Nickel	0.002	0.002
Fluoride	0.238	0.106

(k) *Forging contact cooling water.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water	
Chromium	0.018	0.007
Nickel	0.026	0.018
Fluoride	2.82	1.25

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged	
Chromium	0.069	0.028
Nickel	0.103	0.069
Fluoride	11.2	4.94

(m) *Forging spent lubricants—Subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary methods	
Chromium	0.448	0.182
Nickel	0.666	0.448
Fluoride	72.0	32.0

(o) *Vacuum melting steam condensate—Subpart C—PSNS.* There shall be no allowance for the discharge of process wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized	
Chromium	0.970	0.393
Nickel	1.44	0.970
Fluoride	156	69.2

(q) *Annealing and Solution Heat Treatment Contact Cooling Water—Subpart C—PSNS.* There shall be no allowance for the discharge of process wastewater pollutant.

(r) *Wet Air Pollution Control Scrubber Blowdown.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.300	0.122
Nickel	0.450	0.300
Fluoride	48.2	21.4

(s) *Surface treatment spent baths.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.346	0.141
Nickel	0.515	0.346
Fluoride	55.7	24.7

(t) *Surface treatment rinse.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated	
Chromium	0.874	0.354
Nickel	1.30	0.873
Fluoride	141	62.3

(u) *Alkaline cleaning spent baths.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.013	0.005
Nickel	0.019	0.013
Fluoride	2.02	0.895

(v) *Alkaline cleaning rinse.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned	
Chromium	0.086	0.035
Nickel	0.128	0.086
Fluoride	13.9	6.15

(w) *Molten salt rinse.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt	
Chromium	0.312	0.127
Nickel	0.464	0.312
Fluoride	50.2	22.3

(x) *Ammonia rinse.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution	
Chromium	0.006	0.002
Nickel	0.008	0.006
Fluoride	0.881	0.391

(y) *Sawing or grinding spent emulsions.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions	
Chromium	0.015	0.006
Nickel	0.022	0.015
Fluoride	2.35	1.04

(z) *Sawing or grinding rinse.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed	
Chromium	0.067	0.027
Nickel	0.100	0.067
Fluoride	10.8	4.78

(aa) *Steam cleaning condensate.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned	
Chromium	0.011	0.005
Nickel	0.017	0.011
Fluoride	1.79	0.795

(bb) *Hydrostatic tube testing and ultrasonic testing wastewater—Subpart C—PSNS.* There shall be no allowance discharge of process wastewater pollutants.

(cc) *Degreasing spent solvents—Subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye penetrant testing wastewater.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method	
Chromium	0.079	0.032
Nickel	0.117	0.079
Fluoride	12.7	5.63

(ee) *Electrocoating rinse.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated	
Chromium	1.25	0.506
Nickel	1.86	0.125
Fluoride	201	89.0

(ff) *Miscellaneous wastewater sources.*

SUBPART C—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed	
Chromium	0.091	0.037
Nickel	0.136	0.091
Fluoride	14.7	6.50

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986, as amended at 54 FR 11350, Mar. 17, 1989]

§ 471.36 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart D—Precious Metals Forming Subcategory

§ 471.40 Applicability; description of the precious metals forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the precious metals forming subcategory.

§ 471.41 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—Subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions	
Chromium	0.026	0.012
Copper	0.147	0.077
Cyanide	0.023	0.010
Silver	0.032	0.013
Oil and grease	1.54	0.925
TSS	3.16	1.51
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent neat oils—Subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions	
Cadmium	0.016	0.007
Copper	0.091	0.048
Cyanide	0.014	0.006
Silver	0.020	0.008
Oil and grease	0.950	0.570
TSS	1.95	0.926
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(e) *Drawing spent soap solutions.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions	
Cadmium	0.001	0.0005
Copper	0.006	0.003
Cyanide	0.0009	0.0004
Silver	0.001	0.0006
Oil and grease	0.063	0.038
TSS	0.128	0.061
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Metal powder production wet atomization wastewater.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized	
Cadmium	2.27	1.00
Copper	12.7	6.70
Cyanide	1.94	0.802
Silver	2.70	1.14
Oil and grease	134	80.2
TSS	274	130
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Heat treatment contact cooling water.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded precious metals heat treated	
Cadmium	1.42	0.626
Copper	7.93	4.17
Cyanide	1.21	0.501
Silver	1.71	0.709
Oil and grease	83.4	50.1
TSS	171	81.3
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Semi-continuous or continuous casting contact cooling water.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method	
Cadmium	3.50	1.55
Copper	19.6	10.3
Cyanide	2.99	1.24
Silver	4.23	1.75
Oil and grease	206	124
TSS	423	209
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Stationary casting contact cooling water—Subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method	
Cadmium	3.67	1.62
Copper	20.5	10.8
Cyanide	3.13	1.30
Silver	4.43	1.84
Oil and grease	216	130
TSS	443	211
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Shot casting contact cooling water.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals shot cast	
Cadmium	1.25	0.551
Copper	6.98	3.67
Cyanide	1.07	0.441
Silver	1.51	0.624
Oil and grease	73.4	44.1
TSS	151	71.6
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Wet air pollution control scrubber blowdown—Subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals and base metal pressure bonded	
Cadmium	0.029	0.013
Copper	0.159	0.084
Cyanide	0.024	0.010
Silver	0.034	0.014
Oil and grease	1.67	1.00
TSS	3.43	1.63
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(n) *Surface treatment spent baths.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.033	0.015
Copper	0.183	0.097
Cyanide	0.028	0.012
Silver	0.040	0.017
Oil and grease	1.93	1.16
TSS	3.95	1.88
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(o) *Surface treatment rinse.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	2.10	0.924
Copper	11.7	5.16
Cyanide	1.79	0.739
Silver	2.53	1.05
Oil and grease	123	73.9
TSS	253	120
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(p) *Alkaline cleaning spent baths.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.021	0.009
Copper	0.114	0.060
Cyanide	0.018	0.007
Silver	0.025	0.010
Oil and grease	1.20	0.720
TSS	2.46	1.170
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(q) *Alkaline cleaning rinse.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	3.81	1.68
Copper	21.3	11.2
Cyanide	3.25	1.35
Silver	4.59	1.91
Oil and grease	224	135
TSS	459	219
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(r) *Alkaline cleaning prebonding wastewater.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding	
Cadmium	3.95	1.74
Copper	22.1	11.6
Cyanide	3.37	1.39
Silver	4.76	1.97
Oil and grease	232	139
TSS	476	226
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(s) *Tumbling or burnishing wastewater.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished	
Cadmium	4.12	1.82
Copper	23.0	12.1
Cyanide	3.51	1.45
Silver	4.96	2.06
Oil and grease	242	145
TSS	496	236
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(t) *Sawing or grinding spent neat oils—Subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions	
Cadmium	0.032	0.014
Copper	0.178	0.094
Cyanide	0.027	0.011
Silver	0.039	0.016
Oil and grease	1.87	1.12
TSS	3.83	1.82
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(v) *Degreasing spent solvents—Subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent neat oils—Subpart D—BAT.* There shall be no discharge of wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions	
Cadmium	0.026	0.012
Copper	0.147	0.077
Cyanide	0.023	0.010
Silver	0.032	0.013

(c) *Drawing spent neat oils—Subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions	
Cadmium	0.016	0.007
Copper	0.091	0.048
Cyanide	0.014	0.006
Silver	0.020	0.008

(e) *Drawing spent soap solutions.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions	
Cadmium	0.001	0.0005
Copper	0.006	0.003
Cyanide	0.0009	0.0004
Silver	0.002	0.0006

(f) *Metal powder production wet atomization wastewater.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized	
Cadmium	2.27	1.00
Copper	12.7	6.68
Cyanide	1.94	0.802
Silver	2.74	1.14

(g) *Heat treatment contact cooling water.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals heat treated	
Cadmium	0.142	0.063
Copper	0.793	0.417
Cyanide	0.121	0.050
Silver	0.171	0.071

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method	
Cadmium	0.350	0.155
Copper	1.96	1.03
Cyanide	0.299	0.124
Silver	0.423	0.175

(i) *Stationary casting contact cooling water—Subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

Subpart D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method	
Cadmium	0.3676	0.162
Copper	2.05	1.08
Cyanide	0.313	0.130
Silver	0.443	0.184

(k) *Shot casting contact cooling water.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals shot cast	
Cadmium	0.125	0.055
Copper	0.698	0.367
Cyanide	0.107	0.044
Silver	0.151	0.063

(l) *Wet air pollution control scrubber blowdown—Subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metal and base metal pressure bonded	
Cadmium	0.0297	0.013
Copper	0.159	0.084
Cyanide	0.0247	0.010
Silver	0.0342	0.014

(n) *Surface treatment spent baths.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.033	0.015
Copper	0.183	0.097
Cyanide	0.028	0.012
Silver	0.040	0.017

(o) *Surface treatment rinse.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.210	0.093
Copper	1.17	0.616
Cyanide	0.179	0.074
Silver	0.253	0.105

(p) *Alkaline cleaning spent baths.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.021	0.009
Copper	0.114	0.060
Cyanide	0.018	0.007
Silver	0.025	0.010

(q) *Alkaline cleaning rinse.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.381	0.168
Copper	2.13	1.12
Cyanide	0.325	0.135
Silver	0.459	0.191

(r) *Alkaline cleaning prebonding wastewater.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metal and base metal cleaned prior to bonding	
Cadmium	0.400	0.174
Copper	2.210	1.16
Cyanide	0.337	0.139
Silver	0.476	0.197

(s) *Tumbling or burnishing wastewater.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished	
Cadmium	0.412	0.182
Copper	2.300	1.21
Cyanide	0.351	0.145
Silver	0.496	0.206

(t) *Sawing or grinding spent neat oils—Subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions	
Cadmium	0.0327	0.014
Copper	0.178	0.094
Cyanide	0.0277	0.011
Silver	0.0381	0.016

(v) *Degreasing spent solvents—Subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.43 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

(a) *Rolling Spent Neat Oils—Subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions	
Cadmium	0.026	0.012
Copper	0.147	0.077
Cyanide	0.023	0.010
Silver	0.032	0.013
Oil and grease	1.54	0.925
TSS	3.16	1.51
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent neat oils—Subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions	
Cadmium	0.017	0.007
Copper	0.091	0.048
Cyanide	0.014	0.006
Silver	0.020	0.008
Oil and grease	0.950	0.570
TSS	1.95	0.927
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(e) *Drawing spent soap solutions.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions	
Cadmium	0.001	0.0005
Copper	0.006	0.003
Cyanide	0.0009	0.0004
Silver	0.002	0.0006
Oil and grease	0.063	0.038
TSS	0.128	0.061
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) *Metal powder production atomization wastewater.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized	
Cadmium	2.27	1.00
Copper	12.7	6.68
Cyanide	1.94	0.802
Silver	2.74	1.14
Oil and grease	134	80.2
TSS	274	131
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(g) *Heat treatment contact cooling water.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals heat treated	
Cadmium	0.142	0.063
Copper	0.793	0.417
Cyanide	0.121	0.050
Silver	0.171	0.071
Oil and grease	8.34	5.01
TSS	17.1	8.13
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method	
Cadmium	0.350	0.155
Copper	1.96	1.03
Cyanide	0.299	0.124
Silver	0.423	0.175
Oil and grease	20.6	12.4
TSS	42.3	20.1
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Stationary casting contact cooling water—Subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method	
Cadmium	0.367	0.162
Copper	2.05	1.08
Cyanide	0.313	0.130
Silver	0.443	0.184
Oil and grease	21.6	13.0
TSS	44.3	21.1
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Shot casting contact cooling water.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals shot cast	
Cadmium	0.125	0.055
Copper	0.698	0.367
Cyanide	0.107	0.044
Silver	0.151	0.063
Oil and grease	7.34	4.41
TSS	15.1	7.16
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Wet air pollution control scrubber blowdown—Subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals and base metal pressure bonded	
Cadmium	0.029	0.013
Copper	0.159	0.084
Cyanide	0.024	0.010
Silver	0.034	0.014
Oil and grease	1.67	1.00
TSS	3.43	1.63
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(n) *Surface treatment spent baths.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.033	0.015
Copper	0.183	0.097
Cyanide	0.028	0.012
Silver	0.040	0.017
Oil and grease	1.93	1.16
TSS	3.95	1.88
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(o) *Surface treatment rinse.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.210	0.093
Copper	1.17	0.616
Cyanide	0.179	0.074
Silver	0.253	0.105
Oil and grease	12.3	7.39
TSS	25.3	12.0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(p) *Alkaline cleaning spent baths.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.021	0.009
Copper	0.114	0.060
Cyanide	0.018	0.007
Silver	0.025	0.010
Oil and grease	1.20	0.720
TSS	2.46	1.17
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) *Alkaline cleaning rinse.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.381	0.168
Copper	2.13	1.112
Cyanide	0.325	0.135
Silver	0.459	0.191
Oil and grease	22.4	13.5
TSS	45.9	21.9
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(r) *Alkaline cleaning pre-bonding wastewater.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding	
Cadmium	0.400	0.174
Copper	2.21	1.16
Cyanide	0.337	0.139
Silver	0.476	0.197
Oil and grease	23.2	13.9
TSS	47.6	22.6
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(s) *Tumbling or burnishing wastewater.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished	
Cadmium	0.412	0.182
Copper	2.30	1.21
Cyanide	0.351	0.145
Silver	0.496	0.206
Oil and grease	24.2	14.5
TSS	49.6	23.6
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(t) *Sawing or grinding spent neat oils—Subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions	
Cadmium	0.032	0.014
Copper	0.178	0.094
Cyanide	0.027	0.011
Silver	0.038	0.016
Oil and grease	1.87	1.12
TSS	3.83	1.82
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(v) *Degreasing spent solvents—Subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.44 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1985 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in precious metals forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions	
Cadmium	0.026	0.012
Copper	0.147	0.077
Cyanide	0.023	0.010
Silver	0.032	0.013

(c) *Drawing spent neat oils—Subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions	
Cadmium	0.016	0.007
Copper	0.091	0.048
Cyanide	0.014	0.006
Silver	0.020	0.008

(e) *Drawing spent soap solutions.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions	
Cadmium	0.001	0.0005
Copper	0.006	0.003
Cyanide	0.0009	0.0004
Silver	0.002	0.0006

(f) *Metal powder production atomization wastewater.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized	
Cadmium	2.27	1.00
Copper	12.7	6.68
Cyanide	1.94	0.802
Silver	2.74	1.14

(g) *Heat treatment contact cooling water.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals heat treated	
Cadmium	0.142	0.063
Copper	0.793	0.417
Cyanide	0.121	0.050
Silver	0.171	0.071

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method	
Cadmium	0.350	0.155
Copper	1.96	1.03
Cyanide	0.299	0.124
Silver	0.423	0.175

(i) *Stationary casting contact cooling water—Subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method	
Cadmium	0.367	0.162
Copper	2.05	1.08
Cyanide	0.313	0.130
Silver	0.443	0.184

(k) *Shot casting contact cooling water.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals shot cast	
Cadmium	0.125	0.055
Copper	0.698	0.367
Cyanide	0.107	0.044
Silver	0.151	0.063

(l) *Wet air pollution control scrubber blowdown—Subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metal and base metal pressure bonded	
Cadmium	0.029	0.013
Copper	0.159	0.084
Cyanide	0.024	0.010
Silver	0.034	0.014

(n) *Surface treatment spent baths.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.033	0.015
Copper	0.183	0.097
Cyanide	0.028	0.012
Silver	0.040	0.017

(o) *Surface treatment rinse.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.210	0.093
Copper	1.17	0.616
Cyanide	0.179	0.074
Silver	0.253	0.105

(p) *Alkaline cleaning spent baths.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.021	0.009
Copper	0.114	0.060
Cyanide	0.018	0.007
Silver	0.025	0.010

(q) *Alkaline cleaning rinse.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.381	0.168
Copper	2.13	1.12
Cyanide	0.325	0.135
Silver	0.459	0.191

(r) *Alkaline cleaning prebonding wastewater.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding	
Cadmium	0.400	0.174
Copper	2.210	1.16
Cyanide	0.337	0.139
Silver	0.476	0.197

(s) *Tumbling or burnishing wastewater.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished	
Cadmium	0.412	0.182
Copper	2.300	1.21
Cyanide	0.351	0.145
Silver	0.496	0.206

(t) *Sawing or grinding spent neat oils—Subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions	
Cadmium	0.032	0.014
Copper	0.178	0.094
Cyanide	0.027	0.011
Silver	0.038	0.016

(v) *Degreasing spent solvents—Subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.45 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in precious metals forming wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions	
Cadmium	0.026	0.012
Copper	0.147	0.077
Cyanide	0.023	0.010
Silver	0.032	0.013

(c) *Drawing spent neat oils—Subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions	
Cadmium	0.016	0.007
Copper	0.091	0.048
Cyanide	0.014	0.006
Silver	0.020	0.008

(e) *Drawing spent soap solutions.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions	
Cadmium	0.001	0.0005
Copper	0.006	0.003
Cyanide	0.0009	0.0004
Silver	0.002	0.0006

(f) *Metal powder production wet atomization wastewater.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized	
Cadmium	2.27	1.00
Copper	12.7	6.68
Cyanide	1.94	0.802
Silver	2.74	1.14

(g) *Heat treatment contact cooling water.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extended precious metals heat treated	
Cadmium	0.142	0.063
Copper	0.793	0.417
Cyanide	0.121	0.050
Silver	0.171	0.071

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method	
Cadmium	0.350	0.155
Copper	1.96	1.03
Cyanide	0.299	0.124
Silver	0.423	0.175

(i) *Stationary casting contact cooling water—Subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method	
Cadmium	0.367	0.162
Copper	2.05	1.08
Cyanide	0.313	0.130
Silver	0.443	0.184

(k) *Shot casting contact cooling water.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals shot cast	
Cadmium	0.125	0.055
Copper	0.698	0.367
Cyanide	0.107	0.044
Silver	0.151	0.0631

(l) *Wet air pollution control scrubber blowdown—Subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals and base metal pressure bonded	
Cadmium	0.029	0.013
Copper	0.159	0.084
Cyanide	0.024	0.010
Silver	0.034	0.014

(n) *Surface treatment spent baths.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.033	0.015
Copper	0.183	0.097
Cyanide	0.028	0.012
Silver	0.040	0.017

(o) *Surface treatment rinse.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.210	0.093
Copper	1.17	0.616
Cyanide	0.179	0.074
Silver	0.253	0.105

(p) *Alkaline cleaning spent baths.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.021	0.009
Copper	0.114	0.060
Cyanide	0.018	0.007
Silver	0.025	0.010

(q) *Alkaline cleaning rinse.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned	
Cadmium	0.381	0.168
Copper	2.13	1.12
Cyanide	0.325	0.135
Silver	0.459	0.191

(r) *Alkaline cleaning pre-bonding wastewater.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding	
Cadmium	0.400	0.174
Copper	2.21	1.16
Cyanide	0.337	0.139
Silver	0.476	0.197

(s) *Tumbling or burnishing wastewater.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished	
Cadmium	0.412	0.182
Copper	2.30	1.21
Cyanide	0.351	0.145
Silver	0.496	0.206

(t) *Sawing or grinding spent neat oils—Subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions	
Cadmium	0.032	0.014
Copper	0.178	0.094
Cyanide	0.027	0.011
Silver	0.038	0.016

(v) *Degreasing spent solvents—Subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.46 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart E—Refractory Metals Forming Subcategory

§ 471.50 Applicability; description of the refractory metals forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the refractory metals forming subcategory.

§ 471.51 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils and graphite based lubricants—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions	
Copper	0.815	0.429
Nickel	0.824	0.545
Fluoride	25.5	11.3
Molybdenum	2.84	1.47
Oil and grease	8.58	5.15
TSS	17.6	8.37
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent lubricants—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals extruded	
Copper	2.26	1.19
Nickel	2.29	1.51
Fluoride	70.8	31.4
Molybdenum	7.87	4.07
Oil and grease	23.8	14.3
TSS	48.8	23.2
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) *Forging spent lubricants—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water	
Copper	0.614	0.323
Nickel	0.620	0.410
Fluoride	19.2	8.53
Molybdenum	2.14	1.11
Oil and grease	6.46	3.88
TSS	13.3	6.30
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(h) *Equipment cleaning wastewater.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	2.59	1.36
Nickel	2.61	1.73
Fluoride	80.9	35.9
Molybdenum	8.99	4.65
Oil and grease	27.2	16.3
TSS	55.8	26.5
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(i) *Metal powder production wastewater.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals powder produced	
Copper	0.534	0.281
Nickel	0.540	0.357
Fluoride	16.70	7.42
Molybdenum	1.86	0.961
Oil and grease	5.62	3.37
TSS	11.5	5.48
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(j) *Metal powder production floor wash wastewater—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	0.739	0.389
Nickel	0.747	0.494
Fluoride	23.2	10.3
Molybdenum	2.57	1.33
Oil and grease	7.78	4.68
TSS	16.0	7.59
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(m) *Surface treatment rinse.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	230	121
Nickel	232	154
Fluoride	7,200	3,200
Molybdenum	800	414
Oil and grease	2,420	1,450
TSS	4,960	2,360
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(n) *Alkaline cleaning spent baths.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	0.635	0.334
Nickel	0.641	0.424
Fluoride	19.9	8.82
Molybdenum	2.21	1.14
Oil and grease	6.68	4.01
TSS	13.7	6.51
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(o) *Alkaline cleaning rinse.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	1,550	816
Nickel	1,570	1,040
Fluoride	48,600	21,600
Molybdenum	5,400	2,790
Oil and grease	16,300	9,790
TSS	33,500	15,900
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(p) *Molten salt rinse.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt	
Copper	12.1	6.33
Nickel	12.2	8.04
Fluoride	377	167
Molybdenum	41.9	21.7
Oil and grease	127	76.0
TSS	260	124
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) *Tumbling or burnishing wastewater.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished	
Copper	23.8	12.5
Nickel	24.0	15.9
Fluoride	744	330
Molybdenum	82.7	42.8
Oil and grease	250	150
TSS	513	244
pH	(1)	(1)

Within the range of 7.5 to 10.0 at all times.

(r) *Sawing or grinding spent neat oils—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions	
Copper	0.565	0.297
Nickel	0.570	0.377
Fluoride	17.7	7.84
Molybdenum	1.97	1.02
Oil and grease	5.94	3.57
TSS	12.2	5.79
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(t) *Sawing or grinding contact cooling water.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water	
Copper	46.2	24.3
Nickel	46.7	30.9
Fluoride	1450	642
Molybdenum	161	83.1
Oil and grease	486	292
TSS	997	474
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(u) *Sawing or grinding rinse.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed	
Copper	0.257	0.135
Nickel	0.259	0.172
Fluoride	8.03	3.57
Molybdenum	0.893	0.462
Oil and grease	2.70	1.62
TSS	5.54	2.63
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(v) *Wet air pollution control scrubber blowdown.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground, surface coated or surface treated	
Copper	1.50	0.787
Nickel	1.51	1.00
Fluoride	46.8	20.8
Molybdenum	5.20	2.69
Oil and grease	15.8	9.45
TSS	32.3	15.4
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(w) *Miscellaneous wastewater sources.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.656	0.345
Nickel	0.663	0.438
Fluoride	20.6	9.11
Molybdenum	2.28	1.18
Oil and grease	6.9	4.14
TSS	14.2	6.73
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(x) *Dye penetrant testing wastewater.*

SUBPART E—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals tested	
Copper	0.150	0.078
Nickel	0.150	0.099
Fluoride	4.60	2.00
Molybdenum	0.513	0.266
Oil and grease	1.60	0.930
TSS	3.20	1.50
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(y) *Degreasing spent solvents—Subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.52 Effluent limitations representating the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent neat oils and graphite based lubricants—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E–BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions	
Copper	0.549	0.262
Nickel	0.236	0.157
Fluoride	25.5	11.3
Molybdenum	2.16	0.957

(c) *Drawing spent lubricants—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals extruded	
Copper	1.5	0.730
Nickel	0.650	0.440
Fluoride	71.000	31.0
Molybdenum	5.99	2.66

(f) *Forging spent lubricants—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water	
Copper	0.041	0.020
Nickel	0.018	0.012
Fluoride	1.92	0.853
Molybdenum	0.163	0.072

(h) *Equipment cleaning wastewater.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.174	0.083
Nickel	0.075	0.051
Fluoride	8.09	3.59
Molybdenum	0.684	0.303

(i) *Metal powder production wastewater.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals powder produced	
Copper	0.360	0.172
Nickel	0.155	0.104
Fluoride	16.7	7.42
Molybdenum	1.42	0.627

(j) *Metal powder production floor wash wastewater—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	0.498	0.237
Nickel	0.214	0.144
Fluoride	23.2	10.3
Molybdenum	1.96	0.868

(m) *Surface treatment rinse.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	15.5	7.38
Nickel	6.66	4.48
Fluoride	720	320
Molybdenum	60.9	27.0

(n) *Alkaline cleaning spent baths.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	0.428	0.204
Nickel	0.184	0.124
Fluoride	19.9	8.82
Molybdenum	1.68	0.745

(o) *Alkaline cleaning rinse.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	10.5	4.98
Nickel	4.49	3.02
Fluoride	486	216
Molybdenum	41.1	18.2

(p) *Molten salt rinse.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt	
Copper	0.810	0.386
Nickel	0.348	0.234
Fluoride	37.7	16.7
Molybdenum	3.19	1.41

(q) *Tumbling or burnishing wastewater.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished	
Copper	1.60	0.763
Nickel	0.688	0.463
Fluoride	74.4	33.0
Molybdenum	6.29	2.79

(r) *Sawing or grinding spent neat oils—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions	
Copper	0.380	0.181
Nickel	0.164	0.110
Fluoride	17.7	7.84
Molybdenum	1.50	0.663

(t) *Sawing or grinding contact cooling water.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water	
Copper	3.11	1.48
Nickel	1.34	0.899
Fluoride	145.0	64.2
Molybdenum	12.2	5.42

(u) *Sawing or grinding rinse.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed	
Copper	0.018	0.009
Nickel	0.008	0.005
Fluoride	0.803	0.357
Molybdenum	0.068	0.030

(v) *Wet air pollution control scrubber blowdown.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed, surface coated or surface treated	
Copper	1.01	0.480
Nickel	0.433	0.291
Fluoride	46.8	20.8
Molybdenum	3.96	1.76

(w) *Miscellaneous wastewater sources.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.442	0.211
Nickel	0.190	0.128
Fluoride	20.6	9.11
Molybdenum	1.74	0.770

(x) *Dye penetrant testing wastewater.*

SUBPART E—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals product tested	
Copper	0.100	0.048
Nickel	0.043	0.029
Fluoride	4.62	2.05
Molybdenum	0.391	0.173

(y) *Degreasing spent solvents—Subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.53 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

(a) *Rolling spent neat oils and graphite based lubricants—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions	
Copper	0.549	0.262
Nickel	0.236	0.159
Fluoride	25.5	11.3
Molybdenum	2.16	0.957
Oil and grease	4.29	4.29
TSS	6.44	5.15
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent lubricants.—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants.—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals extruded	
Copper	1.53	0.726
Nickel	0.655	0.441
Fluoride	70.8	31.4
Molybdenum	5.99	2.66
Oil and grease	11.9	11.9
TSS	17.9	14.3
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Forging spent lubricants—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water	
Copper	0.041	0.020
Nickel	0.018	0.012
Fluoride	1.92	0.853
Molybdenum	0.163	0.072
Oil and grease	0.323	0.323
TSS	0.485	0.388
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Equipment cleaning wastewater.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.174	0.083
Nickel	0.075	0.051
Fluoride	8.09	3.59
Molybdenum	0.684	0.303
Oil and grease	1.36	1.36
TSS	2.04	1.63
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Metal powder production wastewater.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals powder produced	
Copper	0.360	0.172
Nickel	0.155	0.104
Fluoride	16.7	7.42
Molybdenum	1.42	0.627
Oil and grease	2.81	2.81
TSS	4.22	3.37
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Metal powder production floor wash wastewater—Subpart E—NSPS.* There

shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	0.498	0.237
Nickel	0.214	0.144
Fluoride	23.2	10.3
Molybdenum	1.96	0.868
Oil and grease	3.89	3.89
TSS	5.84	4.67
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(m) *Surface treatment rinse.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	15.5	7.38
Nickel	6.66	4.48
Fluoride	720	320
Molybdenum	69.9	27.0
Oil and grease	121	121
TSS	182	145
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(n) *Alkaline cleaning spent baths.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	0.428	0.204
Nickel	.184	0.124
Fluoride	19.9	8.82
Molybdenum	1.68	0.745
Oil and grease	3.34	3.34
TSS	5.01	4.01
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(o) *Alkaline cleaning rinse.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	10.5	4.98
Nickel	4.49	3.02
Fluoride	486	216
Molybdenum	41.1	18.2
Oil and grease	81.6	81.6
TSS	123	97.9
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(p) *Molten salt rinse.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt	
Copper	0.810	0.386
Nickel	0.348	0.234
Fluoride	37.7	16.7
Molybdenum	3.19	1.41
Oil and grease	6.33	6.33
TSS	9.5	7.6
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) *Tumbling or burnishing wastewater.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished	
Copper	1.60	0.763
Nickel	0.688	0.463
Fluoride	74.4	33.0
Molybdenum	6.29	2.79
Oil and grease	12.5	12.5
TSS	18.8	15.0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(r) *Sawing or grinding spent neat oils—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions	
Copper	0.380	0.181
Nickel	0.164	0.110
Fluoride	17.7	7.84
Molybdenum	1.5	0.663
Oil and grease	2.97	2.97
TSS	4.46	3.57
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(t) *Sawing or grinding contact cooling water.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water	
Copper	3.11	1.48
Nickel	1.34	0.899
Fluoride	145	64.2
Molybdenum	12.2	5.42
Oil and grease	24.3	24.3
TSS	36.5	29.2
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(u) *Sawing or grinding rinse.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed	
Copper	0.018	0.009
Nickel	0.008	0.005
Fluoride	0.803	0.357
Molybdenum	0.068	0.030
Oil and grease	0.135	0.135
TSS	0.203	0.162
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(v) *Wet air pollution control scrubber blowdown.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed, ground, surface coated or surface treated	
Copper	1.01	0.480
Nickel	0.433	0.291
Fluoride	46.8	20.8
Molybdenum	3.96	1.76
Oil and grease	7.87	7.87
TSS	11.8	9.45
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(w) *Miscellaneous wastewater sources.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.442	0.211
Nickel	0.190	0.128
Fluoride	20.6	9.11
Molybdenum	1.74	0.770
Oil and grease	3.45	3.45
TSS	5.18	4.14
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(x) *Dye penetrant testing wastewater.*

SUBPART E—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals product tested	
Copper	0.100	0.048
Nickel	0.043	0.029
Fluoride	4.62	2.05
Molybdenum	0.391	0.173
Oil and grease	0.776	0.776
TSS	1.17	0.931
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(y) *Degreasing spent solvents—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.54 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in refractory metals forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils and graphite based lubricants—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions	
Copper	0.815	0.429
Nickel	0.824	0.545
Fluoride	25.5	11.4
Molybdenum	2.84	1.47

(c) *Drawing spent lubricants—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals extruded	
Copper	2.26	1.19
Nickel	2.29	1.51
Fluoride	70.8	31.4
Molybdenum	7.87	4.07

(f) *Forging spent lubricants—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water	
Copper	0.062	0.033
Nickel	0.062	0.041
Fluoride	1.92	0.853
Molybdenum	0.214	0.111

(h) *Equipment cleaning wastewater.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.259	0.136
Nickel	0.261	0.173
Fluoride	8.09	3.59
Molybdenum	0.899	0.465

(i) *Metal powder production wastewater.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals powder produced	
Copper	0.534	0.281
Nickel	0.540	0.357
Fluoride	16.7	7.42
Molybdenum	1.86	0.961

(j) *Metal powder production floor wash wastewater—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	0.739	0.389
Nickel	0.747	0.494
Fluoride	23.2	10.3
Molybdenum	2.57	1.33

(m) *Surface treatment rinse.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	23.0	12.1
Nickel	23.3	15.4
Fluoride	720	320
Molybdenum	80.0	41.4

(n) *Alkaline cleaning spent baths.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	0.635	0.334
Nickel	0.642	0.424
Fluoride	19.9	8.82
Molybdenum	2.21	1.14

(o) *Alkaline cleaning rinse.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	15.5	8.16
Nickel	15.7	10.4
Fluoride	486.	216.0
Molybdenum	54.0	27.9

(p) *Molten salt rinse.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt	
Copper	1.20	0.633
Nickel	1.22	0.804
Fluoride	37.7	16.7
Molybdenum	4.19	2.17

(q) *Tumbling or burnishing wastewater.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished	
Copper	2.38	1.25
Nickel	2.40	1.59
Fluoride	74.4	33.0
Molybdenum	8.27	4.28

(r) *Sawing or grinding spent neat oils—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions	
Copper	0.565	0.297
Nickel	0.570	0.377
Fluoride	17.7	7.84
Molybdenum	1.97	1.02

(t) *Sawing or grinding contact cooling water.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water	
Copper	4.62	2.43
Nickel	4.67	3.09
Fluoride	145.	64.2
Molybdenum	16.1	8.31

(u) *Sawing or grinding rinse.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed	
Copper	0.026	0.014
Nickel	0.026	0.017
Fluoride	0.804	0.357
Molybdenum	0.089	0.046

(v) *Wet air pollution control blowdown.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed, surface coated or surface treated	
Copper	1.50	0.787
Nickel	1.51	1.00
Fluoride	46.9	20.8
Molybdenum	5.20	2.69

(w) *Miscellaneous wastewater sources.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.656	0.345
Nickel	0.663	0.438
Fluoride	20.6	9.11
Molybdenum	2.28	1.18

(x) *Dye penetrant testing wastewater.*

SUBPART E—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals product tested	
Copper	0.148	0.078
Nickel	0.149	0.099
Fluoride	4.62	2.05
Molybdenum	0.513	0.266

(y) *Degreasing spent solvents—Subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.55 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in the refractory metals forming process wastewater shall not exceed the values set forth below:

(a) *Rolling spent neat oils and graphite based lubricants—Subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions	
Copper	0.549	0.262
Nickel	0.236	0.159
Fluoride	25.5	11.3
Molybdenum	2.16	0.957

(c) *Drawing spent lubricants—Subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—Subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals extruded	
Copper	1.53	0.726
Nickel	0.655	0.441
Fluoride	70.8	31.4
Molybdenum	5.99	2.66

(f) *Forging spent lubricants—Subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water	
Copper	0.041	0.320
Nickel	0.018	0.021
Fluoride	1.92	0.853
Molybdenum	0.163	0.072

(h) *Equipment cleaning wastewater.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.174	0.083
Nickel	0.075	0.051
Fluoride	8.09	3.59
Molybdenum	0.684	0.303

(i) *Metal powder production wastewater.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals powder produced	
Copper	0.360	0.172
Nickel	0.155	0.104
Fluoride	16.7	7.42
Molybdenum	1.42	0.627

(j) *Metal powder production floor wash wastewater—Subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—Subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	0.498	0.237
Nickel	0.214	0.144
Fluoride	23.2	10.3
Molybdenum	1.96	0.868

(m) *Surface treatment rinse.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals surface treated	
Copper	15.5	7.38
Nickel	6.66	4.48
Fluoride	720	320
Molybdenum	60.9	27.0

(n) *Alkaline cleaning spent baths.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	0.428	0.204
Nickel	0.184	0.124
Fluoride	19.9	8.82
Molybdenum	1.68	0.745

(o) *Alkaline cleaning rinse.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned	
Copper	10.5	4.98
Nickel	4.49	3.02
Fluoride	48.6	216
Molybdenum	41.1	18.2

(p) *Molten salt rinse.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt	
Copper	0.810	0.386
Nickel	0.348	0.234
Fluoride	37.7	16.7
Molybdenum	3.19	1.41

(q) *Tumbling or burnishing wastewater.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished	
Copper	1.60	0.763
Nickel	0.688	0.463
Fluoride	74.4	33.0
Molybdenum	6.29	2.79

(r) *Sawing or grinding spent neat oils—Subpart E—PSNS.* There shall be no discharge or process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions	
Copper	0.380	0.181
Nickel	0.164	0.110
Fluoride	17.7	7.84
Molybdenum	1.50	0.663

(t) *Sawing or grinding contact cooling water.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water	
Copper	3.11	1.48
Nickel	1.34	0.899
Fluoride	145	64.2
Molybdenum	12.2	5.42

(u) *Sawing or grinding rinse.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed	
Copper	0.018	0.009
Nickel	0.008	0.005
Fluoride	0.803	0.357
Molybdenum	0.068	0.030

(v) *Wet air pollution control blowdown.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals sawed, ground, surface coated or surface treated	
Copper	1.01	0.480
Nickel	0.433	0.291
Fluoride	46.8	20.8
Molybdenum	3.96	1.76

(w) *Miscellaneous wastewater source.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals formed	
Copper	0.442	0.211
Nickel	0.192	0.128
Fluoride	20.6	9.11
Molybdenum	1.74	0.770

(x) *Dye penetrant testing wastewater.*

SUBPART E—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals product tested	
Copper	0.100	0.048
Nickel	0.043	0.029
Fluoride	4.62	2.05
Molybdenum	0.391	0.173

(y) *Degreasing spend solvents—Subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.56 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart F—Titanium Forming Subcategory

§ 471.60 Applicability; description of the titanium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the titanium forming subcategory.

§ 471.61 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils.—Subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water	
Cyanide	1.4	0.586
Lead	2.05	0.976
Zinc	7.13	2.98
Ammonia	651	286
Fluoride	291	129
Oil and grease	97.0	58.0
TSS	200.0	95.0
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent neat oils—Subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—Subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.021	0.009
Lead	0.030	0.015
Zinc	0.105	0.044
Ammonia	9.59	4.22
Fluoride	4.28	1.9
Oil and grease	1.44	0.863
TSS	2.95	1.4
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.052	0.022
Lead	0.075	0.036
Zinc	0.260	0.109
Ammonia	23.7	10.5
Fluoride	10.6	4.70
Oil and grease	3.56	2.14
TSS	7.30	3.47
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(g) *Forging spent lubricants—Subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water	
Cyanide	0.580	0.240
Lead	0.840	0.400
Zinc	2.92	1.22
Ammonia	267	117
Fluoride	119	52.8
Oil and grease	40.0	24.0
TSS	82.0	39.0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(i) *Forging equipment cleaning wastewater.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals forged	
Cyanide	0.012	0.005
Lead	0.017	0.008
Zinc	0.059	0.025
Ammonia	5.33	2.35
Fluoride	2.38	1.06
Oil and grease	0.800	0.480
TSS	1.64	0.780
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of refractory metals forged	
Cyanide	0.293	0.121
Lead	0.424	0.202
Zinc	1.48	0.616
Ammonia	135	59.2
Fluoride	60.1	26.7
Oil and grease	20.2	12.1
TSS	41.4	19.7
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(k) *Tube reducing spent lubricants—Subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—Subpart F—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.061	0.025
Lead	0.088	0.042
Zinc	0.304	0.127
Ammonia	27.7	12.2
Fluoride	12.4	5.49
Oil and grease	4.16	2.50
TSS	8.53	4.06
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(n) *Surface treatment rinse.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	8.47	3.51
Lead	12.3	5.84
Zinc	42.7	17.8
Ammonia	3,890	1,710
Fluoride	1,740	771
Oil and grease	584	351
TSS	1,200	570
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged	
Cyanide	0.621	0.257
Lead	0.899	0.428
Zinc	3.13	1.31
Ammonia	285	126
Fluoride	128	56.5
Oil and grease	42.8	25.7
TSS	87.8	41.8
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(p) *Alkaline cleaning spent baths.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.070	0.029
Lead	0.101	0.048
Zinc	0.351	0.147
Ammonia	32.0	14.1
Fluoride	14.3	6.34
Oil and grease	4.80	2.88
TSS	9.84	4.68
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) *Alkaline cleaning rinse.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.801	0.331
Lead	1.16	0.552
Zinc	4.03	1.69
Ammonia	370	160
Fluoride	164	72.9
Oil and grease	55.2	33.1
TSS	113	53.8
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(r) *Molten salt rinse.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt	
Cyanide	0.277	0.115
Lead	0.401	0.191
Zinc	1.40	0.583
Ammonia	128	56.0
Fluoride	56.8	25.2
Oil and grease	19.1	11.5
TSS	39.2	18.6
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(s) *Tumbling wastewater.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tumbled	
Cyanide	0.229	0.095
Lead	0.332	0.158
Zinc	1.16	0.482
Ammonia	110	46
Fluoride	47.0	20.9
Oil and grease	15.8	9.48
TSS	32.4	15.4
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(t) *Sawing or grinding spent neat oils—Subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding of spent emulsions.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with an emulsion	
Cyanide	0.053	0.022
Lead	0.077	0.037
Zinc	0.267	0.112
Ammonia	24.4	10.7
Fluoride	10.9	4.83
Oil and grease	3.66	2.20
TSS	7.51	3.57
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(v) *Sawing or grinding contact cooling water.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water	
Cyanide	1.38	0.571
Lead	2.00	0.952
Zinc	6.95	2.91
Ammonia	635	279
Fluoride	283	126
Oil and grease	95.2	57.1
TSS	195	92.8
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(w) *Dye penetrant testing wastewater.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tested with dye penetrant methods	
Cyanide	0.325	0.135
Lead	0.471	0.224
Zinc	1.64	0.683
Ammonia	149	65.7
Fluoride	66.7	29.6
Oil and grease	22.4	13.5
TSS	45.9	21.9
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(x) *Miscellaneous wastewater sources.*

SUBPART F—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium formed	
Cyanide	0.010	0.004
Lead	0.014	0.007
Zinc	0.048	0.020
Ammonia	4.32	1.90
Fluoride	1.93	0.856
Oil and grease	0.648	0.389
TSS	1.33	0.632
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(y) *Degreasing spent solvents—Subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent neat oils—Subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water	
Cyanide	0.142	0.059
Lead	0.205	0.098
Zinc	0.713	0.298
Ammonia	65.1	28.6
Fluoride	29.1	12.90

(c) *Drawing spent neat oils—Subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—Subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent lubricants.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.021	0.009
Lead	0.030	0.015
Zinc	0.105	0.044
Ammonia	9.59	4.22
Fluoride	4.28	1.90

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.052	0.022
Lead	0.075	0.036
Zinc	0.260	0.109
Ammonia	23.7	10.5
Fluoride	10.6	4.70

(g) *Forging spent lubricants—Subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water	
Cyanide	0.029	0.012
Lead	0.042	0.020
Zinc	0.146	0.061
Ammonia	13.3	5.86
Fluoride	5.95	2.64

(i) *Forging equipment cleaning wastewater.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged cyanide	
Cyanide	0.012	0.005
Lead	0.017	0.008
Zinc	0.059	0.025
Ammonia	5.33	2.35
Fluoride	2.38	1.06

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged	
Cyanide	0.293	0.121
Lead	0.424	0.202
Zinc	1.48	0.616
Ammonia	135	59.2
Fluoride	60.1	26.7

(k) *Tube reducing spent lubricants—Subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—Subpart F—BAT.* There shall be no discharge allowance for process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.061	0.025
Lead	0.088	0.042
Zinc	0.304	0.127
Ammonia	27.7	12.2
Fluoride	12.4	5.49

(n) *Surface treatment rinse.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.847	0.351
Lead	1.23	0.584
Zinc	4.27	1.78
Ammonia	389	171
Fluoride	174	77.1

(o) *Wet air pollutant control scrubber blowdown.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged	
Cyanide	0.062	0.026
Lead	0.090	0.043
Zinc	0.313	0.131
Ammonia	28.5	12.6
Fluoride	12.8	5.68

(p) *Alkaline cleaning spent baths.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.070	0.029
Lead	0.101	0.048
Zinc	0.351	0.147
Ammonia	32	14.1
Fluoride	14.3	6.34

(q) *Akaline cleaning rinse.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.080	0.033
Lead	0.116	0.055
Zinc	0.403	0.169
Ammonia	36.8	16.2
Fluoride	16.4	7.29

(r) *Molten salt rinse.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt	
Cyanide	0.277	0.115
Lead	0.401	0.191
Zinc	1.40	0.583
Ammonia	128	56
Fluoride	56.8	25.2

(s) *Tumbling wastewater.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tumbled	
Cyanide	0.022	0.010
Lead	0.033	0.016
Zinc	0.116	0.048
Ammonia	11.0	4.60
Fluoride	4.70	2.09

(t) *Sawing or grinding spent neat oils—Subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions	
Cyanide	0.053	0.022
Lead	0.077	0.037
Zinc	0.267	0.112
Ammonia	24.4	10.7
Fluoride	10.9	4.83

(v) *Sawing or grinding contact cooling water.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) to titanium sawed or ground with contact cooling water	
Cyanide	0.138	0.057
Lead	0.200	0.095
Zinc	0.695	0.291
Ammonia	63.5	27.9
Fluoride	28.3	12.6

(w) *Dye penetrant testing wastewater.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tested with dye penetrant methods	
Cyanide	0.325	0.135
Lead	0.471	0.224
Zinc	1.64	0.683
Ammonia	149	65.7
Fluoride	66.7	29.6

(x) *Miscellaneous wastewater sources.*

SUBPART F—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium formed	
Cyanide	0.010	0.004
Lead	0.014	0.007
Zinc	0.048	0.020
Ammonia	4.32	1.90
Fluoride	1.93	0.856

(y) *Degreasing spent solvents—Subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.63 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The discharge of wastewater pollutants from titanium process wastewater shall not exceed the values set forth below:

(a) *Rolling spent neat oils—Subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water	
Cyanide	0.142	0.059
Lead	0.205	0.098
Zinc	0.713	0.298
Ammonia	65.1	28.6
Fluoride	29.1	12.9
Oil and grease	9.76	5.86
TSS	20.0	9.52
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Drawing spent neat oils—Subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—Subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.021	0.009
Lead	0.030	0.015
Zinc	0.105	0.044
Ammonia	9.59	4.22
Fluoride	4.28	1.9
Oil and grease	1.44	0.863
TSS	2.95	1.40
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.052	0.022
Lead	0.075	0.036
Zinc	0.260	0.109
Ammonia	23.7	10.5
Fluoride	10.6	4.70
Oil and grease	3.56	2.14
TSS	7.30	3.47
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Forging spent lubricants—Subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water	
Cyanide	0.029	0.012
Lead	0.0420	0.020
Zinc	0.146	0.061
Ammonia	13.3	5.86
Fluoride	5.95	2.64
Oil and grease	2.00	1.20
TSS	4.10	1.95
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Forging equipment cleaning wastewater.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged	
Cyanide	0.012	0.005
Lead	0.017	0.008
Zinc	0.059	0.025
Ammonia	5.33	2.35
Fluoride	2.38	1.06
Oil and grease	0.800	0.490
TSS	1.64	0.780
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged	
Cyanide	0.293	0.121
Lead	0.424	0.202
Zinc	1.48	0.616
Ammonia	135	59.2
Fluoride	60.1	26.7
Oil and grease	20.2	12.1
TSS	41.4	19.7
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Tube reducing spent lubricants—Subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—Subpart F—NSPS.* There shall be no discharge allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.061	0.025
Lead	0.088	0.042
Zinc	0.304	0.127
Ammonia	27.7	12.2
Fluoride	12.4	5.49
Oil and grease	4.16	2.50
TSS	8.53	4.06
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(n) *Surface treatment rinse.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.847	0.351
Lead	1.23	0.584
Zinc	4.27	1.78
Ammonia	389	171
Fluoride	174	77.1
Oil and grease	58.4	35.1
TSS	120	57.0
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged	
Cyanide	0.062	0.026
Lead	0.090	0.043
Zinc	0.313	0.131
Ammonia	28.5	12.6
Fluoride	12.8	5.65
Oil and grease	4.28	2.57
TSS	8.78	4.18
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(p) *Alkaline cleaning spent baths.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.070	0.030
Lead	0.101	0.048
Zinc	0.351	0.147
Ammonia	32.0	14.1
Fluoride	14.3	6.34
Oil and grease	4.80	2.88
TSS	9.84	4.68
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) *Alkaline cleaning rinse.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.080	0.033
Lead	0.116	0.055
Zinc	0.403	0.169
Ammonia	36.8	16.2
Fluoride	16.4	7.29
Oil and grease	5.52	3.31
TSS	11.3	5.38
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(r) *Molten salt rinse.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt	
Cyanide	0.277	0.115
Lead	0.401	0.191
Zinc	1.40	0.583
Ammonia	128	56.0
Fluoride	56.8	25.2
Oil and grease	19.1	11.5
TSS	39.2	18.6
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(s) *Tumbling wastewater.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tumbled	
Cyanide	0.023	0.010
Lead	0.033	0.016
Zinc	0.116	0.048
Ammonia	10.6	4.63
Fluoride	4.70	2.09
Oil and grease	1.58	0.948
TSS	3.24	1.54
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(t) *Sawing or grinding spent neat oils—Subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions	
Cyanide	0.053	0.022
Lead	0.077	0.037
Zinc	0.267	0.112
Ammonia	24.4	10.7
Fluoride	10.9	4.83
Oil and grease	3.66	2.20
TSS	7.51	3.57
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(v) *Sawing or grinding contact cooling water.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water	
Cyanide	0.138	0.057
Lead	0.200	0.095
Zinc	0.695	0.291
Ammonia	63.5	27.9
Fluoride	28.3	12.6
Oil and grease	9.52	5.71
TSS	19.5	9.28
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(w) *Dye penetrant testing wastewater.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tested using dye penetrant methods	
Cyanide	0.325	0.135
Lead	0.471	0.224
Zinc	1.64	0.683
Ammonia	149	65.7
Fluoride	66.7	29.6
Oil and grease	22.4	13.5
TSS	45.9	21.9
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(x) *Miscellaneous wastewater sources.*

SUBPART F—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium formed	
Cyanide	0.010	0.004
Lead	0.014	0.007
Zinc	0.048	0.020
Ammonia	4.32	1.90
Fluoride	1.93	0.856
Oil and grease	0.648	0.389
TSS	1.33	0.63
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(y) *Degreasing spent solvents—Subpart F—NSPS.* There shall be no discharge of process wastewater pollutant.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.64 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in titanium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water	
Cyanide	0.142	0.059
Lead	0.205	0.098
Zinc	0.713	0.298
Ammonia	65.1	28.6
Fluoride	29.1	12.9

(c) *Drawing spent neat oils—Subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—Subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.021	0.009
Lead	0.030	0.015
Zinc	0.105	0.044
Ammonia	9.59	4.22
Fluoride	4.28	1.90

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.052	0.022
Lead	0.75	0.036
Zinc	0.260	0.109
Ammonia	23.7	10.5
Fluoride	10.6	4.70

(g) *Forging spent lubricants—Subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water	
Cyanide	0.029	0.012
Lead	0.042	0.020
Zinc	0.146	0.061
Ammonia	13.3	5.86
Fluoride	5.95	2.64

(i) *Forging equipment cleaning wastewater.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged	
Cyanide	0.012	0.005
Lead	0.017	0.008
Zinc	0.059	0.025
Ammonia	5.33	2.35
Fluoride	2.38	1.06

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged	
Cyanide	0.293	0.121
Lead	0.424	0.202
Zinc	1.48	0.616
Ammonia	135	59.2
Fluoride	60.1	26.7

(k) *Tube reducing spent lubricants—Subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—Subpart F—PSES.* There shall be no discharge allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.061	0.025
Lead	0.088	0.042
Zinc	0.304	0.127
Ammonia	27.7	12.2
Fluoride	12.4	5.49

(n) *Surface treatment rinse.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.847	0.351
Lead	1.23	0.584
Zinc	4.27	1.78
Ammonia	389	171
Fluoride	174	77.1

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged	
Cyanide	0.062	0.026
Lead	0.090	0.043
Zinc	0.313	0.131
Ammonia	28.5	12.6
Fluoride	12.8	5.65

(p) *Alkaline cleaning spent baths.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.070	0.029
Lead	0.101	0.048
Zinc	0.351	0.147
Ammonia	32.0	14.1
Fluoride	14.3	6.34

(q) *Alkaline cleaning rinse.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.080	0.033
Lead	0.116	0.055
Zinc	0.403	0.169
Ammonia	36.8	16.2
Fluoride	16.4	7.29

(r) *Molten salt rinse.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt	
Cyanide	0.277	0.115
Lead	0.401	0.191
Zinc	1.40	0.583
Ammonia	128	56.0
Fluoride	56.8	25.2

(s) *Tumbling wastewater.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tumbled	
Cyanide	0.023	0.010
Lead	0.033	0.016
Zinc	0.116	0.048
Ammonia	10.6	4.63
Fluoride	4.70	2.09

(t) *Sawing or grinding spent neat oils—Subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions	
Cyanide	0.053	0.022
Lead	0.077	0.037
Zinc	0.267	0.112
Ammonia	24.4	10.7
Fluoride	10.9	4.83

(v) *Sawing or grinding contact cooling water.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water	
Cyanide	0.138	0.057
Lead	0.200	0.095
Zinc	0.695	0.291
Ammonia	63.5	27.9
Fluoride	28.3	12.6

(w) *Dye penetrant testing wastewater.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium treated using dye penetrant methods	
Cyanide	0.325	0.135
Lead	0.471	0.224
Zinc	1.64	0.638
Ammonia	149	65.7
Fluoride	66.7	29.6

(x) *Miscellaneous wastewater sources.*

SUBPART F—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium formed	
Cyanide	0.010	0.004
Lead	0.014	0.007
Zinc	0.048	0.020
Ammonia	4.32	1.90
Fluoride	1.93	0.856

(y) *Degreasing spent solvents—Subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.65 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in the titanium forming process wastewater shall not exceed the values set forth below:

(a) *Rolling spent neat oils—Subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water	
Cyanide	0.142	0.059
Lead	0.205	0.098
Zinc	0.713	0.298
Ammonia	65.1	28.6
Fluoride	29.1	12.9

(c) *Drawing spent neat oils—Subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—Subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.021	0.009
Lead	0.030	0.015
Zinc	0.105	0.044
Ammonia	9.59	4.22
Fluoride	4.28	1.90

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium extruded	
Cyanide	0.052	0.022
Lead	0.075	0.036
Zinc	0.260	0.109
Ammonia	23.7	10.5
Fluoride	10.6	4.70

(g) *Forging spent lubricants—Subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water	
Cyanide	0.029	0.012
Lead	0.042	0.020
Zinc	0.146	0.061
Ammonia	13.3	5.86
Fluoride	5.95	2.64

(i) *Forging equipment cleaning wastewater.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged	
Cyanide	0.012	0.005
Lead	0.017	0.008
Zinc	0.059	0.025
Ammonia	5.33	2.35
Fluoride	2.38	1.06

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium forged	
Cyanide	0.293	0.121
Lead	0.424	0.202
Zinc	1.48	0.616
Ammonia	135	59.2
Fluoride	60.1	26.7

(k) *Tube reducing spent lubricants—Subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—Subpart F—PSNS.* There shall be no discharge allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.061	0.025
Lead	0.088	0.042
Zinc	0.304	0.127
Ammonia	27.7	12.2
Fluoride	12.4	5.49

(n) *Surface treatment rinse.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated	
Cyanide	0.847	0.351
Lead	1.23	0.584
Zinc	4.27	1.78
Ammonia	389	171
Fluoride	174	77.1

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged	
Cyanide	0.062	0.026
Lead	0.090	0.043
Zinc	0.313	0.131
Ammonia	28.5	12.6
Fluoride	12.8	5.65

(p) *Alkaline cleaning spent baths.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.070	0.029
Lead	0.101	0.048
Zinc	0.351	0.147
Ammonia	32.0	14.1
Fluoride	14.3	6.34

(q) *Alkaline cleaning rinse.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned	
Cyanide	0.080	0.033
Lead	0.116	0.055
Zinc	0.403	0.169
Ammonia	36.8	16.2
Fluoride	16.4	7.29

(r) *Molten salt rinse.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt	
Cyanide	0.277	0.115
Lead	0.401	0.191
Zinc	1.40	0.583
Ammonia	128	56.0
Fluoride	56.8	25.2

(s) *Tumbling wastewater.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium tumbled	
Cyanide	0.023	0.010
Lead	0.033	0.016
Zinc	0.116	0.048
Ammonia	10.6	4.63
Fluoride	4.70	2.09

(t) *Sawing or grinding spent neat oils—Subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions	
Cyanide	0.053	0.022
Lead	0.077	0.037
Zinc	0.267	0.112
Ammonia	24.4	10.7
Fluoride	10.9	4.83

(v) *Sawing or grinding contact cooling water.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water	
Cyanide	0.138	0.057
Lead	0.200	0.095
Zinc	0.695	0.291
Ammonia	63.5	27.9
Fluoride	28.3	12.6

(w) *Dye penetrant testing wastewater.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium treated using dye penetrant methods	
Cyanide	0.325	0.135
Lead	0.471	0.224
Zinc	1.64	0.683
Ammonia	149	65.7
Fluoride	66.7	29.6

(x) *Miscellaneous wastewater sources.*

SUBPART F—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of titanium formed	
Cyanide	0.010	0.004
Lead	0.014	0.007
Zinc	0.048	0.020
Ammonia	4.32	1.90
Fluoride	1.93	0.856

(y) *Degreasing spent solvents—Subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§471.66 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart G—Uranium Forming Subcategory

§471.70 Applicability; description of the uranium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the uranium forming subcategory.

§471.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best praticable control technology currently available (BPT):

(a) *Extrusion spent lubricants—Subpart G—BPT.* There shall be no discharge process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium extruded	
Cadium	0.117	0.052
Chromium	0.152	0.062
Copper	0.654	0.344
Lead	0.145	0.069
Nickel	0.661	0.437
Fluoride	20.5	9.08
Molybdenum	2.28	1.18
Oil and grease	6.88	4.13
TSS	14.1	6.71
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Heat treatment contact cooling water.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated	
Cadium	0.646	0.285
Chromium	0.836	0.342
Copper	3.61	1.90
Lead	0.798	0.380
Nickel	3.65	2.42
Fluoride	113	50.2
Molybdenum	12.6	6.5
Oil and grease	38	22.8
TSS	77.9	37.1
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) *Forging spent lubricants—Subpart G—BPT.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.010	0.004
Chromium	0.012	0.005
Copper	0.052	0.027
Lead	0.012	0.006
Nickel	0.052	0.035
Fluoride	1.62	0.718
Molybdenum	0.180	0.093
Oil and grease	0.544	0.327
TSS	1.12	0.531
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Surface treatment rinse.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.115	0.050
Chromium	0.149	0.061
Copper	0.641	0.337
Lead	0.142	0.068
Nickel	0.647	0.428
Fluoride	20.1	8.90
Molybdenum	2.23	1.16
Oil and grease	6.74	4.05
TSS	13.8	6.57
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Wet air pollution control scrubber blowdown.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.00	0.0006
Chromium	0.002	0.0007
Copper	0.007	0.004
Lead	0.002	0.0007
Nickel	0.007	0.005
Fluoride	0.208	0.092
Molybdenum	0.023	0.012
Oil and grease	0.070	0.042
TSS	0.143	0.068
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Sawing or grinding spent emulsions.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions	
Cadmium	0.002	0.0009
Chromium	0.003	0.001
Copper	0.011	0.006
Lead	0.003	0.001
Nickel	0.011	0.007
Fluoride	0.338	0.150
Molybdenum	0.038	0.020
Oil and grease	0.114	0.068
TSS	0.233	0.111
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Sawing or grinding contact cooling water.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling ater	
Cadmium	0.561	0.248
Chromium	0.726	0.297
Copper	3.14	1.65
Lead	0.693	0.330
Nickel	3.17	2.1
Fluoride	98.2	43.6
Molybdenum	10.9	5.65
Oil and grease	33.0	19.8
TSS	67.7	32.2
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(j) *Sawing or grinding rinse.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinses	
Cadmium	0.002	0.0007
Chromium	0.002	0.0009
Copper	0.009	0.005
Lead	0.002	0.001
Nickel	0.009	0.006
Fluoride	0.277	0.123
Molybdenum	0.031	0.016
Oil and grease	0.093	0.056
TSS	0.191	0.091
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(k) *Area cleaning rinse.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.015	0.007
Chromium	0.019	0.008
Copper	0.082	0.043
Lead	0.018	0.009
Nickel	0.083	0.055
Fluoride	2.56	1.14
Molybdenum	0.284	0.147
Oil and grease	0.858	0.515
TSS	1.76	0.837
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(l) *Drum washwater.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.015	0.007
Chromium	0.020	0.008
Copper	0.084	0.045
Lead	0.019	0.009
Nickel	0.085	0.057
Fluoride	2.64	1.17
Molybdenum	0.293	0.152
Oil and grease	0.886	0.532
TSS	1.82	0.864
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(m) *Laundry washwater.*

SUBPART G—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/employee—day	
Cadmium	17.8	7.86
Chromium	23.1	9.43
Copper	99.6	52.4
Lead	22.0	10.5
Nickel	101	66.6
Fluoride	3,120	1,390
Molybdenum	347	179
Oil and grease	1,050	629
TSS	2,150	1,020
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(n) *Degreasing spent solvents—Subpart G—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Extrusion spent lubricants—Subpart G—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium extruded	
Cadmium	0.007	0.003
Chromium	0.013	0.005
Copper	0.044	0.021
Lead	0.010	0.005
Nickel	0.019	0.013
Fluoride	2.05	0.908
Molybdenum	0.173	0.077

(c) *Heat treatment contact cooling water.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated	
Cadmium	0.006	0.003
Chromium	0.012	0.005
Copper	0.040	0.019
Lead	0.009	0.004
Nickel	0.017	0.012
Fluoride	1.86	0.827
Molybdenum	0.158	0.070

(d) *Forging spent lubricants—Subpart G—BAT.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.006	0.002
Chromium	0.010	0.004
Copper	0.035	0.017
Lead	0.008	0.004
Nickel	0.015	0.010
Fluoride	1.62	0.718
Molybdenum	0.137	0.061

(f) *Surface treatment rinse.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.068	0.027
Chromium	0.125	0.051
Copper	0.432	0.260
Lead	0.095	0.044
Nickel	0.186	0.125
Fluoride	20.1	8.90
Molybdenum	1.70	0.752

(g) *Wet air pollution control scrubber blowdown.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.0007	0.0003
Chromium	0.001	0.0005
Copper	0.005	0.002
Lead	0.001	0.0005
Nickel	0.002	0.001
Fluoride	0.208	0.092
Molybdenum	0.018	0.008

(h) *Sawing or grinding spent emulsions.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions	
Cadmium	0.001	0.0005
Chromium	0.002	0.0009
Copper	0.007	0.004
Lead	0.002	0.001
Nickel	0.003	0.002
Fluoride	0.338	0.150
Molybdenum	0.029	0.013

(i) *Sawing or grinding contact cooling water.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling water	
Cadmium	0.033	0.013
Chromium	0.061	0.025
Copper	0.211	0.101
Lead	0.046	0.022
Nickel	0.091	0.061
Fluoride	9.82	4.36
Molybdenum	0.830	0.368

(j) *Sawing or grinding rinse.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinse	
Cadmium	0.001	0.0004
Chromium	0.002	0.0007
Copper	0.006	0.003
Lead	0.002	0.0006
Nickel	0.003	0.002
Fluoride	0.277	0.123
Molybdenum	0.024	0.011

(k) *Area cleaning rinse.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.009	0.004
Chromium	0.016	0.007
Copper	0.055	0.026
Lead	0.012	0.006
Nickel	0.024	0.016
Fluoride	2.56	1.14
Molybdenum	0.216	0.096

(l) *Drum, washwater.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.009	0.004
Chromium	0.017	0.007
Copper	0.057	0.027
Lead	0.013	0.006
Nickel	0.025	0.017
Fluoride	2.64	1.17
Molybdenum	0.223	0.099

(m) *Laundry washwater.*

SUBPART G—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/employee—day	
Cadmium	5.24	2.10
Chromium	9.70	3.93
Copper	33.6	16.0
Lead	7.34	3.41
Nickel	14.4	9.70
Fluoride	1.560	692
Molybdenum	132	58.4

(n) *Degreasing spent solvents—Subpart G—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.73 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutants in the uranium forming process wastewater shall not exceed the following values:

(a) *Extrusion spent lubricants—Subpart G—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium extruded	
Cadmium	0.007	0.003
Chromium	0.013	0.005
Copper	0.044	0.021
Lead	0.010	0.005
Nickel	0.019	0.013
Fluoride	2.05	0.908
Molybdenum	0.173	0.077
Oil and grease	0.344	0.344
TSS	0.516	0.413
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Heat treatment contact cooling water.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated	
Cadmium	0.006	0.003
Chromium	0.012	0.005
Copper	0.040	0.019
Lead	0.009	0.004
Nickel	0.017	0.012
Fluoride	1.86	0.827
Molybdenum	0.158	0.070
Oil and grease	0.313	0.313
TSS	0.470	0.376
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) *Forging spent lubricants—Subpart G—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.006	0.002
Chromium	0.010	0.004
Copper	0.035	0.017
Lead	0.008	0.004
Nickel	0.015	0.010
Fluoride	1.62	0.718
Molybdenum	0.137	0.061
Oil and grease	0.272	0.272
TSS	0.408	0.327
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Surface treatment rinse.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.068	0.027
Chromium	0.125	0.051
Copper	0.432	0.206
Lead	0.095	0.044
Nickel	0.186	0.125
Fluoride	20.1	8.90
Molybdenum	1.70	0.752
Oil and grease	3.37	3.37
TSS	5.06	4.05
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Wet air pollution control scrubber blowdown.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.0007	0.0003
Chromium	0.001	0.0005
Copper	0.005	0.002
Lead	0.001	0.0005
Nickel	0.002	0.001
Fluoride	0.208	0.092
Molybdenum	0.018	0.008
Oil and grease	0.035	0.035
TSS	0.053	0.042
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Sawing or grinding spent emulsions.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions	
Cadmium	0.001	0.0005
Chromium	0.002	0.0009
Copper	0.007	0.004
Lead	0.002	0.0008
Nickel	0.003	0.002
Fluoride	0.338	0.150
Molybdenum	0.029	0.013
Oil and grease	0.057	0.057
TSS	0.085	0.068
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Sawing or grinding contact cooling water.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling water	
Cadmium	0.033	0.013
Chromium	0.061	0.025
Copper	0.211	0.101
Lead	0.046	0.022
Nickel	0.091	0.061
Fluoride	9.82	4.36
Molybdenum	0.830	0.368
Oil and grease	1.65	1.65
TSS	2.48	1.98
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Sawing or grinding rinse.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinsed	
Cadmium	0.001	0.0004
Chromium	0.002	0.0007
Copper	0.006	0.003
Lead	0.002	0.0006
Nickel	0.003	0.002
Fluoride	0.277	0.123
Molybdenum	0.024	0.011
Oil and grease	0.047	0.047
TSS	0.070	0.056
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Area cleaning rinse.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.009	0.004
Chromium	0.016	0.007
Copper	0.055	0.026
Lead	0.012	0.006
Nickel	0.024	0.016
Fluoride	2.56	1.14
Molybdenum	0.216	0.096
Oil and grease	0.429	0.429
TSS	0.644	0.515
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Drum washwater.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.009	0.004
Chromium	0.017	0.007
Copper	0.057	0.027
Lead	0.013	0.006
Nickel	0.025	0.017
Fluoride	2.64	1.17
Molybdenum	0.223	0.099
Oil and grease	0.443	0.443
TSS	0.665	0.532
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(m) *Laundry washwater.*

SUBPART G—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/employee—day	
Cadmium	5.24	2.10
Chromium	9.70	3.93
Copper	33.6	16.0
Lead	7.34	3.41
Nickel	14.4	9.70
Fluoride	1,560	692
Molybdenum	132	58.4
Oil and grease	262	262
TSS	393	315
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(n) *Degreasing spent solvents—Subpart G—NSPS.* There shall be no discharge of process waster pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.74 Pretreatment standards for existing sources (PSES). [Reserved]

§ 471.75 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in uranium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Extrusion spent lubricants—Subpart G—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium extruded	
Cadmium	0.007	0.003
Chromium	0.013	0.005
Copper	0.044	0.021
Lead	0.010	0.005
Nickel	0.019	0.013
Fluoride	2.05	0.908
Molybdenum	0.173	0.077

(c) *Heat treatment contact cooling water.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated	
Cadmium	0.006	0.003
Chromium	0.012	0.005
Copper	0.040	0.019
Lead	0.009	0.004
Nickel	0.017	0.012
Fluoride	1.86	0.827
Molybdenum	0.158	0.070

(d) *Forging spent lubricants—Subpart G—PSNS.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.006	0.002
Chromium	0.010	0.004
Copper	0.035	0.017
Lead	0.008	0.004
Nickel	0.015	0.010
Fluoride	1.62	0.718
Molybdenum	0.137	0.061

(f) *Surface treatment rinse.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.068	0.027
Chromium	0.125	0.051
Copper	0.432	0.206
Lead	0.095	0.044
Nickel	0.186	0.125
Fluoride	20.1	8.90
Molybdenum	1.70	0.752

(g) *Wet air pollution control scrubber blowdown.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium surface treated	
Cadmium	0.0007	0.0003
Chromium	0.001	0.0005
Copper	0.005	0.002
Lead	0.001	0.0005
Nickel	0.002	0.001
Fluoride	0.208	0.092
Molybdenum	0.018	0.008

(h) *Sawing or grinding spent emulsions.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions	
Cadmium	0.001	0.0005
Chromium	0.002	0.0009
Copper	0.007	0.004
Lead	0.002	0.0008
Nickel	0.003	0.002
Fluoride	0.338	0.150
Molybdenum	0.029	0.013

(i) *Sawing or grinding contact cooling water.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling water	
Cadmium	0.033	0.013
Chromium	0.061	0.025
Copper	0.211	0.101
Lead	0.046	0.022
Nickel	0.091	0.061
Fluoride	9.82	4.36
Molybdenum	0.830	0.368

(j) *Sawing or grinding rinse.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinsed	
Cadmium	0.001	0.0004
Chromium	0.002	0.0007
Copper	0.006	0.003
Lead	0.002	0.0006
Nickel	0.003	0.002
Fluoride	0.277	0.123
Molybdenum	0.024	0.011

(k) *Area cleaning rinse.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.009	0.004
Chromium	0.016	0.007
Copper	0.055	0.026
Lead	0.012	0.006
Nickel	0.024	0.016
Fluoride	2.56	1.14
Molybdenum	0.216	0.096

(l) *Drum washwater.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of uranium formed	
Cadmium	0.009	0.004
Chromium	0.017	0.007
Copper	0.057	0.027
Lead	0.013	0.006
Nickel	0.025	0.017
Fluoride	2.64	1.17
Molybdenum	0.223	0.099

(m) *Laundry washwater.*

SUBPART G—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/employee—day	
Cadmium	5.24	2.10
Chromium	9.70	3.93
Copper	33.6	16.0
Lead	7.34	3.41
Nickel	14.4	9.70
Fluoride	1,560	692
Molybdenum	132	58.4

(n) *Degreasing spent solvents—Subpart G—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.76 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart H—Zinc Forming Subcategory

§ 471.80 Applicability; description of the zinc forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the zinc forming subcategory.

§ 471.81 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—Subpart H—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions	
Chromium	0.0006	0.0003
Copper	0.003	0.002
Cyanide	0.0004	0.0002
Zinc	0.002	0.0009
Oil and grease	0.028	0.017
TSS	0.057	0.027
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Rolling contact cooling water.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water	
Chromium	0.236	0.0097
Copper	1.02	0.536
Cyanide	0.156	0.065
Zinc	0.783	0.327
Oil and grease	10.7	6.43
TSS	22.0	10.5
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) *Drawing spent emulsions.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions	
Chromium	0.003	0.001
Copper	0.011	0.006
Cyanide	0.002	0.0007
Zinc	0.009	0.004
Oil and grease	0.116	0.070
TSS	0.238	0.113
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(e) *Direct chill casting contact cooling water.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method	
Chromium	0.222	0.091
Copper	0.960	0.505
Cyanide	0.147	0.061
Zinc	0.738	0.308
Oil and grease	10.1	6.06
TSS	20.7	9.85
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Stationary casting contact cooling water—Subpart H—BPT.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc heat treated	
Chromium	0.336	0.138
Copper	1.45	0.763
Cyanide	0.221	0.092
Zinc	1.12	0.466
Oil and grease	15.3	9.16
TSS	31.3	14.9
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Surface treatment spent baths.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	0.039	0.016
Copper	0.169	0.089
Cyanide	0.026	0.011
Zinc	0.130	0.054
Oil and grease	1.78	1.07
TSS	3.64	1.73
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Surface treatment rinse.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	1.58	0.645
Copper	6.80	3.58
Cyanide	1.04	0.430
Zinc	5.23	2.19
Oil and grease	71.6	43.0
TSS	147	69.8
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Alkaline cleaning spent baths.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.002	0.0007
Copper	0.007	0.004
Cyanide	0.001	0.0004
Zinc	0.005	0.002
Oil and grease	0.071	0.043
TSS	0.146	0.069
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Alkaline cleaning rinse.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.744	0.304
Copper	3.21	1.69
Cyanide	0.490	0.203
Zinc	2.47	1.03
Oil and grease	33.8	20.3
TSS	69.3	33.0
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Sawing or grinding spent emulsions.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions	
Chromium	0.011	0.005
Copper	0.045	0.024
Cyanide	0.007	0.003
Zinc	0.035	0.015
Oil and grease	0.476	0.286
TSS	0.976	0.464
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(m) *Electrocoating rinse.*

SUBPART H—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc electrocoated	
Chromium	1.01	0.412
Copper	4.35	2.29
Cyanide	0.664	0.275
Zinc	3.35	1.40
Oil and grease	45.8	27.5
TSS	93.9	44.7
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(n) *Degreasing spent solvents—Subpart H—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent neat oils—Subpart H—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions	
Chromium	0.0005	0.0002
Copper	0.002	0.0009
Cyanide	0.0003	0.0001
Zinc	0.002	0.0006

(c) *Rolling contact cooling water.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water	
Chromium	0.020	0.009
Copper	0.069	0.033
Cyanide	0.011	0.004
Zinc	0.055	0.023

(d) *Drawing spent emulsions.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions	
Chromium	0.002	0.0009
Copper	0.008	0.004
Cyanide	0.001	0.0005
Zinc	0.006	0.003

(e) *Direct chill casting contact cooling water.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method	
Chromium	0.019	0.008
Copper	0.065	0.031
Cyanide	0.010	0.004
Zinc	0.052	0.021

(f) *Stationary casting contact cooling water—Subpart H—BAT.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc heat treated	
Chromium	0.029	0.012
Copper	0.098	0.047
Cyanide	0.016	0.006
Zinc	0.078	0.032

(h) *Surface treatment spent baths.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	0.033	0.014
Copper	0.114	0.054
Cyanide	0.018	0.007
Zinc	0.091	0.038

(i) *Surface treatment rinse.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	0.133	0.054
Copper	0.457	0.219
Cyanide	0.072	0.029
Zinc	0.365	0.151

(j) *Alkaline cleaning spent baths.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.002	0.0006
Copper	0.005	0.002
Cyanide	0.0007	0.0003
Zinc	0.004	0.002

(k) *Alkaline cleaning rinse.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.626	0.254
Copper	2.17	1.03
Cyanide	0.338	0.135
Zinc	1.73	0.710

(l) *Sawing or grinding spent emulsions.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions	
Chromium	0.009	0.004
Copper	0.031	0.015
Cyanide	0.005	0.002
Zinc	0.025	0.010

(m) *Electrocoating rinse.*

SUBPART H—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc electrocoated	
Chromium	0.085	0.035
Copper	0.293	0.140
Cyanide	0.046	0.019
Zinc	0.234	0.096

(n) *Degreasing spent solvents—Subpart H—BAT.* There shall be no discharge or process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.83 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

(a) *Rolling spent neat oils—Subpart H—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions	
Chromium	0.0005	0.0002
Copper	0.002	0.0009
Cyanide	0.0003	0.0001
Zinc	0.002	0.0006
Oil and grease	0.014	0.014
TSS	0.021	0.017
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Rolling contact cooling water.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water	
Chromium	0.020	0.009
Copper	0.069	0.037
Cyanide	0.011	0.004
Zinc	0.055	0.023
Oil and grease	0.536	0.536
TSS	0.804	0.643
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(d) *Drawing spent emulsions.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions	
Chromium	0.002	0.0009
Copper	0.008	0.004
Cyanide	0.001	0.0005
Zinc	0.006	0.003
Oil and grease	0.058	0.058
TSS	0.087	0.070
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times

(e) *Direct chill casting contact cooling water.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method	
Chromium	0.019	0.008
Copper	0.065	0.031
Cyanide	0.010	0.004
Zinc	0.052	0.021
Oil and grease	0.505	0.505
TSS	0.758	0.606
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Stationary casting contact cooling water—Subpart H—NSPS.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc heat treated	
Chromium	0.029	0.012
Copper	0.098	0.047
Cyanide	0.016	0.006
Zinc	0.078	0.032
Oil and grease	0.763	0.763
TSS	1.15	0.916
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Surface treatment spent baths.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	0.033	0.014
Copper	0.114	0.054
Cyanide	0.018	0.007
Zinc	0.091	0.038
Oil and grease	0.887	0.887
TSS	1.33	1.07
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Surface treatment rinse.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	0.133	0.054
Copper	0.459	0.219
Cyanide	0.072	0.029
Zinc	0.365	0.151
Oil and grease	3.58	3.58
TSS	5.37	4.30
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(j) *Alkaline cleaning spent baths.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.002	0.0006
Copper	0.005	0.002
Cyanide	0.0007	0.0003
Zinc	0.004	0.002
Oil and grease	0.036	0.036
TSS	0.054	0.043
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(k) *Alkaline cleaning rinse.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.626	0.259
Copper	2.17	1.03
Cyanide	0.338	0.135
Zinc	1.73	0.710
Oil and grease	16.9	16.9
TSS	25.4	20.3
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(l) *Sawing or grinding spent emulsions.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions	
Chromium	0.009	0.004
Copper	0.031	0.015
Cyanide	0.005	0.002
Zinc	0.025	0.010
Oil and grease	0.235	0.235
TSS	0.357	0.286
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(m) *Electrocoating rinse.*

SUBPART H—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc electrocoated	
Chromium	0.085	0.035
Copper	0.293	0.140
Cyanide	0.046	0.019
Zinc	0.234	0.096
Oil and grease	2.29	2.29
TSS	3.44	2.75
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times

(n) *Degreasing spent solvents—Subpart H—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.84 Pretreatment standards for existing sources (PSES). [Reserved]

§ 471.85 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of the wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart H—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions	
Chromium	0.0005	0.0002
Copper	0.002	0.0009
Cyanide	0.0003	0.0001
Zinc	0.002	0.0006

(c) *Rolling contact cooling water.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water	
Chromium	0.020	0.008
Copper	0.069	0.033
Cyanide	0.011	0.004
Zinc	0.055	0.023

(d) *Drawing spent emulsions.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions	
Chromium	0.002	0.0009
Copper	0.008	0.004
Cyanide	0.001	0.0005
Zinc	0.006	0.003

(e) *Direct chill casting contact cooling water.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method	
Chromium	0.019	0.008
Copper	0.065	0.031
Cyanide	0.010	0.004
Zinc	0.052	0.021

(f) *Stationary casting contact cooling water—Subpart H—PSNS.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc heat treated	
Chromium	0.029	0.012
Copper	0.098	0.047
Cyanide	0.016	0.006
Zinc	0.078	0.032

(h) *Surface treatment spent baths.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	0.033	0.014
Copper	0.114	0.054
Cyanide	0.018	0.007
Zinc	0.091	0.038

(i) *Surface treatment rinse.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc surface treated	
Chromium	0.133	0.054
Copper	0.459	0.219
Cyanide	0.072	0.029
Zinc	0.365	0.151

(j) *Alkaline cleaning spent baths.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.002	0.0006
Copper	0.005	0.002
Cyanide	0.0007	0.0003
Zinc	0.004	0.002

(k) *Alkaline cleaning rinse.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned	
Chromium	0.626	0.254
Copper	2.17	1.03
Cyanide	0.338	0.134
Zinc	1.73	0.710

(l) *Sawing or grinding spent emulsions.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions	
Chromium	0.009	0.004
Copper	0.031	0.015
Cyanide	0.005	0.002
Zinc	0.025	0.010

(m) *Electrocoating rinse.*

SUBPART H—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zinc electrocoated	
Chromium	0.085	0.035
Copper	0.293	0.140
Cyanide	0.046	0.019
Zinc	0.234	0.096

(n) *Decreasing spent solvents— Subpart H—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§471.86 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart I—Zirconium-Hafnium Forming Subcategory

§471.90 Applicability; description of the zirconium-hafnium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the zirconium-hafnium forming subcategory.

§471.91 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—Subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—Subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spend emulsions—Subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded	
Chromium	0.104	0.043
Cyanide	0.069	0.029
Nickel	0.455	0.301
Ammonia	31.6	13.9
Fluoride	14.1	6.26
Oil and grease	4.74	2.85
TSS	9.72	4.62
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(e) *Swaging spent neat oils—Subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated	
Chromium	0.151	0.062
Cyanide	0.100	0.041
Nickel	0.659	0.436
Ammonia	45.7	20.1
Fluoride	20.4	9.06
Oil and grease	6.86	4.12
TSS	14.1	6.69
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Tube Reducing Spent Lubricant—Subpart I—BPT.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under subparagraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in subparagraph (g)(2) of this section, the actions described in paragraph (g)(4), of this section shall be taken, and the demonstration required under paragraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e.,

lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.150	0.61
Cyanide	0.099	0.041
Nickel	0.653	0.432
Ammonia	45.3	20
Fluoride	20.3	8.98
Oil and grease	6.80	4.08
TSS	14	6.63
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Surface treatment rinse.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirkonium-hafnium surface treated	
Chromium	3.91	1.60
Cyanide	2.58	1.07
Nickel	17.1	11.3
Ammonia	1,190	521
Fluoride	529	235
Oil and grease	178	107
TSS	364	173
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Alkaline cleaning spent baths.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	0.704	0.288
Cyanide	0.464	0.192
Nickel	3.07	2.03
Ammonia	214	93.8
Fluoride	95.2	42.3
Oil and grease	32	19.2
TSS	65.6	31.2
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Alkaline cleaning rinse.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	13.8	5.65
Cyanide	9.11	3.77
Nickel	60.3	39.9
Ammonia	4,190	1,840
Fluoride	1,870	829
Oil and grease	628	377
TSS	1,290	613
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Sawing or grinding spent emulsions.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions	
Chromium	0.124	0.051
Cyanide	0.082	0.034
Nickel	0.540	0.357
Ammonia	37.5	16.5
Fluoride	16.7	7.42
Oil and grease	5.62	3.37
TSS	11.5	5.48
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(m) *Wet air pollution control scrubber blowdown—Subpart I—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—Subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—Subpart I—BPT.* There shall be no discharge or process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthy average
	mg/off-kg (pounds per million off pounds) of zirconium-hafnium treated with molten salt	
Chromium	3.33	1.360
Cyanide	2.20	0.907
Nickel	14.5	9.60
Ammonia	1,010	443
Fluoride	450	200
Oil and grease	151	90.7
TSS	310	148
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(q) *Sawing or grinding contact cooling water.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water	
Chromium	0.142	0.058
Cyanide	0.093	0.039
Nickel	0.617	0.408
Ammonia	42.8	18.8
Fluoride	19.1	8.48
Oil and grease	6.42	3.85
TSS	13.2	6.26
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(r) *Sawing on grinding rinse.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium hafnium rinsed	
Chromium	0.792	0.324
Cyanide	0.522	0.216
Nickel	3.46	2.29
Ammonia	240	106
Fluoride	107	47.5
Oil and grease	36	21.6
TSS	73.8	35.1
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(s) *Sawing or grinding spent neat oils—Subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested	
Chromium	0.007	0.003
Cyanide	0.005	0.002
Nickel	0.030	0.020
Ammonia	2.06	0.903
Fluoride	0.917	0.407
Oil and grease	0.308	0.185
TSS	0.632	0.301
pH	(1)	(1)

1 Within the range of 7.05 to 10.0 at all times.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986, as amended at 54 FR 11350, Mar. 17, 1989]

§ 471.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Rolling spent neat oils—Subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—Subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsions—Subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds of zirconium-hafnium extruded	
Chromium	0.104	0.043
Cyanide	0.069	0.029
Nickel	0.455	0.301
Ammonia	31.6	13.9
Fluoride	14.1	6.26

(e) *Swaging spent neat oils.*—There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated	
Chromium	0.015	0.006
Cyanide	0.010	0.004
Nickel	0.066	0.044
Ammonia	4.57	2.01
Fluoride	2.04	0.906

(g) *Tube Reducing Spent Lubricant*—Subpart I—BAT.

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under paragraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in

determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.150	0.061
Cyanide	0.099	0.041
Nickel	0.653	0.432
Ammonia	45.3	20
Fluoride	20.3	8.98

(i) *Surface treatment rinse.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.391	0.160
Cyanide	0.258	0.107
Nickel	1.71	1.13
Ammonia	119	52.1
Fluoride	52.9	23.5

(j) *Alkaline cleaning spent baths.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	0.704	0.288
Cyanide	0.464	0.192
Nickel	3.07	2.03
Ammonia	214	93.8
Fluoride	95.2	42.3

(k) *Alkaline cleaning rinse.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	1.380	0.565
Cyanide	0.911	0.377
Nickel	6.03	3.99
Ammonia	419	184
Fluoride	187	82.9

(l) *Sawing or grinding spent emulsions.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions	
Chromium	0.124	0.051
Cyanide	0.082	0.034
Nickel	0.540	0.357
Ammonia	37.5	16.5
Fluoride	16.7	7.42

(m) *Wet air pollution control scrubber blowdown—Subpart I—BAT.* There shall be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—Subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—Subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium treated with molten salt	
Chromium	0.333	0.136
Cyanide	0.220	0.091
Nickel	1.45	0.960
Ammonia	101	44.3
Fluoride	45.0	20.0

(q) *Sawing or grinding contact cooling water.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water	
Chromium	0.142	0.058
Cyanide	0.093	0.039
Nickel	0.617	0.408
Ammonia	42.8	18.8
Fluoride	19.1	8.48

(r) *Sawing or grinding rinse.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed	
Chromium	0.079	0.033
Cyanide	0.052	0.022
Nickel	0.346	0.229
Ammonia	24.0	10.6
Fluoride	10.7	4.75

(s) *Sawing or grinding spent neat oils—Subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested	
Chromium	0.007	0.003
Cyanide	0.005	0.002
Nickel	0.030	0.020
Ammonia	2.06	0.903
Fluoride	0.917	0.407

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986, as amended at 54 FR 11351, Mar. 17, 1989]

§ 471.93 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutant in the zirconium-hafnium process wastewater shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—Subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsions—Subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded	
Chromium	0.104	0.043
Cyanide	0.069	0.029
Nickel	0.455	0.301
Ammonia	31.6	13.9
Fluoride	14.1	6.26
Oil and grease	4.74	2.85
TSS	9.72	4.62
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(e) *Swaging spent neat oils—Subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated	
Chromium	0.015	0.006
Cyanide	0.010	0.004
Nickel	0.066	0.044
Ammonia	4.57	2.01
Fluoride	2.04	0.906
Oil and grease	0.686	0.412
TSS	1.41	0.669
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(g) *Tube Reducing Spent Lubricant—Subpart I—NSPS*:

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided

the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under paragraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.150	0.061
Cyanide	0.099	0.041
Nickel	0.653	0.432
Ammonia	45.3	20.0
Fluoride	20.0	8.98
Oil and grease	6.80	4.08
TSS	14.0	6.63
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Surface treatment rinse.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.391	0.160
Cyanide	0.258	0.107
Nickel	1.71	1.13
Ammonia	119	52.1
Fluoride	52.9	23.5
Oil and grease	17.8	10.7
TSS	36.4	17.3
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Alkaline cleaning spent baths.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	0.704	0.288
Cyanide	0.464	0.192
Nickel	3.07	2.03
Ammonia	214	93.8
Fluoride	95.2	42.3
Oil and grease	32.0	19.2
TSS	65.6	31.2
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times

(k) *Alkaline cleaning rinse.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	1.38	0.565
Cyanide	0.911	0.377
Nickel	6.03	3.99
Ammonia	419	184
Fluoride	187	82.9
Oil and grease	62.8	37.7
TSS	129	61.3
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(l) *Sawing or grinding spent emulsions.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions	
Chromium	0.124	0.051
Cyanide	0.082	0.034
Nickel	0.540	0.357
Ammonia	37.5	16.50
Fluoride	16.7	7.42
Oil and grease	5.62	3.37
TSS	11.5	5.48
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(m) *Wet air pollution control scrubber blowdown—Subpart I—NSPS.* There shall be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—Subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—Subpart I—NSPS.* There shall be no discharge of process wastewater pollutants

(p) *Molten salt rinse.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium treated with molten salt	
Chromium	0.333	0.136
Cyanide	0.220	0.091
Nickel	1.45	0.960
Ammonia	101	44.3
Fluoride	45.0	20.0
Oil and grease	15.1	9.07
TSS	31.0	14.8
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(q) *Sawing or grinding contact cooling water.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water	
Chromium	0.142	0.058
Cyanide	0.093	0.039
Nickel	0.617	0.408
Ammonia	42.8	18.8
Fluoride	19.1	8.48
Oil and grease	6.42	3.85
TSS	13.2	6.26
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(r) *Sawing or grinding rinse.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed	
Chromium	0.079	0.033
Cyanide	0.052	0.022
Nickel	0.346	0.229
Ammonia	24.0	10.6
Fluoride	10.7	4.75
Oil and Grease	3.60	2.16
TSS	7.38	3.51
pH	(1)	(1)

[1] Within range of 7.5 to 10.0 at all times.

(s) *Sawing or grinding spent neat oils—Subpart I—NSPS.* There shall be no discharge or process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested	
Chromium	0.007	0.003
Cyanide	0.005	0.002
Nickel	0.030	0.020
Ammonia	2.06	0.903
Fluoride	0.917	0.407
Oil and grease	0.308	0.185
TSS	0.632	0.301
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986, as amended at 54 FR 11351, Mar. 17, 1989]

§ 471.94 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1988 achieve the following preteatment standards for existing sources (PSES). The mass of wastewater pollutants in zirconium-hafnium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—Subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—Subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsion—Subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded	
Chromium	0.104	0.043
Cyanide	0.069	0.029
Nickel	0.455	0.301
Ammonia	31.6	13.9
Fluoride	14.1	6.26

(e) *Swaging spent neat oils—Subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated	
Chromium	0.015	0.006
Cyanide	0.010	0.004
Nickel	0.066	0.044
Ammonia	4.57	2.01
Fluoride	2.04	0.906

(g) *Tube Reducing Spent Lubricant—Subpart I—PSES.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine,

and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in subparagraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under subparagraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.150	0.061
Cyanide	0.099	0.041
Nickel	0.653	0.432
Ammonia	45.3	20.0
Fluoride	20.0	8.98

(i) *Surface treatment rinse.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.391	0.160
Cyanide	0.258	0.107
Nickel	1.71	1.13
Ammonia	119	52.1
Fluoride	52.9	23.5

(j) *Alkaline cleaning spent baths.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	0.704	0.288
Cyanide	0.464	0.192
Nickel	3.07	2.03
Ammonia	214	93.8
Fluoride	95.2	42.3

(k) *Alkaline cleaning rinse.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	1.38	0.565
Cyanide	0.911	0.377
Nickel	6.03	3.99
Ammonia	419	184
Fluoride	187	82.9

(l) *Sawing or grinding spent emulsions.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions	
Chromium	0.124	0.051
Cyanide	0.082	0.034
Nickel	0.540	0.357
Ammonia	37.5	16.50
Fluoride	16.7	7.42

(m) *Wet air pollution control scrubber blowdown—Subpart I—PSES.* There shall be no allowance for the discharge or process wastewater pollutants.

(n) *Degreasing spent solvents—Subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—Subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium treated with molten salt	
Chromium	0.333	0.136
Cyanide	0.220	0.091
Nickel	1.45	0.960
Ammonia	101	44.3
Fluoride	45	20

(q) *Sawing or grinding contact cooling water.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water	
Chromium	0.142	0.058
Cyanide	0.093	0.039
Nickel	0.617	0.408
Ammonia	42.8	18.8
Fluoride	19.1	8.48

(r) *Sawing or grinding rinse.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed	
Chromium	0.079	0.033
Cyanide	0.052	0.022
Nickel	0.346	0.229
Ammonia	24	10.6
Fluoride	10.7	4.75

(s) *Sawing or grinding spent neat oils—Subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested	
Chromium	0.007	0.003
Cyanide	0.005	0.002
Nickel	0.030	0.020
Ammonia	2.06	0.903
Fluoride	0.917	0.407

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986, as amended at 54 FR 11352, Mar. 17, 1989]

§ 471.95 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment

standards for new sources (PSNS). The mass of wastewater shall not exceed the following:

(a) *Rolling spent neat oils—Subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—Subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsions—Subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded	
Chromium	0.104	0.043
Cyanide	0.069	0.029
Nickel	0.455	0.301
Ammonia	31.6	13.9
Fluoride	14.1	6.26

(e) *Swaging spent neat oils—Subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off/kg (pounds per million off-pounds) of zirconium-hafnium heat treated	
Chromium	0.015	0.006
Cyanide	0.010	0.004
Nickel	0.066	0.044
Ammonia	4.57	2.01
Fluoride	2.04	0.906

(g) *Tube Reducing Spent Lubricant—Subpart I—PSNS.*

(1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under subparagraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in subparagraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under paragraph (g)(2) shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling

after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (i.e., lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off/kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.150	0.061
Cyanide	0.099	0.041
Nickel	0.653	0.432
Ammonia	45.3	20
Fluoride	20	8.98

(i) *Surface treatment rinse.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off/kg (pounds per million off-pounds) of zirconium-hafnium surface treated	
Chromium	0.391	0.160
Cyanide	0.258	0.107
Nickel	1.71	1.13
Ammonia	119	52.1
Fluoride	52.9	23.5

(j) *Alkaline cleaning spent baths.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off/kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	0.704	0.288
Cyanide	0.464	0.192
Nickel	3.07	2.03
Ammonia	214	93.8
Fluoride	95.2	42.3

(k) *Alkaline cleaning rinse.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned	
Chromium	1.38	0.565
Cyanide	0.911	0.377
Nickel	6.03	3.99
Ammonia	419	184
Fluoride	187	82.9

(l) *Sawing or grinding spent emulsions.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions	
Chromium	0.124	0.051
Cyanide	0.082	0.034
Nickel	0.540	0.357
Ammonia	37.5	16.50
Fluoride	16.7	7.42

(m) *Wet air pollution control scrubber blowdown—Subpart I—PSNS.* There shall be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—Subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—Subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium rinsed following molten salt treatment	
Chromium	0.333	0.136
Cyanide	0.220	0.091
Nickel	1.45	0.960
Ammonia	101	44.3
Fluoride	45.0	20.0

(q) *Sawing or grinding contact cooling water.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water	
Chromium	0.142	0.058
Cyanide	0.093	0.039
Nickel	0.617	0.408
Ammonia	42.8	18.8
Fluoride	19.1	8.48

(r) *Sawing or grinding rinse.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed	
Chromium	0.079	0.033
Cyanide	0.052	0.022
Nickel	0.346	0.229
Ammonia	24.0	10.6
Fluoride	10.7	4.75

(s) *Sawing or grinding spent neat oils—Subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested	
Chromium	0.007	0.003
Cyanide	0.005	0.002
Nickel	0.030	0.020
Ammonia	2.06	0.903
Fluoride	0.917	0.407

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986, as amended at 54 FR 11352, Mar. 17, 1989]

§ 471.96 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart J—Metals Powders Subcategory

§ 471.100 Applicability; description of the powder metals subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the metal powders subcategory.

§ 471.101 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Metal powder production atomization wastewater.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder wet atomized	
Copper	9.58	5.04
Cyanide	1.46	0.605
Lead	2.12	1.01
Oil and grease	101	60.5
TSS	207	98.3
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) *Sizing spent emulsion.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sized	
Copper	0.028	0.015
Cyanide	0.004	0.002
Lead	0.006	0.003
Oil and grease	0.292	0.175
TSS	0.599	0.285
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(c) *Oil-resin impregnation wastewater—Subpart J—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of power metallurgy parts steam treated	
Copper	1.51	0.792
Cyanide	0.230	0.095
Lead	0.333	0.159
Oil and grease	15.9	9.51
TSS	32.5	15.5
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned	
Copper	8.36	4.40
Cyanide	1.28	0.528
Lead	1.85	0.880
Oil and grease	88.0	52.800
TSS	181	85.8
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(f) *Sawing or grinding spent neat oils.—Subpart J—BPT.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsion.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsion	
Copper	0.035	0.018
Cyanide	0.005	0.002
Lead	0.008	0.004
Oil and grease	0.362	0.217
TSS	0.742	0.353
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(h) *Sawing or grinding contact cooling water.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with contact cooling	
Copper	3.08	1.62
Cyanide	0.470	0.195
Lead	0.681	0.324
Oil and grease	32.4	19.5
TSS	66.4	31.6
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(i) *Hot pressing contact cooling water.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder cooled after pressing	
Copper	16.7	8.80
Cyanide	2.55	1.06
Lead	3.70	1.76
Oil and grease	176	106
TSS	361	172
pH	(1)	(1)

1 Within the range of 7.5 to 10.0 at all times.

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—BPT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder mixed	
Copper	15.0	7.90
Cyanide	2.29	0.948
Lead	3.32	1.58
Oil and grease	158	94.8
TSS	324	154
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Degreasing spent solvents.—Subpart J—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

(a) *Metal powder production atomization wastewater.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder wet atomized	
Copper	9.58	5.04
Cyanide	1.46	0.605
Lead	2.12	1.01

(b) *Sizing spent emulsions.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) or powder sized	
Copper	0.028	0.015
Cyanide	0.004	0.002
Lead	0.006	0.003

(c) *Oil-resin impregnation wastewater—Subpart J—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts steam treated	
Copper	1.51	0.792
Cyanide	0.230	0.095
Lead	0.333	0.159

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) or powder metallurgy parts tumbled, burnished, or cleaned	
Copper	8.36	4.40
Cyanide	1.28	0.528
Lead	1.850	0.880

(f) *Sawing or grinding spent neat oils. Subpart J—BAT.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsions.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions	
Copper	0.0035	0.018
Cyanide	0.005	0.002
Lead	0.008	0.004

(h) *Sawing or grinding contact cooling water.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling	
Copper	3.08	1.62
Cyanide	0.470	0.195
Lead	0.681	0.324

(i) *Hot pressing contact cooling water.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder cooled after pressing	
Copper	16.7	8.80
Cyanide	2.55	1.06
Lead	3.70	1.760

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—BAT

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder mixed	
Copper	15.0	7.90
Cyanide	2.29	0.948
Lead	3.32	1.58

(k) *Degreasing spent solvents—Subpart J—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.103 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutants in the metal powder process wastewater shall not exceed the following values:

(a) *Metal powder production atomization wastewater.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder wet atomized	
Copper	9.58	5.04
Cyanide	1.46	0.605
Lead	2.12	1.01
Oil and grease	101	60.5
TSS	207	98.3
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(b) *Sizing spent emulsions.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sized	
Copper	0.028	0.015
Cyanide	0.004	0.002
Lead	0.006	0.003
Oil and grease	0.292	0.175
TSS	0.599	0.285
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(c) *Oil-resin impregnation wastewater.—Subpart J—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdwn.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts steam treated	
Copper	0.151	0.079
Cyanide	0.023	0.010
Lead	0.033	0.016
Oil and grease	1.59	0.951
TSS	3.25	1.55
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned	
Copper	0.836	0.440
Cyanide	0.128	0.053
Lead	0.185	0.088
Oil and grease	8.80	5.28
TSS	18.1	8.58
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(f) *Sawing or grinding spent neat oils.—Subpart J—NSPS.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsions.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions	
Copper	0.035	0.018
Cyanide	0.005	0.002
Lead	0.008	0.004
Oil and grease	0.362	0.217
TSS	0.742	0.353
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(h) *Sawing or grinding contact cooling waterr.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling water	
Copper	3.08	1.62
Cyanide	0.470	0.195
Lead	0.681	0.324
Oil and grease	32.4	19.5
TSS	66.4	31.6
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(i) *Hot pressing contact cooling water.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder cooled after pressing	
Copper	1.67	0.880
Cyanide	0.255	0.106
Lead	0.370	0.176
Oil and grease	17.6	10.6
TSS	36.1	17.2
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder mixed	
Copper	15.0	7.90
Cyanide	2.29	0.948
Lead	3.32	1.58
Oil and grease	158	94.8
TSS	324	154
pH	(1)	(1)

[1] Within the range of 7.5 to 10.0 at all times.

(k) *Degreasing spent solvents.—Subpart J—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.104 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject

to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in metal powders process wastewater introduced into a POTW shall not exceed the following values:

(a) *Metal powder production atomization wastewater.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder wet atomized	
Copper	9.58	5.040
Cyanide	1.46	0.605
Lead	2.12	1.01

(b) *Sizing spent emulsions.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sized	
Copper	0.028	0.015
Cyanide	0.004	0.002
Lead	0.006	0.003

(c) *Oil-resin impregnation wastewater.—Subpart J—PSES.*

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy part steam treated	
Copper	1.51	0.792
Cyanide	0.230	0.095
Lead	0.333	0.159

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned	
Copper	8.36	4.40
Cyanide	1.28	0.528
Lead	1.85	0.880

(f) *Sawing or grinding spent neat oils.—Subpart J—PSES.* There shall be no discharge of process watewater pollutants.

(g) *Sawing or grinding spent emulsions.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions	
Copper	0.035	0.018
Cyanide	0.005	0.002
Lead	0.008	0.004

(h) *Sawing or grinding contact cooling water.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling water	
Copper	3.08	1.62
Cyanide	0.470	0.195
Lead	0.681	0.324

(i) *Hot pressing contact cooling water.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder cooled after pressing	
Copper	16.7	8.80
Cyanide	2.55	1.06
Lead	3.70	1.76

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder mixed	
Copper	15.0	7.90
Cyanide	2.29	0.948
Lead	3.32	1.58

(k) *Degreasing spent solvents—Subpart J—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.105 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subject which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in metal powders process wastewater introduced into a POTW shall not exceed the following values:

(a) *Metal powder production atomization wastewater.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder wet atomized	
Copper	9.58	5.04
Cyanide	1.46	0.605
Lead	2.12	1.01

(b) *Sizing spent emulsions.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sized	
Copper	0.028	0.015
Cyanide	0.004	0.002
Lead	0.006	0.003

(c) *Oil-resin impregnation wastewater—Subpart J—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts steam treated	
Copper	0.151	0.079
Cyanide	0.023	0.010
Lead	0.033	0.016

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned	
Copper	0.836	0.440
Cyanide	0.128	0.053
Lead	0.185	0.088

(f) *Sawing or grinding spent neat oils—Subpart J—PSNS.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsions.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions	
Copper	0.035	0.018
Cyanide	0.005	0.002
Lead	0.008	0.004

(h) *Sawing or grinding contact cooling water.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling water	
Copper	3.08	1.620
Cyanide	0.470	0.195
Lead	0.681	0.324

(i) *Hot pressing contact cooling water.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder cooled after pressing	
Copper	1.67	0.880
Cyanide	0.255	0.106
Lead	0.370	0.176

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/off-kg (pounds per million off-pounds) of powder mixed	
Copper	15.0	7.90
Cyanide	2.29	0.948
Lead	3.32	1.58

(k) *Degreasing spent solvents—Subpart J—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.106 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

SUBCHAPTER O—SEWAGE SLUDGE

PART 501—STATE SLUDGE MANAGEMENT PROGRAM REGULATIONS

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501.31 Review and approval procedures.
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501.34 Procedures for withdrawal of State programs.

AUTHORITY: 33 U.S.C. 1251 *et seq.*

SOURCE: 54 FR 18786, May 2, 1989, unless otherwise noted.

Subpart A—Purpose, Scope and General Program Requirements

§501.1 Purpose and scope.

(a) These regulations are promulgated under the authority of sections 101(e), 405(f), 501(a), and 518(e) of the CWA, and implement the requirements of those sections.

(b) This part specifies the procedures EPA will follow in approving, revising, and withdrawing State sludge management programs under section 405(f) that are not part of a State's NPDES program, and the requirements State programs must meet to be approved by the Administrator under section 405(f) of CWA. Sludge Management Program submissions may be developed and implemented under any existing or new State authority or authorities as long as they meet the requirements of this part. (States seeking approval of their sludge program as part of their NPDES program are to follow the requirements and procedures for program modification set forth in 40 CFR part 123.)

(c) Any complete State Sludge Management Program submitted for approval under this part shall have the following as a minimum:

(1) The authority to require compliance by any person who uses or disposes of sewage sludge with standards for sludge use or disposal issued under section 405(d) of the CWA, including compliance by federal facilities;

(2) The authority to issue permits that apply, and ensure compliance with, the applicable requirements of section 405 of the Clean Water Act to any POTW or other treatment works treating domestic sewage, and procedures for issuance of such permits;

(3) Provisions for regulating the use or disposal of sewage sludge by nonpermittees;

(4) The authority to take actions to protect public health and the environment from any adverse effects that may occur from toxic pollutants in sewage sludge; and

(5) The authority to abate violations of the State sludge program, including civil and criminal penalties and other ways and means of enforcement. Indian Tribes can satisfy criminal enforcement authority requirements under §501.25.

(d) In addition, any complete State Sludge Management Program submitted for approval under this part shall have authority to address:

(1) All sewage sludge management practices used in the State, including associated transport and storage, that are practiced or planned to be practiced in the State, unless the State is applying for partial sludge program approval in accordance with 40 CFR 123.30. The State sludge management program shall also be applicable to all federal facilities in the State. Sludge management activities and practices shall include as applicable:

(i) Sludge treatment, processing, and short term storage practices as may be covered by federal regulations;

(ii) Sludge use and ultimate disposal practices, including:

(A) Land application,

(B) Landfilling,

(C) Distribution & marketing,

(D) Incineration,

(E) Surface disposal sites, and

(F) Any other sludge use and disposal practices as may be covered by federal regulations.

(e) The Administrator will approve State programs which conform to the applicable requirements of this part.

(f)(1) Upon approval of a State program, the Administrator will suspend the issuance of federal permits for those activities subject to the approved State program. After program approval EPA will retain jurisdiction over any permits (including general permits) which it has issued unless arrangements have been made with the State in the Memorandum of Agreement for the State to assume responsibility for these permits. Retention of jurisdiction will include the processing of any permit appeals, modification requests, or variance requests; the conduct of inspections, and the receipt and review of self-monitoring reports. If any permit appeal, modification request, or variance request is not finally resolved when the federally issued permit expires, EPA may, with the consent of the State, retain jurisdiction until the matter is resolved.

(2) The procedures outlined in the preceding paragraph (f)(1) of this section for the suspension of permitting authority and transfer of existing permits will also apply when EPA approves an Indian Tribe's application to operate a State sludge management program and a State was the authorized permitting authority under § 501.13 for sludge management activities within the scope of the newly approved program. The authorized State will retain jurisdiction over its existing permits as described in paragraph (f)(1) of this section absent a different arrangement stated in the Memorandum of Agreement executed between EPA and the Tribe.

(g) Notwithstanding approval of a State sludge program, EPA has the authority to take enforcement actions for any violations of this part or sections 405 or 309 of the CWA.

(h) Any State program approved by the Administrator shall at all times be conducted in accordance with the requirements of this part.

(i) Nothing in this part precludes a State or political subdivision thereof, or interstate agency, from adopting or enforcing requirements established by State or local law that are more stringent or more extensive than those required in this part or in any other federal statute or regulation.

(j) Nothing in this part precludes a State from operating a program with a greater scope of coverage than that required under this part. If an approved State program has greater scope of coverage than required by federal law, the additional coverage is not part of the federally approved program.

(k) Sections 106 (a) and (d) of the Marine Protection, Research, and Sanctuaries Act (MPRSA), 33 U.S.C. 1416, generally preclude States from regulating or issuing permits for ocean dumping. Nothing in this regulation is intended to confer on the States the authority to engage in the regulation or permitting of ocean dumping in contravention of the provisions of sections 106 (a) and (d) of the MPRSA.

(l) The Administrator may allow a State sewage sludge management agency to assign portions of its program responsibilities to local agencies, provided that:

(1) No assignment is made to a local agency which owns or operates a POTW or other facility that treats or disposes of sewage sludge;

(2) The program description required by § 501.12 of this part identifies any assignment of program responsibilities to

the local agency(ies), describes the capabilities of the local agency to carry out assigned functions, and includes copies of any documents which execute the assignment and an agreement between the State sewage sludge management agency and the local agency(ies) defining their respective program responsibilities;

(3) The Attorney General's Statement required by § 501.13 of this part states that any assignment of program responsibilities to the local agency(ies) described in the program description is valid under State law and that State and local law do not otherwise prohibit the local agency(ies) from executing the program responsibilities assigned by the State sewage sludge management agency;

(4) The Memorandum of Agreement (MOA) required by § 501.14 of this part includes adequate provisions for the State sewage sludge management agency's oversight of the program responsibilities assigned to the local agency(ies);

(5) The State sewage sludge management agency retains all responsibility for the program reporting required by § 501.21 of this part and for all other activities required by this part or by the MOA related to EPA oversight of the State's approved program; and

(6) The State sewage sludge management agency retains full authority and ultimate responsibility for administering all aspects of the State's approved program in accordance with the requirements of this part and the MOA.

[54 FR 18786, May 2, 1989, as amended at 58 FR 67983, Dec. 22, 1993]

§ 501.2 Definitions.

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Approved State program means a State program which has received EPA approval under this part.

Class I sludge management facility means any POTW identified under 40 CFR 403.8(a) as being required to have an approved pretreatment program (including such POTWs located in a State that has elected to assume local program responsibilities pursuant to 40 CFR 403.10(e)) and any other treatment works treating domestic sewage classified as a Class I sludge management facility by the Regional Administrator in conjunction with the State Program Director because of the potential for its sludge use or disposal practices to adversely affect public health or the environment.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972), Pub. L. 92–500, as amended by Pub. L. 95–217, Pub. L. 95–576, Pub. L. 96–483, Pub. L. 97–117, and Pub. L. 100–4, 33 U.S.C. 1251 *et seq.*

Federal Indian reservation means all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.

Indian Tribe means any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

Municipality means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created under State law (or an Indian tribe or an authorized Indian tribal organization), or a designated and approved management agency under section 208 of the Clean Water Act. This definition includes a special district created under State law such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201(e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, or disposal of sewage sludge.

Permit means an authorization, license, or equivalent control document issued by EPA or an ''approved State program'' to implement the requirements of this part.

Person is an individual, association, partnership, corporation, municipality, State or Federal Agency, or an agent or employee thereof.

POTW means a publicly owned treatment works.

Publicly owned treatment works means a treatment works treating domestic sewage that is owned by a municipality or State.

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank, when the system is cleaned or maintained.

Sewage sludge means any solid, semisolid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary or advanced waste water treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation device pumpings (33 CFR part 159), and sewage sludge products. Sewage sludge does not include grit, screenings, or ash generated during the incineration of sewage sludge.

Standards for sewage sludge use or disposal means the regulations promulgated at 40 CFR part 503 pursuant to section 405(d) of the CWA which govern minimum requirements for sludge quality, management practices, and monitoring and reporting applicable to the generation or treatment of sewage sludge from a treatment works treating domestic sewage or use or disposal of that sewage sludge by any person.

State means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, and the Commonwealth of the Northern Mariana Islands, and an Indian Tribe as defined in these regulations which meets the requirements of § 501.22.

State Program Director or *Director* means the chief executive officer of the State sewage sludge management agency.

State sewage sludge management agency means the agency designated by the Governor as having the lead responsibility for managing or coordinating the approved State program under this part.

Toxic pollutant means any pollutant listed as toxic under section 307(a)(1) or any pollutant identified in regulations implementing section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including Federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices. For purposes of this definition, ''domestic sewage'' includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works.

[54 FR 18786, May 2, 1989, as amended at 58 FR 67983, Dec. 22, 1993]

§ 501.3 Coordination with other programs.

Issuance of State permits under this part may be coordinated with issuance of RCRA, UIC, NPDES, 404 and other permits whether they are controlled by the State, EPA, or the Corps of Engineers. (See for example 40 CFR 124.4 for procedures for coordinating permit issuance.)

Subpart B—Development and Submission of State Programs

§ 501.11 Elements of a sludge management program submission.

(a) Any State that seeks to administer a program under this part shall submit to the Administrator at least three copies of a program submission. The submission shall contain the following:

(1) A letter from the Governor of the State (or in the case of an Indian Tribe in accordance with § 501.24(b), the Tribal authority exercising powers substantially similar to those of a State Governor) requesting program approval;

(2) A complete program description, as required by § 501.12 describing how the State intends to carry out its responsibilities under this part;

(3) An Attorney General's Statement as required by § 501.13;

(4) A Memorandum of Agreement with the Regional Administrator as required by § 501.l4; and

(5) Copies of all applicable State statutes and regulations, including those

governing State administrative procedures.

(b)(1) Within 30 days of receipt of a State program submission, EPA will notify the State whether its submission is complete. If it is incomplete, EPA will identify the information needed to complete the program submission.

(2) In the case of an Indian Tribe eligible under §501.24(b), EPA shall take into consideration the contents of the Tribe's request submitted under §501.22, in determining if the program submission required by §501.11(a) is complete.

(Information collection requirements in paragraph (a) were approved by the Office of Management and Budget under control number 2040–0128)

[54 FR 18786, May 2, 1989, as amended at 58 FR 67983, Dec. 22, 1993; 59 FR 64346, Dec. 14, 1994]

§501.12 Program description.

Any State that seeks to administer a program under this part shall submit a description of the program it proposes to administer in lieu of the federal program under State law or under any interstate compact. The program description shall include:

(a) A description in narrative form of the scope, structure, coverage and processes of the State program.

(b) A description (including organization charts) of the organization and structure of the State agency or agencies which will have responsibility for administering the program, including the information listed below. If more than one agency is responsible for administration of a program, the responsibilities of each agency must be delineated, their procedures for coordination set forth, and an agency must be designated as a ''lead agency'' (i.e., the ''State sludge management agency'') to facilitate communications between EPA and the State agencies having program responsibility. If the State proposes to administer a program of greater scope of coverage than is required by federal law, the information provided under this paragraph shall indicate the resources dedicated to administering the federally required portion of the program. This description shall include:

(1) A description of the State agency staff who will carry out the State program, including the number, occupations, and general duties of the employees. The State need not submit complete job descriptions for every employee carrying out the State program;

(2) An itemization of the estimated costs of establishing and administering the program for the first two years after approval including cost of the personnel listed in paragraph (b)(1) of this section, cost of administrative support, and cost of technical support; and

(3) An estimate of the sources and amounts of funding for the first two years after approval to meet the costs listed in paragraph (b)(2) of this section.

(c) A description of applicable State procedures, including permitting procedures, and any State administrative or judicial review procedures.

(d) Copies of the permit form(s), application form(s), and reporting form(s) the State intends to employ in its program.

(e) A complete description of the State's compliance tracking and enforcement program (see 40 CFR 501.16 and 501.17).

(f)(1) An inventory of all POTWs and other treatment works treating domestic sewage that are subject to regulations promulgated pursuant to 40 CFR part 503, which includes:

(i) Name, location, and ownership status (e.g., public, private, federal),

(ii) Sludge use or disposal practice(s),

(iii) Annual sludge production volume, and

(iv) NPDES, UIC, RCRA, Clean Air Act, and State permit number, if any,

(v) Compliance status, and;

(2) An inventory of all sewage sludge disposal and use sites not included under paragraph (f)(1) of this section (except those sites to which sludge that meets the requirements for distribution and marketing is applied such as home gardens), which includes the name, location, permit number (if any), and source of sewage sludge.

(3) States may submit either:

(i) Inventories which contain all of the information required by paragraphs (f) (1) and (2); or

(ii) A partial inventory that covers at a minimum all information required by paragraphs (f)(1) (i) through (ii) of this section together with a detailed plan showing how the State will complete the inventories within five years after approval of its sludge management program under this part.

(g) In the case of Indian Tribes eligible under § 501.24(b), if a State has been authorized by EPA to issue permits on the Federal Indian reservation in accordance with § 501.13, a description of how responsibility for pending permit applications, existing permits, and supporting files will be transferred from the State to the eligible Indian Tribe. To the maximum extent practicable, this should include a Memorandum of Agreement negotiated between the State and the Indian Tribe addressing the arrangements for such transfer.

[54 FR 18786, May 2, 1989, as amended at 58 FR 67984, Dec. 22, 1993; 59 FR 64346, Dec. 14, 1994]

§ 501.13 Attorney General's statement.

Any State that seeks to administer a program under this part shall submit a statement from the State Attorney General (or the attorney for those State or interstate agencies which have independent legal counsel) that the laws of the State, or an interstate compact, provide adequate authority to carry out the program described under § 501.12 and to meet the requirements of this part. This statement shall include citations to the specific statutes, administrative regulations, and, where appropriate, judicial decisions which demonstrate adequate authority. State statutes and regulations cited by the State Attorney General or independent legal counsel shall be in the form of lawfully adopted State statutes and regulations at the time the statement is signed and shall be fully effective by the time the program is approved. To qualify as ''independent legal counsel'' the attorney signing the statement required by this section must have full authority to independently represent the State agency in court on all matters pertaining to the State program. If a State (which is not an Indian Tribe) seeks to carry out the program on Indian lands, the statement shall include an appropriate opinion and analysis of the State's legal authority.

[54 FR 18786, May 2, 1989, as amended at 58 FR 67984, Dec. 22, 1993]

§ 501.14 Memorandum of Agreement with the Regional Administrator.

(a) Any State that seeks to administer a program under this part shall submit a Memorandum of Agreement. The Memorandum of Agreement shall be executed by the State Program Director and the Regional Administrator and shall become effective when approved by the Administrator. In addition to meeting the requirements of paragraph (b) of this section, the Memorandum of Agreement may include other terms, conditions, or agreements consistent with this part and relevant to the administration and enforcement of the State's regulatory program. The Administrator shall not approve any Memorandum of Agreement which contains provisions which restrict EPA's oversight responsibility.

(b) The Memorandum of Agreement shall include the following:

(1)(i) Provisions for the prompt transfer from EPA to the State of pending permit applications and any other information relevant to program operation not already in the possession of the State Director (e.g., support files for permit issuance, compliance reports, etc.). If existing permits are transferred from EPA to the State for administration, the Memorandum of Agreement shall contain provisions specifying a procedure for transferring the administration of these permits. If a State lacks the authority to directly administer permits issued by the federal government, a procedure may be established to transfer responsibility for these permits.

(ii) Where a State has been authorized by EPA to issue permits in accordance with § 501.13 on the Federal Indian reservation of the Indian Tribe seeking program approval, provisions describing how the transfer of pending permit applications, permits, and any other information relevant to the program operation not already in the possession of the Indian Tribe (support files for permit issuance, compliance reports, etc.) will be accomplished.

(2) Provisions specifying classes and categories of permit applications, draft permits, and proposed permits that the State will send to the Regional Administrator for review, comment and, where applicable, objection. These provisions shall follow the permit review procedures set forth in 40 CFR 123.44, except that where a State issues a general permit for sludge, the review by the Office of Water Enforcement and Permits provided in 40 CFR 123.44(a)(2) for NPDES general permits will not apply.

(3) The Memorandum of Agreement shall also specify the extent to which EPA will waive its right to review, object to, or comment upon State-issued permits. While the Regional Administrator and the State may agree to waive EPA review of certain ''classes or categories'' of permits, no waiver of review may be granted for permits issued to ''Class I sludge management facilities'' as defined in § 501.2.

(4) Whenever a waiver is granted under paragraph (3) of this section, the Memorandum of Agreement shall contain a statement that the Regional Administrator retains the right to terminate the waiver as to future permit actions, in whole or in part, at any time by sending the State Director written notice of termination.

(5) Provisions specifying the frequency and content of reports, documents and other information which the State is required to submit to EPA. The State shall allow EPA to routinely review State records, reports, and files relevant to the administration and enforcement of the approved program. State reports may be combined with grant reports where appropriate. The procedures shall implement the requirements of § 501.21.

(c) The Memorandum of Agreement shall also provide for the following:

(1) Prompt transmission to the Regional Administrator of notice of every action taken by the State agency related to the consideration of any permit application or general permit, including a copy of each proposed or draft permit and any conditions, requirements, or documents which are related to the proposed or draft permit or which affect the authorization of the proposed permit, except those for which permit review has been waived under paragraph (b)(3) of this section. The State shall supply EPA with copies of notices for which permit review has been waived whenever requested by EPA; and

(2) Transmission to the Regional Administrator of a copy of every permit issued to a Class I sludge management facility. Copies of final permits issued to other treatment works treating domestic sewage shall be transmitted to the Regional Administrator upon request.

(3) Provisions on the State's compliance monitoring and enforcement program, including:

(i) Provisions for coordination of compliance monitoring activities by the State and by EPA. These may specify the basis on which the Regional Administrator will select facilities or activities within the State for EPA inspection. The Regional Administrator will normally notify the State at least 7 days before any such inspection; and

(ii) Procedures to assure coordination of enforcement activities.

(4) When appropriate, provisions for joint processing of permits by the State and EPA for facilities or activities which require permits from both EPA and the State under different programs (See for example 40 CFR 124.4).

(5) Provisions for modification of the Memorandum of Agreement in accordance with this part.

(d) The Memorandum of Agreement, the annual program grant and the State/EPA Agreement should be consistent. If the State/EPA Agreement indicates that a change is needed in the Memorandum of Agreement, the Memorandum of Agreement may be amended through the procedures set forth in this part. The State/EPA Agreement may not override the Memorandum of Agreement.

(The information collection requirements in paragraph (c) of this section have been approved by the Office of Management and Budget under control number 2040–0128)

[54 FR 18786, May 2, 1989, as amended at 58 FR 67984, Dec. 22, 1993]

§ 501.15 Requirements for permitting.

(a) *General requirements.* All State programs under this part shall have legal authority to implement each of

the following provisions and must be administered in conformance with each, except that States are not precluded from omitting or modifying any provisions to impose more stringent requirements:

(1) *Confidentiality of information.* Claims of confidentiality shall be denied for the following information:

(i) The name and address of any permit applicant or permittee;

(ii) Permit applications, permits, and effluent data. This includes information submitted on the permit application forms themselves and any attachments used to supply information required by the forms.

(2) *Information requirements.* All treatment works treating domestic sewage shall submit to the Director within the time frames established in paragraph (d)(1)(ii) of this section the following information:

(i) The activities conducted by the applicant which require it to obtain a permit.

(ii) Name, mailing address, and location of the treatment works treating domestic sewage for which the application is submitted.

(iii) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.

(iv) Whether the facility is located on Indian lands.

(v) A listing of all permits or construction approvals received or applied for under any of the following programs:

(A) Hazardous Waste Management program under RCRA.

(B) UIC program under SDWA.

(C) NPDES program under CWA.

(D) Prevention of Significant Deterioration (PSD) program under the Clean Air Act.

(E) Nonattainment program under the Clean Air Act.

(F) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.

(G) Ocean dumping permits under the Marine Protection, Research, and Sanctuaries Act.

(H) Dredge or fill permits under section 404 of CWA.

(I) Other relevant environmental permits, including State or local permits.

(vi) A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the treatment works treating domestic sewage, depicting the location of the sludge management facilities (including disposal sites), the location of all water bodies, and the location of wells used for drinking water listed in the public records or otherwise known to the applicant within ¼ mile of the property boundaries;

(vii) Any sludge monitoring data the applicant may have, including available ground water monitoring data, with a description of the well locations and approximate depth to ground water, for landfills or land application sites (see appendix I to 40 CFR part 257);

(viii) A description of the applicant's sludge use and disposal practices (including, where applicable, the location of any sites where the applicant transfers sludge for treatment and/or disposal, as well as the name of the applicator or other contractor who applies the sludge to land if different from the applicant, and the name of any distributors when the sludge will be disposed of through distribution and marketing, if different from the applicant);

(ix) For each land application site the applicant will use during the life of the permit, the applicant will supply information necessary to determine if the site is appropriate for land application and a description of how the site is (or will be) managed. Applicants intending to apply sludge to land application sites not identified at the time of application must submit a land application plan which at a minimum:

(A) Describes the geographical area covered by the plan;

(B) Identifies site selection criteria;

(C) Describes how sites will be managed;

(D) Provides for advance notice to the permit authority of specific land application sites and reasonable time for the permit authority to object prior to the sludge application; and

(E) Provides for advance public notice as required by State and local law, but in all cases requires notice to landowners and occupants adjacent to or

abutting the proposed land application site.

(x) Annual sludge production volume;

(xi) Any information required to determine the appropriate standards for permitting under 40 CFR part 503; and

(xii) Any other information the Program Director may request and reasonably require to assess the sludge use and disposal practices, to determine whether to issue a permit, or to ascertain appropriate permit requirements.

(3) *Recordkeeping.* Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under this section for a period of at least five years from the date the application is signed, or as required by 40 CFR part 503.

(4) *Signatories to permit applications and reports* as provided in 40 CFR 122.22.

(5) *Duration of permits.* (i) Permits issued to treatment works treating domestic sewage pursuant to section 405(f) of the CWA shall be effective for a fixed term not to exceed five years.

(ii) The term of a permit shall not be extended by modification beyond the maximum duration specified in this section.

(iii) The Director may issue a permit for a duration that is less than the full allowable term under this section.

(6) *Schedules of compliance*—(i) *General.* The permit may, when appropriate, specify a schedule of compliance leading to compliance with the CWA and these regulations. Any schedules of compliance under this section shall require compliance as soon as possible, but not later than any applicable statutory deadline under the CWA.

(ii) *Interim dates.* If a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule shall set forth interim requirements and the date for their achievement. The time between interim dates shall not exceed six months.

(iii) *Reporting.* The permit shall be written to require that no later than 14 days following each interim date and the final date of compliance, the permittee shall notify the Director in writing of its compliance or noncompliance with the interim or final requirements, or submit progress reports if paragraph (a)(6)(ii) is applicable.

(b) *Permit conditions applicable to all permits.* In addition to permit conditions which must be developed on a case-by-case basis in order to meet applicable requirements of 40 CFR part 503, paragraph (a) (1) through (6) of this section, and permit conditions developed on a case-by-case basis using best professional judgment to protect public health and the environment from the adverse effects of toxic pollutants in sewage sludge, all permits shall contain the following permit conditions:

(1) *Duty to comply.* The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(2) *Compliance with sludge standards.* The permittee shall comply with standards for sewage sludge use or disposal established under section 405(d) of the CWA (40 CFR part 503) within the time provided in the regulations that establish such standards, even if this permit has not yet been modified to incorporate the standards.

(3) *CWA penalties.* Section 309 of the Clean Water Act (CWA) sets out penalties applicable to persons who violate the Act's requirements. For example, section 309(d) provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day for each violation. Such violations also may be subject to administrative penalties assessed by the Administrator pursuant to section 309(g) of the CWA. Any person who negligently violates permit conditions implementing sections 301, 302, 306, 307, 308, or 405 of the Clean Water Act is subject to a fine not less than $2,500 nor more than $25,000 per day of violation or by imprisonment for not more than 1 year, or both. Any person who knowingly violates a permit condition implementing sections 301, 302, 304, 307, 308, or 405 shall be punished by a fine not less than $5000 nor more than

$50,000 per day of violation, or by imprisonment for not more than 3 years or both.

(4) *Need to halt or reduce activity not a defense.* It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(5) *Duty to mitigate.* The permittee shall take all reasonable steps to minimize or prevent sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(6) *Proper operation and maintenance.* The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

(7) *Permit actions.* This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(8) *Duty to provide information.* The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

(9) *Inspection and entry.* The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

(i) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(ii) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(iii) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(iv) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances, parameters or practices at any location.

(10) *Monitoring and records.* (i) The permittee shall monitor and report monitoring results as specified elsewhere in this permit with a frequency dependent on the nature and effect of its sludge use or disposal practices. At a minimum, this shall be as required by 40 CFR part 503, but in no case less than once a year.

(ii) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The permittee shall retain records of all monitoring information, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application, or longer as required by 40 CFR part 503. This period may be extended by request of the Director at any time.

(iii) Records of monitoring information shall include:

(A) The date, exact place, and time of sampling or measurements;

(B) The individual(s) who perfored the sampling or measurements;

(C) The date(s) analyses were performed;

(D) The individual(s) who performed the analyses;

(E) The analytical techniques or methods used; and

(F) The results of such analyses.

(iv) Monitoring must be conducted according to test procedures specified in 40 CFR part 503 or 136 unless other

test procedures have been specified in this permit.

(v) The Clean Water Act provides that any person who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished for the first conviction by a fine of not more than $10,000 or by imprisonment for not more than 2 years per violation, or by both. Subsequent convictions for the same offense are punishable by a fine of not more than $20,000 per day of violation, or imprisonment of not more than 4 years, or both.

(11) *Signatory requirements.* (i) All applications, reports, or information submitted to the Director shall be signed and certified according to the provisions of 40 CFR 122.22.

(ii) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit shall, upon conviction, be punished for the first conviction by a fine of not more than $10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both. Subsequent convictions shall be punishable by a fine of not more than $20,000 per day of violation or by imprisonment of not more than 4 years, or by both.

(12) *Notice requirements.* (i) *Planned changes.* The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility, or significant changes planned in the permittee's sludge disposal practice, where such alterations, additions, or changes may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

(ii) *Anticipated noncompliance.* The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(iii) *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA.

(iv) *Other noncompliance reporting.* The permittee shall report all instances of noncompliance. Reports of noncompliance shall be submitted with the permittee's next self monitoring report or earlier. if requested by the Director or if required by an applicable standard for sewage sludge use or disposal or condition of this permit.

(v) *Other information.* Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

(13) *Reopener.* If a standard for sewage sludge use or disposal applicable to permittee's use or disposal methods is promulgated under section 405(d) of the CWA before the expiration of this permit, and that standard is more stringent than the sludge pollutant limits or acceptable management practices authorized in this permit, or controls a pollutant or practice not limited in this permit, this permit may be promptly modified or revoked and reissued to conform to the standard for sludge use or disposal promulgated under section 405(d) of the CWA. The permittee shall comply with applicable standards for sludge use or disposal by no later than the compliance deadline specified in the regulations establishing those standards, whether or not this permit has been modified or revoked and reissued.

(14) *Duty to reapply.* If the permittee wishes to continue an activity regulated by the this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

(15) Indian Tribes can satisfy the criminal enforcement authority requirements of this section under § 501.25.

(c) *Permit actions.* All State programs under this part shall have the legal authority to implement the following provisions as a minimum and must be administered in conformance with each.

(1) *Transfer of permits*—(i) *Transfers by modification.* Except as provided in paragraph (ii) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued to identify the new permittee and incorporate such other requirements as may be necessary to assure compliance with the CWA.

(ii) *Automatic transfers.* As an alternative to transfers under paragraph (c)(1)(i) of this section, the State Director may authorize automatic transfer of any sludge permit to a new permittee if:

(A) The current permittee notifies the Director at least 30 days in advance of the proposed transfer date in paragraph (c)(1)(ii)(B) of this section;

(B) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

(C) The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (c)(ii)(B) of this section.

(2) *Modification or revocation and reissuance of permits.* (i) When the Director receives any information (for example, where the Director inspects the facility, receives information submitted by the permittee as required in the permit, receives a request for modification or revocation and reissuance under § 501.15(d)(2)(i), or conducts a review of the permit file), he or she may determine whether or not one or more of the causes listed in paragraphs (c)(2) (ii) and (iii) of this section for modification or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit and may request an updated application if necessary. When a permit is modified, only the conditions subject to a modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. A draft permit must be prepared and other procedures in § 501.15(d) followed. If cause does not exist under this section, the Director shall not modify or revoke and reissue the permit.

(ii) *Causes for modification.* The following are causes for modification but not revocation and reissuance of permits except when the permittee requests or agrees.

(A) *Alterations.* There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different from or absent in the existing permit.

(B) *Information.* The Director has received new information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.

(C) *New regulations.* New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

(D) *Compliance schedules.* The Director determines good cause exists for modification of a compliance schedule, such as an Act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonable available remedy. However, in no case may a compliance schedule be modified to extend beyond an applicable CWA statutory deadline.

(E) *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

(iii) The following are causes to modify or alternatively, revoke and reissue, a permit.

(A) Cause exists for termination under § 501.15(c)(3) and the Director determines that modification or revocation and reissuance is appropriate.

(B) The Director has received notification (as required in the permit, see § 501.15(b)(12)(iii)) of a proposed transfer of the permit.

(3) *Termination of permits.* The following are causes for terminating a permit during its term, or for denying a permit renewal application:

(i) Noncompliance by the permittee with any condition of the permit;

(ii) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;

(iii) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or

(iv) A change in any condition that requires either a temporary or a permanent reduction or elimination of any activity controlled by the permit.

(d) *Permit procedures.* All State programs approved under this part shall have the legal authority to implement each of the following provisions and must be administered in accordance with each, except that States are not precluded from omitting or modifying any provisions to impose more stringent requirements.

(1) *Application for a permit.* (i) Any person who is required to obtain a permit for the use or disposal of sewage sludge shall complete, sign, and submit to the Director an application for a permit within the time specified in paragraph (d)(1)(ii) of this section.

(ii)(A) Any existing ''treatment works treating domestic sewage'' required to have (or requesting) site-specific pollutant limits as provided under 40 CFR part 503, must submit the permit application information required by paragraph (a)(2) of this section within 180 days after publication of a standard applicable to its sewage sludge use or disposal practice(s). After this 180-day period, ''treatment works treating domestic sewage'' may only apply for site-specific pollutant limits for good cause and such requests must be made within 180 days of becoming aware that good cause exists.

(B) Any ''treatment works treating domestic sewage'' with a currently effective NPDES permit, not addressed under paragraph (d)(1)(ii)(A) of this section, must submit the application information required by paragraph (a)(2) of this section when the next application for NPDES permit renewal is due.

(C) Any other existing ''treatment works treating domestic sewage'' not addressed under paragraph (d)(1)(ii) (A) or (B) of this section must submit the information listed in paragraphs (d)(1)(ii)(C)(*1*)–(*5*) of this section, to the Director within one year after publication of a standard applicable to its sewage sludge use or disposal practice(s). The Director shall determine when such ''treatment works treating domestic sewage'' must apply for a permit.

(*1*) Name, mailing address and location of the ''treatment works treating domestic sewage'';

(*2*) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public or other entity;

(*3*) A description of the sewage sludge use or disposal practices (including, where applicable, the location of any sites where sewage sludge is transferred for treatment, use, or disposal, as well as the name of the applicator or other contractor who applies the sewage sludge to land if different from the ''treatment works treating domestic sewage,'' and the name of any distributors if the sewage sludge is sold or given away in a bag or similar enclosure for application to the land, if different from the ''treatment works treating domestic sewage'');

(*4*) Annual amount of sewage sludge generated, treated, used or disposed (dry weight basis); and

(*5*) The most recent data the ''treatment works treating domestic sewage'' may have on the quality of the sewage sludge.

(D) Notwithstanding paragraph (d)(1)(ii) (A), (B), or (C) of this section,

the Director may require permit applications from any ''treatment works treating domestic sewage'' at any time if the Director determines that a permit is necessary to protect public health and the environment from any potential adverse effects that may occur from toxic pollutants in sewage sludge.

(E) Any ''treatment works treating domestic sewage'' that commences operations after promulgation of an applicable standard for sewage sludge use or disposal shall submit an application to the Director at least 180 days prior to the date proposed for commencing operations.

(iii) The Director shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit.

(2) *Modification, revocation and reissuance, or termination of permits.* (i) Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in § 501.15(c). All requests shall be in writing and shall contain factors or reasons supporting the request.

(ii) If the Director tentatively decides to modify or revoke and reissue a permit he or she shall prepare a draft permit incorporating the proposed changes. The Director may request additional information and, in the case of a modified permit, may require the submission of an updated application. In the case of a revoked and reissued permit, the Director shall require the submission of a new application. If the Director tentatively decides to terminate a permit he or she shall prepare a Notice of Intent to Terminate and follow the public notice and comment procedures outlined in Section 501.15(d)(6).

(3) *Draft permits.* Once an application is complete, the Director shall tentatively decide whether to prepare a draft permit or to deny the application. If the Director decides to prepare a draft permit, he or she shall prepare a draft permit that contains the necessary conditions to implement this part, 40 CFR part 503, and section 405 of the CWA.

(4) *Fact sheets.* A fact sheet shall be prepared for every draft permit for a Class I sludge management facility, for every draft permit requiring permit conditions developed on a case-by-case basis to implement section 405(d)(4) of the CWA, for every draft permit that includes a sewage sludge land application plan under § 501.15(a)(2)(ix), and for every draft permit which the Director finds is the subject of widespread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person.

(i) The fact sheet shall include:

(A) A brief description of the type of facility or activity which is the subject of the draft permit;

(B) Any calculations or other necessary explanation of the derivation of conditions for sludge use and disposal, including a citation to the applicable standards for sludge use or disposal and reasons why they are applicable, or in the case of conditions developed on a case-by-case basis to implement section 405(d)(4) of the CWA, an explanation of, and the bases for, such conditions; and

(C) For permits that include a sewage sludge land application plan under § 501.15(a)(2)(ix), a brief description of how each of the required elements of the land application plan area is addressed in the permit.

(5) *Public notice of permit actions and public comment period.* (i) The Director shall give public notice that the following actions have occurred:

(A) A draft permit has been prepared. The public notice shall allow at least 30 days for public comment.

(B) A hearing has been scheduled. Public notice shall be given at least 30 days before the hearing.

(ii) *Methods.* Public notice of activities described in paragraph (d)(5)(i) of this section shall be given by the following methods:

(A) By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under

this paragraph may waive his or her rights to receive notice for any classes and categories of permits):

(*1*) The applicant;

(*2*) Any other Agency which the Director knows has issued or is required to issue a RCRA, UIC, PSD, NPDES, MPRSA, or 404 permit for the same facility or activity (including EPA);

(*3*) Any State agency responsible for plan development under CWA section 208(b)(2), 208(b)(4) or 303(e);

(*4*) To any unit of local government having jurisdiction over the area where the facility is proposed to be located; and to each State agency having any authority under State law with respect to the construction or operation of such facility; and

(*5*) Any person who requests a copy.

(B) For Class I sludge management facility permits and permits that include land application plans under § 501.15(a)(2)(ix), publication of a notice in a daily or weekly newspaper within the area affected by the facility or activity, in addition to the methods required by paragraph (d)(5)(ii)(A) of this section;

(C) In a manner constituting legal notice to the public under State law; and

(D) Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

(iii) *Contents*—(A) *All public notices.* All public notices issued under this part shall contain the following minimum information:

(*1*) Name and address of the office processing the permit action for which notice is being given;

(*2*) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit;

(*3*) A brief description of the activity described in the permit application (including the inclusion of land application plan, if appropriate);

(*4*) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, fact sheet, and the application;

(*5*) A brief description of the comment procedures required by § 501.15(d)(6) and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision; and

(*6*) Any additional information considered necessary or proper.

(B) *Public notices for hearings.* In addition to the general public notice described in paragraph (d)(5)(iii)(A) of this section, the public notice of a hearing shall contain the following information:

(*1*) Reference to the date of previous public notices relating to the permit;

(*2*) Date, time and place of the hearing; and

(*3*) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

(6) *Public comments and requests for public hearings.* During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in paragraph (d)(8) of this section.

(7) *Public hearings.* The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit. The Director may also hold a public hearing at his or her discretion, (e.g. where such a hearing might clarify one or more issues involved in the permit decision).

(8) *Response to comments.* At the time a final permit is issued, the Director shall issue a response to comments. The response to comments shall be available to the public, and shall:

(i) Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and

(ii) Briefly describe and respond to all significant comments on the draft

permit raised during the public comment period or during any hearing.

(e) *Optional program provisions.* The following provisions may be included in a State program at the State's option. If the State decides to adopt any of these provisions, they must be no less stringent than the corresponding Federal provisions:

(1) Continuation of expiring permits (40 CFR 122.6);

(2) General permits (40 CFR 122.28);

(3) Minor modifications of permits (40 CFR 122.63); and

(4) Effect of permit: affirmative defense (40 CFR 122.5(b)).

(f) *Conflict of interest.* Except as provided in paragraph (f)(2), State sludge management programs shall ensure that any board or body which approves all or portions of permits shall not include as a member any person who receives, or has during the previous two years received, a significant portion of income directly or indirectly from permit holders or applicants for a permit.

(1) For the purposes of this paragraph:

(i) ''Board or body'' includes any individual, including the Director, who has or shares authority to approve all or portions of permits either in the first instance, as modified or reissued, or on appeal.

(ii) ''Significant portion of income'' means 10 percent or more of gross personal income for a calendar year, except that it means 50 percent or more of gross personal income for a calendar year if the recipient is over 60 years of age and is receiving that portion under retirement, pension, or similar arrangement.

(iii) ''Permit holders or applicants for a permit'' does not include any department or agency of a State government, such as a Department of Parks or a Department of Fish and Wildlife.

(iv) ''Income'' includes retirement benefits, consultant fees, and stock dividends.

(v) Income is not received ''directly or indirectly from permit holders or applicants for a permit'' when it is derived from mutual fund payments, or from other diversified investments for which the recipient does not know the identity of the primary sources of income.

(2) The Administrator may waive the requirements of this paragraph if the board or body which approves all or portions of permits is subject to, and certifies that it meets, a conflict-of-interest standard imposed as part of another EPA-approved State permitting program or an equivalent standard.

[54 FR 18786, May 2, 1989, as amended at 58 FR 9414, Feb. 19, 1993; 58 FR 67984, Dec. 22, 1993]

§ 501.16 Requirements for compliance evaluation programs.

State sludge management programs shall have requirements and procedures for compliance monitoring and evaluation as set forth in § 123.26.

§ 501.17 Requirements for enforcement authority.

(a) Any State agency administering a program shall have available the following remedies for violations of State program requirements:

(1) To restrain immediately and effectively any person by order or by suit in State court from engaging in any unauthorized activity which is endangering or causing damage to public health or the environment;

NOTE: This paragraph ((a)(1)) requires that States have a mechanism (e.g., an administrative cease and desist order or the ability to seek a temporary restraining order) to stop any unauthorized activity endangering public health or the environment.

(2) To sue in courts of competent jurisdiction to enjoin any threatened or continuing violation of any program requirement, including permit conditions, without the necessity of a prior revocation of the permit; and

(3) To assess or sue to recover in court civil penalties and to seek criminal remedies, including fines, as follows:

(i) Civil penalties shall be recoverable for the violation of any permit condition; any applicable standard or limitation; any filing requirement; any duty to allow or carry out inspection, entry or monitoring activities; or any regulation or orders issued by the State Program Director. These penalties shall be assessable in at least the amount of $5,000 a day for each violation.

(ii) Criminal fines shall be recoverable against any person who willfully or negligently violates any applicable standards or limitations; any permit condition; or any filing requirement. These fines shall be assessable in at least the amount of $10,000 a day for each violation. States which provide the criminal remedies based on ''criminal negligence,'' ''gross negligence'' or strict liability satisfy the requirement of this paragraph (a)(3)(ii).

(iii) Criminal fines shall be recoverable against any person who knowingly makes any false statement, representation or certification in any program form, or in any notice or report required by a permit or State Program Director, or who knowingly renders inaccurate any monitoring device or method required to be maintained by the State Program Director. These fines shall be recoverable in at least the amount of $5,000 for each instance of violation.

(b)(1) The maximum civil penalty or criminal fine (as provided in paragraph (a)(3) of this section) shall be assessable for each instance of violation and, if the violation is continuous, shall be assessable up to the maximum amount for each day of violation.

(2) The burden of proof and degree of knowledge or intent required under State law for establishing violations under paragraph (a)(3) of this section shall be no greater than the burden of proof or degree of knowledge or intent EPA must provide when it brings an action under the appropriate Act.

NOTE: For example, this requirement is not met if State law includes mental state as an element of proof for civil violations.

(c) A civil penalty assessed, sought, or agreed upon by the State Program Director under paragraph (a)(3) of this section shall be appropriate to the violation.

(d) Any State administering a program shall provide for public participation in the State enforcement process by providing either:

(1) Authority which allows intervention as of right in any civil or administrative action to obtain remedies specified in paragraphs (a)(1), (2) or (3) of this section by any citizen having an interest which is or may be adversely affected; or

(2) Assurance that the State agency or enforcement authority will:

(i) Investigate and provide responses to all citizen complaints submitted pursuant to the procedures specified in 40 CFR 123.26(b)(4);

(ii) Not oppose intervention by any citizen in any civil or administrative proceeding when permissive intervention may be authorized by statute, rule, or regulation; and

(iii) Publish notice of and provide at least 30 days for public comment on any proposed settlement of a State enforcement action.

(e) Indian Tribes that cannot satisfy the criminal enforcement authority requirements of this section may still be approved under this part if they meet the requirements established in §501.25.

[54 FR 18786, May 2, 1989, as amended at 58 FR 67984, Dec. 22, 1993]

§501.18 Prohibition.

State permit programs shall provide that no permit shall be issued when the Regional Administrator has objected in writing under 40 CFR 123.44.

§501.19 Sharing of information.

State sludge management programs shall comply with the requirements of 40 CFR 123.41.

§501.20 Receipt and use of federal information.

State sludge management programs shall comply with 40 CFR 123.42.

§501.21 Program reporting to EPA.

The State Program Director shall prepare semi-annual and annual reports as detailed below and shall submit any reports required under this section to the Regional Administrator. These reports shall serve as the main vehicle for the State to report on the status of its sludge management program, update its inventory of sewage sludge generators and sludge disposal facilities, and provide information on incidents of noncompliance. The State Program Director shall submit these reports to the Regional Administrator according to a mutually agreed-upon schedule. The Semi-annual Sludge Violation Reports and Annual Reports specified below may be combined with other reports to EPA (e.g., existing

NPDES or RCRA reporting systems) where appropriate.

(a) *Semi-annual reports.* Semi-annual Sludge Violation Reports (SSVRs) shall provide a tabular summary of the incidents of noncompliance which occurred in the previous six-month period by Class I sludge management facilities.

(1) At a minimum, the following occurrences must be reported under this section:

(i) Significant failure to comply with minimum Federal requirements for sludge use or disposal practices;

(ii) Significant failure to comply with permit conditions;

(iii) Failure to complete construction of essential elements of a sludge management facility or meet other key milestone dates specified in a permit;

(iv) Failure to provide required compliance monitoring reports or submission of reports that are so deficient as to cause misunderstanding and thus impede the review of the status of compliance;

(v) Significant noncompliance with other program requirements.

(2) The tabular summary will identify:

(i) The non-complying facilities by name and reference number;

(ii) The type of noncompliance, a brief description and date(s) of the event. (See list in paragraph (a)(1) of this section.) If records for a facility show noncompliance of more than one type under the sludge management program, the information should be combined into a single entry for each such facility;

(iii) The date(s) and a brief description of the action(s) taken to ensure timely and appropriate action to achieve compliance;

(iv) Status of the incident(s) of noncompliance with the date of resolution; and

(v) Any details which tend to explain or mitigate the incident(s) of noncompliance.

(b) *Annual report.* In addition to the information required by paragraph (a) of this section, the annual report shall include the following:

(1) Information to update the inventory of all sewage sludge generators and sewage sludge disposal facilities submitted with the program plan or in previous annual reports, including:

(i) Name and location,

(ii) NPDES, UIC, RCRA, Clean Air Act, and State permit number, if any,

(iii) Sludge management practice(s) used,

(iv) Identification of non-complying facilities, and

(v) Sludge production volume.

(2) A summary of the number and type of violations by sludge use and disposal practice over the past year for Class I sludge management facilities;

(3) A list of Class I sludge management facilities brought into compliance since the last annual report;

(4) Information on noncompliance of non-Class I Facilities which shall include:

(i) A tabular listing which identifies:

(A) The non-complying facility by name and reference number,

(B) The type of noncompliance (see list in paragraph (a)(1) of this section),

(C) How long the facility has been in noncompliance, and

(D) What steps are being taken to bring these facilities into compliance;

(ii) A summary of the number and type of violations by sludge use and disposal practice over the past year by non-Class I sludge management facilities;

(iii) A list of non-Class I facilities that have been brought into compliance since the last annual report; and

(5) A separate list of all facilities (along with any applicable permit numbers) that are six or more months behind in their schedules for achieving compliance.

(6) A summary of the results of periodic State compliance monitoring efforts to verify self-monitoring reports.

(The information collection requirements in this section have been approved by the Office of Management and Budget under control number 2040–0128)

§ 501.22 Requirements for eligibility of Indian Tribes.

(a) Consistent with section 518(e) of the CWA, 33 U.S.C. 1377(e), the Regional Administrator will treat an Indian Tribe as eligible to apply for sludge management program authority if it meets the following criteria:

(1) The Indian Tribe is recognized by the Secretary of the Interior.

(2) The Indian Tribe has a governing body carrying out substantial governmental duties and powers.

(3) The functions to be exercised by the Indian Tribe pertain to the management and protection of water resources which are held by an Indian Tribe, held by the United States in trust for the Indians, held by a member of an Indian Tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of an Indian reservation.

(4) The Indian Tribe is reasonably expected to be capable, in the Regional Administrator's judgment, of carrying out the functions to be exercised, in a manner consistent with the terms and purposes of the Act and applicable regulations, of an effective sludge management program.

(b) An Indian Tribe which the Regional Administrator determines meets the criteria described in paragraph (a) of this section must also satisfy the State program requirements described in this part for assumption of the State program.

[58 FR 67984, Dec. 22, 1993, as amended at 59 FR 64346, Dec. 14, 1994]

§ 501.23 Request by an Indian Tribe for a determination of eligibility.

An Indian Tribe may apply to the Regional Administrator for a determination that it qualifies pursuant to section 518 of the Act for purposes of seeking sludge management program approval. The application shall be concise and describe how the Indian Tribe will meet each of the requirements of § 501.22. The application shall include the following information:

(a) A statement that the Tribe is recognized by the Secretary of the Interior;

(b) A descriptive statement demonstrating that the Tribal governing body is currently carrying out substantial governmental duties and powers over a defined area. This statement should:

(1) Describe the form of the Tribal government;

(2) Describe the types of governmental functions currently performed by the Tribal governing body, such as, but not limited to, the exercise of police powers affecting (or relating to) the health, safety, and welfare of the affected population; taxation; and the exercise of the power of eminent domain; and

(3) Identify the source of the Tribal government's authority to carry out the governmental functions currently being performed.

(c) A map or legal description of the area over which the Indian Tribe asserts authority under section 518(e)(2) of the Act; a statement by the Tribal Attorney General (or equivalent official authorized to represent the Tribe in all legal matters in court pertaining to the program for which it seeks approval) which describes the basis for the Tribe's assertion (including the nature or subject matter of the asserted regulatory authority); copies of those documents such as Tribal constitutions, by-laws, charters, executive orders, codes, ordinances, and/or resolutions which the Tribe believes are relevant to its assertion under section 518(e)(2) of the Act.

(d) A narrative statement describing the capability of the Indian Tribe to administer an effective, environmentally sound sludge management program. The statement should include:

(1) A description of the Indian Tribe's previous management experience which may include the administration of programs and service authorized by the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450 *et seq.*), the Indian Mineral Development Act (25 U.S.C. 2101 *et seq.*), or the Indian Sanitation Facility Construction Activity Act (42 U.S.C. 2004a);

(2) A list of existing environmental or public health programs administered by the Tribal governing body, and a copy of related Tribal laws, regulations, and policies;

(3) A description of the entity (or entities) which exercise the executive, legislative, and judicial functions of the Tribal government;

(4) A description of the existing, or proposed, agency of the Indian Tribe which will assume primary responsibility for establishing and administering

a sludge management program (including a description of the relationship between the existing or proposed agency and its regulated entities);

(5) A description of the technical and administrative abilities of the staff to administer and manage an effective, environmentally sound sludge management program or a plan which proposes how the Tribe will acquire additional administrative and technical expertise. The plan must address how the Tribe will obtain the funds to acquire the administrative and technical expertise.

(e) The Regional Administrator may, at his discretion, request further documentation necessary to support a Tribe's eligibility.

(f) If the Administrator or her delegatee has previously determined that a Tribe has met the prerequisites that make it eligible to assume a role similar to that of a state as provided by statute under the Safe Drinking Water Act, the Clean Water Act, or the Clean Air Act, then that Tribe need provide only that information unique to the sludge management program which is requested by the Regional Administrator.

[58 FR 67984, Dec. 22, 1993, as amended at 59 FR 64346, Dec. 14, 1994]

§ 501.24 Procedures for processing an Indian Tribe's application.

(a) The Regional Administrator shall process an application of an Indian Tribe submitted pursuant to § 501.23 in a timely manner. He shall promptly notify the Indian Tribe of receipt of the application.

(b) The Regional Administrator shall follow the procedures described in subpart C of this part in processing a Tribe's request to assume the sludge management program.

[58 FR 67985, Dec. 22, 1993, as amended at 59 FR 64346, Dec. 14, 1994]

§ 501.25 Provisions for Tribal criminal enforcement authority.

To the extent that an Indian Tribe is precluded from asserting criminal enforcement authority as required under §§ 501.1(c)(5) and 501.17, the Federal Government will exercise primary criminal enforcement responsibility. The Tribe, with the EPA Region, shall develop a procedure by which the Tribal agency will refer potential criminal violations to the Regional Administrator, as agreed to by the parties, in an appropriate and timely manner. This procedure shall encompass all circumstances in which the Tribe is incapable of exercising the enforcement requirements of §§ 501.1(c)(5) and 501.17. This agreement shall be incorporated into a joint or separate Memorandum of Agreement with the EPA Region, as appropriate.

[58 FR 67985, Dec. 22, 1993]

Subpart C—Program Approval, Revision and Withdrawal

§ 501.31 Review and approval procedures.

(a) EPA shall approve or disapprove a State's application for approval of its State sludge management program within 90 days after receiving a complete program submission.

(b) Within 30 days of receipt by EPA of a State program submission, EPA will notify the State whether its submission is complete. If EPA finds that a State's submission is complete, the 90-day review period will be deemed to have begun on the date of the completeness determination. If EPA finds that a State's submission is incomplete, the review period will not begin until all the necessary information is received by EPA.

(c) After determining that a State program submission is complete, EPA will publish notice of the State's application in the FEDERAL REGISTER and in enough of the largest newspapers in the State to attract statewide attention. EPA will mail notices to persons known to be interested in such matters, including all persons on appropriate State and EPA mailing lists and all treatment works treating domestic sewage listed on the inventory required by § 501.12(f) of this part. The notice will:

(1) Provide a comment period of not less than 45 days during which interested members of the public may express their views on the State program;

(2) Provide opportunity for a public hearing within the State to be held no

less than 30 days after notice is published in the FEDERAL REGISTER and indicate when and where the hearing is to be held, or how interested persons may request that a hearing be held if a hearing has not been scheduled. EPA shall hold a public hearing whenever the Regional Administrator finds, on the basis of requests, a significant degree of public interest in the State's application or that a public hearing might clarify one or more issues involved in the State's application.

(3) Indicate the cost of obtaining a copy of the State's submission;

(4) Indicate where and when the State's submission may be reviewed by the public;

(5) Indicate whom an interested member of the public should contact with any questions; and

(6) Briefly outline the fundamental aspects of the State's proposed program, and the process for EPA review and decision.

(d) Within 90 days after determining that the State has submitted a complete program, the Administrator shall approve or disapprove the program based on the requirements of this part and of the CWA and after taking into consideration all comments received. A responsiveness summary shall be prepared by the Regional Office which identifies the public participation activities conducted, describes the matters presented to the public, summarizes significant comments received and explains EPA's response to these comments.

(e) The State and EPA may extend the 90-day review period by mutual agreement.

(f) If the State's submission is materially changed during the 90-day review, either as a result of EPA's review or the State action, the official review period shall begin again upon receipt of the revised submission.

(g) Notice of program approval shall be published by EPA in the FEDERAL REGISTER.

(h) If the Administrator disapproves the State program he or she shall notify the State of the reasons for disapproval and of any revisions or modifications to the State program which are necessary to obtain approval.

§ 501.32 Procedures for revision of State programs.

(a) Any approved State program which requires revision to comply with amendments to federal regulations governing sewage sludge use or disposal (including revisions to this part) shall revise its program within one year after promulgation of applicable regulations, unless the State must amend or enact a statute in order to make the required revision, in which case such revision shall take place within 2 years.

(b) State sludge management programs shall follow the procedures for program revision set forth in 40 CFR 123.62.

§ 501.33 Criteria for withdrawal of State programs.

The criteria for withdrawal of sludge management programs shall be those set forth in 40 CFR 123.63.

§ 501.34 Procedures for withdrawal of State programs.

The procedures for withdrawal of sludge management programs shall be those set forth in 40 CFR 123.64.

PART 503—STANDARDS FOR THE USE OR DISPOSAL OF SEWAGE SLUDGE

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APPENDIX A TO PART 503—PROCEDURE TO DETERMINE THE ANNUAL WHOLE SLUDGE APPLICATION RATE FOR A SEWAGE SLUDGE

APPENDIX B TO PART 503—PATHOGEN TREATMENT PROCESSES

AUTHORITY: Sections 405 (d) and (e) of the Clean Water Act, as amended by Pub. L. 95–217, sec. 54(d), 91 Stat. 1591 (33 U.S.C. 1345 (d) and (e)); and Pub. L. 100–4, title IV, sec. 406 (a), (b), 101 Stat., 71, 72 (33 U.S.C. 1251 *et seq.*).

SOURCE: 58 FR 9387, Feb. 19, 1993, unless otherwise noted.

Subpart A—General Provisions

§ 503.1 Purpose and applicability.

(a) *Purpose.* (1) This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

(2) In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.

(b) *Applicability.* (1) This part applies to any person who prepares sewage sludge, applies sewage sludge to the land, or fires sewage sludge in a sewage sludge incinerator and to the owner/operator of a surface disposal site.

(2) This part applies to sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

(3) This part applies to the exit gas from a sewage sludge incinerator stack.

(4) This part applies to land where sewage sludge is applied, to a surface disposal site, and to a sewage sludge incinerator.

§ 503.2 Compliance period.

(a) Compliance with the standards in this part shall be achieved as expeditiously as practicable, but in no case later than February 19, 1994. When compliance with the standards requires construction of new pollution control facilities, compliance with the standards shall be achieved as expeditiously as practicable, but in no case later than February 19, 1995.

(b) The requirements for frequency of monitoring, recordkeeping, and reporting in this part for total hydrocarbons in the exit gas from a sewage sludge incinerator are effective February 19, 1994 or, if compliance with the operational standard for total hydrocarbons in this part requires the construction of new pollution control facilities, February 19, 1995.

(c) All other requirements for frequency of monitoring, recordkeeping, and reporting in this part are effective on July 20, 1993.

§503.3 Permits and direct enforceability.

(a) Permits. The requirements in this part may be implemented through a permit:

(1) Issued to a ''treatment works treating domestic sewage'', as defined in 40 CFR 122.2, in accordance with 40 CFR parts 122 and 124 by EPA or by a State that has a State sludge management program approved by EPA in accordance with 40 CFR part 123 or 40 CFR part 501 or

(2) Issued under subtitle C of the Solid Waste Disposal Act; part C of the Safe Drinking Water Act; the Marine Protection, Research, and Sanctuaries Act of 1972; or the Clean Air Act. ''Treatment works treating domestic sewage'' shall submit a permit application in accordance with either 40 CFR 122.21 or an approved State program.

(b) Direct enforceability. No person shall use or dispose of sewage sludge through any practice for which requirements are established in this part except in accordance with such requirements.

§503.4 Relationship to other regulations.

Disposal of sewage sludge in a municipal solid waste landfill unit, as defined in 40 CFR 258.2, that complies with the requirements in 40 CFR part 258 constitutes compliance with section 405(d) of the CWA. Any person who prepares sewage sludge that is disposed in a municipal solid waste landfill unit shall ensure that the sewage sludge meets the requirements in 40 CFR part 258 concerning the quality of materials disposed in a municipal solid waste landfill unit.

§503.5 Additional or more stringent requirements.

(a) On a case-by-case basis, the permitting authority may impose requirements for the use or disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect public health and the environment from any adverse effect of a pollutant in the sewage sludge.

(b) Nothing in this part precludes a State or political subdivision thereof or interstate agency from imposing requirements for the use or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use or disposal of sewage sludge.

§503.6 Exclusions.

(a) *Treatment processes.* This part does not establish requirements for processes used to treat domestic sewage or for processes used to treat sewage sludge prior to final use or disposal, except as provided in §503.32 and §503.33.

(b) *Selection of a use or disposal practice.* This part does not require the selection of a sewage sludge use or disposal practice. The determination of the manner in which sewage sludge is used or disposed is a local determination.

(c) *Co-firing of sewage sludge.* This part does not establish requirements for sewage sludge co-fired in an incinerator with other wastes or for the incinerator in which sewage sludge and other wastes are co-fired. Other wastes do not include auxiliary fuel, as defined in 40 CFR 503.41(b), fired in a sewage sludge incinerator.

(d) *Sludge generated at an industrial facility.* This part does not establish requirements for the use or disposal of sludge generated at an industrial facility during the treatment of industrial wastewater, including sewage sludge generated during the treatment of industrial wastewater combined with domestic sewage.

(e) *Hazardous sewage sludge.* This part does not establish requirements for the use or disposal of sewage sludge determined to be hazardous in accordance with 40 CFR part 261.

(f) *Sewage sludge with high PCB concentration.* This part does not establish requirements for the use or disposal of sewage sludge with a concentration of polychlorinated biphenyls (PCBs) equal to or greater than 50 milligrams per kilogram of total solids (dry weight basis).

(g) *Incinerator ash.* This part does not establish requirements for the use or disposal of ash generated during the

firing of sewage sludge in a sewage sludge incinerator.

(h) *Grit and screenings.* This part does not establish requirements for the use or disposal of grit (e.g., sand, gravel, cinders, or other materials with a high specific gravity) or screenings (e.g., relatively large materials such as rags) generated during preliminary treatment of domestic sewage in a treatment works.

(i) *Drinking water treatment sludge.* This part does not establish requirements for the use or disposal of sludge generated during the treatment of either surface water or ground water used for drinking water.

(j) *Commercial and industrial septage.* This part does not establish requirements for the use or disposal of commercial septage, industrial septage, a mixture of domestic septage and commercial septage, or a mixture of domestic septage and industrial septage.

§ 503.7 Requirement for a person who prepares sewage sludge.

Any person who prepares sewage sludge shall ensure that the applicable requirements in this part are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

§ 503.8 Sampling and analysis.

(a) *Sampling.* Representative samples of sewage sludge that is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator shall be collected and analyzed.

(b) *Methods.* The materials listed below are incorporated by reference in this part. These incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The materials are incorporated as they exist on the date of approval, and notice of any change in these materials will be published in the FEDERAL REGISTER. They are available for inspection at the Office of the Federal Register, 7th Floor, suite 700, 800 North Capitol Street, NW., Washington, DC, and at the Office of Water Docket, room L–102, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC. Copies may be obtained from the standard producer or publisher listed in the regulation. Methods in the materials listed below shall be used to analyze samples of sewage sludge.

(1) *Enteric viruses.* ASTM Designation: D 4994–89, ''Standard Practice for Recovery of Viruses From Wastewater Sludges'', 1992 Annual Book of ASTM Standards: Section 11—Water and Environmental Technology, ASTM, 1916 Race Street, Philadelphia, PA 19103–1187.

(2) *Fecal coliform.* Part 9221 E. or Part 9222 D., ''Standard Methods for the Examination of Water and Wastewater'', 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.

(3) *Helminth ova.* Yanko, W.A., ''Occurrence of Pathogens in Distribution and Marketing Municipal Sludges'', EPA 600/1–87–014, 1987. National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (PB 88–154273/AS).

(4) *Inorganic pollutants.* ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'', EPA Publication SW–846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and Third Edition (November 1986) with Revision I (December 1987). Second Edition and Updates I and II are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (PB–87–120–291). Third Edition and Revision I are available from Superintendent of Documents, Government Printing Office, 941 North Capitol Street, NE., Washington, DC 20002 (Document Number 955–001–00000–1).

(5) *Salmonella sp. bacteria.* Part 9260 D., ''Standard Methods for the Examination of Water and Wastewater'', 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005; or

Kenner, B.A. and H.P. Clark, ''Detection and enumeration of *Salmonella* and *Pseudomonas aeruginosa*'', Journal of the Water Pollution Control Federation, Vol. 46, no. 9, September 1974, pp. 2163–2171. Water Environment Federation, 601 Wythe Street, Alexandria, Virginia 22314.

(6) *Specific oxygen uptake rate.* Part 2710 B., ''Standard Methods for the Examination of Water and Wastewater'',

18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.

(7) *Total, fixed, and volatile solids.* Part 2540 G., ''Standard Methods for the Examination of Water and Wastewater'', 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.

§ 503.9 General definitions.

(a) *Apply sewage sludge or sewage sludge applied to the land* means land application of sewage sludge.

(b) *Base flood* is a flood that has a one percent chance of occurring in any given year (i.e., a flood with a magnitude equalled once in 100 years).

(c) *Class I sludge management facility* is any publicly owned treatment works (POTW), as defined in 40 CFR 501.2, required to have an approved pretreatment program under 40 CFR 403.8(a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 CFR 403.10(e)) and any treatment works treating domestic sewage, as defined in 40 CFR 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

(d) *Cover crop* is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

(e) *CWA* means the Clean Water Act (formerly referred to as either the Federal Water Pollution Act or the Federal Water Pollution Control Act Amendments of 1972), Public Law 92–500, as amended by Public Law 95–217, Public Law 95–576, Public Law 96–483, Public Law 97–117, and Public Law 100–4.

(f) *Domestic septage* is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

(g) *Domestic sewage* is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

(h) *Dry weight basis* means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass (i.e., essentially 100 percent solids content).

(i) *EPA* means the United States Environmental Protection Agency.

(j) *Feed crops* are crops produced primarily for consumption by animals.

(k) *Fiber crops* are crops such as flax and cotton.

(l) *Food crops* are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

(m) *Ground water* is water below the land surface in the saturated zone.

(n) *Industrial wastewater* is wastewater generated in a commercial or industrial process.

(o) *Municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201(e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use, or disposal of sewage sludge.

(p) *Permitting authority* is either EPA or a State with an EPA-approved sludge management program.

(q) *Person* is an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

(r) *Person who prepares sewage sludge* is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

(s) *Place sewage sludge or sewage sludge placed* means disposal of sewage sludge on a surface disposal site.

(t) *Pollutant* is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

(u) *Pollutant limit* is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare); or the volume of a material that can be applied to a unit area of land (e.g., gallons per acre).

(v) *Runoff* is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.

(w) *Sewage sludge* is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

(x) *State* is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and an Indian Tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

(y) *Store or storage of sewage sludge* is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

(z) *Treat or treatment of sewage sludge* is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

(aa) *Treatment works* is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

(bb) *Wetlands* means those areas that are inundated or saturated by surface water or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Subpart B—Land Application

§ 503.10 Applicability.

(a) This subpart applies to any person who prepares sewage sludge that is applied to the land, to any person who applies sewage sludge to the land, to sewage sludge applied to the land, and to the land on which sewage sludge is applied.

(b)(1) *Bulk sewage sludge.* The general requirements in § 503.12 and the management practices in § 503.14 do not apply when bulk sewage sludge is applied to the land if the bulk sewage sludge meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(2) The Regional Administrator of EPA or, in the case of a State with an approved sludge management program, the State Director, may apply any or all of the general requirements in § 503.12 and the management practices in § 503.14 to the bulk sewage sludge in § 503.10(b)(1) on a case-by-case basis after determining that the general requirements or management practices are needed to protect public health and the environment from any reasonably anticipated adverse effect that may occur from any pollutant in the bulk sewage sludge.

(c)(1) The general requirements in § 503.12 and the management practices in § 503.14 do not apply when a bulk material derived from sewage sludge is applied to the land if the derived bulk material meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(2) The Regional Administrator of EPA or, in the case of a State with an approved sludge management program, the State Director, may apply any or all of the general requirements in § 503.12 or the management practices in § 503.14 to the bulk material in § 503.10(c)(1) on a case-by-case basis after determining that the general requirements or management practices are needed to protect public health and the environment from any reasonably anticipated adverse effect that may occur from any pollutant in the bulk sewage sludge.

(d) The requirements in this subpart do not apply when a bulk material derived from sewage sludge is applied to the land if the sewage sludge from which the bulk material is derived meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(e) *Sewage sludge sold or given away in a bag or other container for application to the land.* The general requirements in § 503.12 and the management practices in § 503.14 do not apply when sewage sludge is sold or given away in a bag or other container for application to the land if the sewage sludge sold or given away in a bag or other container for application to the land meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(f) The general requirements in § 503.12 and the management practices in § 503.14 do not apply when a material derived from sewage sludge is sold or given away in a bag or other container for application to the land if the derived material meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(g) The requirements in this subpart do not apply when a material derived from sewage sludge is sold or given away in a bag or other container for application to the land if the sewage sludge from which the material is derived meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

§ 503.11 Special definitions.

(a) *Agricultural land* is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

(b) *Agronomic rate* is the whole sludge application rate (dry weight basis) designed:

(1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and

(2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

(c) *Annual pollutant loading rate* is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

(d) *Annual whole sludge application rate* is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

(e) *Bulk sewage sludge* is sewage sludge that is not sold or given away in a bag or other container for application to the land.

(f) *Cumulative pollutant loading rate* is the maximum amount of an inorganic pollutant that can be applied to an area of land.

(g) *Forest* is a tract of land thick with trees and underbrush.

(h) *Land application* is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

(i) *Monthly average* is the arithmetic mean of all measurements taken during the month.

(j) *Other container* is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

(k) *Pasture* is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

(l) *Public contact site* is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

(m) *Range land* is open land with indigenous vegetation.

(n) *Reclamation site* is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

§ 503.12 General requirements.

(a) No person shall apply sewage sludge to the land except in accordance with the requirements in this subpart.

(b) No person shall apply bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in § 503.13(b)(2) has been reached.

(c) No person shall apply domestic septage to agricultural land, forest, or a reclamation site during a 365 day period if the annual application rate in § 503.13(c) has been reached during that period.

(d) The person who prepares bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk sewage sludge written notification of the concentration of total nitrogen (as N on a dry weight basis) in the bulk sewage sludge.

(e)(1) The person who applies sewage sludge to the land shall obtain information needed to comply with the requirements in this subpart.

(2)(i) Before bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) is applied to the land, the person who proposes to apply the bulk sewage sludge shall contact the permitting authority for the State in which the bulk sewage sludge will be applied to determine whether bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has been applied to the site since July 20, 1993.

(ii) If bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has not been applied to the site since July 20, 1993, the cumulative amount for each pollutant listed in Table 2 of § 503.13 may be applied to the site in accordance with § 503.13(a)(2)(i).

(iii) If bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk sewage sludge since that date is known, the cumulative amount of each pollutant applied to the site shall be used to determine the additional amount of each pollutant that can be applied to the site in accordance with § 503.13(a)(2)(i).

(iv) If bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk sewage sludge since that date is not known, an additional amount of each pollutant shall not be applied to the site in accordance with § 503.13(a)(2)(i).

(f) When a person who prepares bulk sewage sludge provides the bulk sewage

sludge to a person who applies the bulk sewage sludge to the land, the person who prepares the bulk sewage sludge shall provide the person who applies the sewage sludge notice and necessary information to comply with the requirements in this subpart.

(g) When a person who prepares sewage sludge provides the sewage sludge to another person who prepares the sewage sludge, the person who provides the sewage sludge shall provide the person who receives the sewage sludge notice and necessary information to comply with the requirements in this subpart.

(h) The person who applies bulk sewage sludge to the land shall provide the owner or lease holder of the land on which the bulk sewage sludge is applied notice and necessary information to comply with the requirements in this subpart.

(i) Any person who prepares bulk sewage sludge that is applied to land in a State other than the State in which the bulk sewage sludge is prepared shall provide written notice, prior to the initial application of bulk sewage sludge to the land application site by the applier, to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

(1) The location, by either street address or latitude and longitude, of each land application site.

(2) The approximate time period bulk sewage sludge will be applied to the site.

(3) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge.

(4) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

(j) Any person who applies bulk sewage sludge subject to the cumulative pollutant loading rates in §503.13(b)(2) to the land shall provide written notice, prior to the initial application of bulk sewage sludge to a land application site by the applier, to the permitting authority for the State in which the bulk sewage sludge will be applied and the permitting authority shall retain and provide access to the notice. The notice shall include:

(1) The location, by either street address or latitude and longitude, of the land application site.

(2) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) of the person who will apply the bulk sewage sludge.

§503.13 Pollutant limits.

(a) Sewage sludge. (1) Bulk sewage sludge or sewage sludge sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the sewage sludge exceeds the ceiling concentration for the pollutant in Table 1 of §503.13.

(2) If bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site, either:

(i) The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2 of §503.13; or

(ii) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13.

(3) If bulk sewage sludge is applied to a lawn or a home garden, the concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13.

(4) If sewage sludge is sold or given away in a bag or other container for application to the land, either:

(i) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13; or

(ii) The product of the concentration of each pollutant in the sewage sludge and the annual whole sludge application rate for the sewage sludge shall not cause the annual pollutant loading rate for the pollutant in Table 4 of §503.13 to be exceeded. The procedure used to determine the annual whole sludge application rate is presented in appendix A of this part.

(b) Pollutant concentrations and loading rates—sewage sludge.

(1) Ceiling concentrations.

TABLE 1 OF § 503.13.—CEILING CONCENTRATIONS

Pollutant	Ceiling concentration (milligrams per kilogram) [1]
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

[1] Dry weight basis.

(2) Cumulative pollutant loading rates.

TABLE 2 OF § 503.13.—CUMULATIVE POLLUTANT LOADING RATES

Pollutant	Cumulative pollutant loading rate (kilograms per hectare)
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

(3) Pollutant concentrations.

TABLE 3 OF § 503.13.—POLLUTANT CONCENTRATIONS

Pollutant	Monthly average concentration (milligrams per kilogram) [1]
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

[1] Dry weight basis.

(4) Annual pollutant loading rates.

TABLE 4 OF § 503.13.—ANNUAL POLLUTANT LOADING RATES

Pollutant	Annual pollutant loading rate (kilograms per hectare per 365 day period)
Arsenic	2.0
Cadmium	1.9
Copper	75
Lead	15
Mercury	0.85
Nickel	21
Selenium	5.0
Zinc	140

(c) Domestic septage.

The annual application rate for domestic septage applied to agricultural land, forest, or a reclamation site shall not exceed the annual application rate calculated using equation (1).

$$AAR = \frac{N}{0.0026} \qquad \text{Eq. (1)}$$

Where:

AAR=Annual application rate in gallons per acre per 365 day period.

N=Amount of nitrogen in pounds per acre per 365 day period needed by the crop or vegetation grown on the land.

[58 FR 9387, Feb. 19, 1993, as amended at 58 FR 9099, Feb. 25, 1994; 60 FR 54769, Oct. 25, 1995]

§ 503.14 Management practices.

(a) Bulk sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

(b) Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the United States, as defined in 40 CFR 122.2, except as provided in a permit issued pursuant to section 402 or 404 of the CWA.

(c) Bulk sewage sludge shall not be applied to agricultural land, forest, or a reclamation site that is 10 meters or less from waters of the United States, as defined in 40 CFR 122.2, unless otherwise specified by the permitting authority.

(d) Bulk sewage sludge shall be applied to agricultural land, forest, a public contact site, or a reclamation site at a whole sludge application rate that is equal to or less than the agronomic rate for the bulk sewage sludge, unless, in the case of a reclamation site, otherwise specified by the permitting authority.

(e) Either a label shall be affixed to the bag or other container in which sewage sludge that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge sold or given away in an other container for application to the land. The label or information sheet shall contain the following information:

(1) The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.

(2) A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.

(3) The annual whole sludge application rate for the sewage sludge that does not cause any of the annual pollutant loading rates in Table 4 of §503.13 to be exceeded.

§503.15 Operational standards—pathogens and vector attraction reduction.

(a) *Pathogens—sewage sludge.* (1) The Class A pathogen requirements in §503.32(a) or the Class B pathogen requirements and site restrictions in §503.32(b) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) The Class A pathogen requirements in §503.32(a) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) The Class A pathogen requirements in §503.32(a) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(b) *Pathogens—domestic septage.* The requirements in either §503.32 (c)(1) or (c)(2) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.

(c) *Vector attraction reduction—sewage sludge.* (1) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(10) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(d) *Vector attraction reduction—domestic septage.* The vector attraction reduction requirements in §503.33(b)(9), (b)(10), or (b)(12) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.

§503.16 Frequency of monitoring.

(a) *Sewage sludge.* (1) The frequency of monitoring for the pollutants listed in Table 1, Table 2, Table 3 and Table 4 of §503.13; the pathogen density requirements in §503.32(a) and in §503.32(b)(2) through (b)(4); and the vector attraction reduction requirements §503.33 (b)(1) through §503.33(b)(8) shall be the frequency in Table 1 of §503.16.

TABLE. 1 OF §503.16.—FREQUENCY OF MONITORING—LAND APPLICATION

Amount of sewage sludge[1] (metric tons per 365 day period)	Frequency
Greater than zero but less than 290.	Once per year.
Equal to or greater than 290 but less than 1,500.	Once per quarter (four times per year).
Equal to or greater than 1,500 but less than 15,000.	Once per 60 days (six times per year).

TABLE. 1 OF § 503.16.—FREQUENCY OF MONITORING—LAND APPLICATION—Continued

Amount of sewage sludge [1] (metric tons per 365 day period)	Frequency
Equal to or greater than 15,000.	Once per month (12 times per year).

[1] Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge received by a person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis).

(2) After the sewage sludge has been monitored for two years at the frequency in Table 1 of § 503.16, the permitting authority may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in § 503.32 (a)(5)(ii) and (a)(5)(iii), but in no case shall the frequency of monitoring be less than once per year when sewage sludge is applied to the land.

(b) *Domestic septage.* If either the pathogen requirements in § 503.32(c)(2) or the vector attraction reduction requirements in § 503.33(b)(12) are met when domestic septage is applied to agricultural land, forest, or a reclamation site, each container of domestic septage applied to the land shall be monitored for compliance with those requirements.

(Approved by the Office of Management and Budget under control number 2040–0157)

§ 503.17 Recordkeeping.

(a) *Sewage sludge.* (1) The person who prepares the sewage sludge in § 503.10(b)(1) or (e) shall develop the following information and shall retain the information for five years:

(i) The concentration of each pollutant listed in Table 3 of § 503.13 in the sewage sludge.

(ii) The following certification statement:

''I certify, under penalty of law, that the Class A pathogen requirements in § 503.32(a) and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33(b)(1) through § 503.33(b)(8)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(iii) A description of how the Class A pathogen requirements in § 503.32(a) are met.

(iv) A description of how one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) is met.

(2) The person who derives the material in § 503.10 (c)(1) or (f) shall develop the following information and shall retain the information for five years:

(i) The concentration of each pollutant listed in Table 3 of § 503.13 in the material.

(ii) The following certification statement:

''I certify, under penalty of law, that the Class A pathogen requirements in § 503.32(a) and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and the vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(iii) A description of how the Class A pathogen requirements in § 503.32(a) are met.

(iv) A description of how one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) is met.

(3) If the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and the vector attraction reduction requirements in either § 503.33 (b)(9) or (b)(10) are met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site:

(i) The person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The concentration of each pollutant listed in Table 3 of § 503.13 in the bulk sewage sludge.

(B) The following certification statement:

''I certify, under penalty of law, that the pathogen requirements in §503.32(a) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(C) A description of how the pathogen requirements in §503.32(a) are met.

(ii) The person who applies the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The following certification statement:

''I certify, under penalty of law, that the management practices in §503.14 and the vector attraction reduction requirement in [insert either §503.33 (b)(9) or (b)(10)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.''

(B) A description of how the management practices in §503.14 are met for each site on which bulk sewage sludge is applied.

(C) A description of how the vector attraction reduction requirements in either §503.33(b)(9) or (b)(10) are met for each site on which bulk sewage sludge is applied.

(4) If the pollutant concentrations in §503.13(b)(3) and the Class B pathogen requirements in §503.32(b) are met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site:

(i) The person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years:

(A) The concentration of each pollutant listed in Table 3 of §503.13 in the bulk sewage sludge.

(B) The following certification statement:

''I certify under, penalty of law, that the Class B pathogen requirements in §503.32(b) and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) if one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements [and vector attraction reduction requirements if applicable] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(C) A description of how the Class B pathogen requirements in §503.32(b) are met.

(D) When one of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) is met, a description of how the vector attraction reduction requirement is met.

(ii) The person who applies the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The following certification statement:

''I certify, under penalty of law, that the management practices in §503.14, the site restrictions in §503.32(b)(5), and the vector attraction reduction requirements in [insert either §503.33 (b)(9) or (b)(10), if one of those requirements is met] have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices and site restrictions [and the vector attraction reduction requirements if applicable] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(B) A description of how the management practices in §503.14 are met for each site on which bulk sewage sludge is applied.

(C) A description of how the site restrictions in §503.32(b)(5) are met for each site on which bulk sewage sludge is applied.

(D) When the vector attraction reduction requirement in either §503.33 (b)(9) or (b)(10) is met, a description of how the vector attraction reduction requirement is met.

(5) If the requirements in §503.13(a)(2)(i) are met when bulk sewage sludge is applied to agricultural

land, forest, a public contact site, or a reclamation site:

(i) The person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The concentration of each pollutant listed in Table 1 of § 503.13 in the bulk sewage sludge.

(B) The following certification statement:

''I certify, under penalty of law, that the pathogen requirements in [insert either § 503.32(a) or § 503.32(b)] and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) if one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements [and vector attraction reduction requirements] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(C) A description of how the pathogen requirements in either § 503.32 (a) or (b) are met.

(D) When one of the vector attraction requirements in § 503.33 (b)(1) through (b)(8) is met, a description of how the vector attraction requirement is met.

(ii) The person who applies the bulk sewage sludge shall develop the following information, retain the information in § 503.17 (a)(5)(ii)(A) through (a)(5)(ii)(G) indefinitely, and retain the information in § 503.17 (a)(5)(ii)(H) through (a)(5)(ii)(M) for five years.

(A) The location, by either street address or latitude and longitude, of each site on which bulk sewage sludge is applied.

(B) The number of hectares in each site on which bulk sewage sludge is applied.

(C) The date and time bulk sewage sludge is applied to each site.

(D) The cumulative amount of each pollutant (i.e., kilograms) listed in Table 2 of § 503.13 in the bulk sewage sludge applied to each site, including the amount in § 503.12(e)(2)(iii).

(E) The amount of sewage sludge (i.e., metric tons) applied to each site.

(F) The following certification statement:

''I certify, under penalty of law, that the requirements to obtain information in § 503.12(e)(2) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the requirements to obtain information have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.''

(G) A description of how the requirements to obtain information in § 503.12(e)(2) are met.

(H) The following certification statement:

''I certify, under penalty of law, that the management practices in § 503.14 have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.''

(I) A description of how the management practices in § 503.14 are met for each site on which bulk sewage sludge is applied.

(J) The following certification statement when the bulk sewage sludge meets the Class B pathogen requirements in § 503.32(b):

''I certify, under penalty of law, that the site restrictions in § 503.32(b)(5) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the site restrictions have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.''

(K) A description of how the site restrictions in § 503.32(b)(5) are met for each site on which Class B bulk sewage sludge is applied.

(L) The following certification statement when the vector attraction reduction requirement in either § 503.33 (b)(9) or (b)(10) is met:

''I certify, under penalty of law, that the vector attraction reduction requirement in [insert either § 503.33(b)(9) or § 503.33(b)(10)] has been met. This determination has been

made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the vector attraction reduction requirement has been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(M) If the vector attraction reduction requirements in either §503.33 (b)(9) or (b)(10) are met, a description of how the requirements are met.

(6) If the requirements in §503.13(a)(4)(ii) are met when sewage sludge is sold or given away in a bag or other container for application to the land, the person who prepares the sewage sludge that is sold or given away in a bag or other container shall develop the following information and shall retain the information for five years:

(i) The annual whole sludge application rate for the sewage sludge that does not cause the annual pollutant loading rates in Table 4 of §503.13 to be exceeded.

(ii) The concentration of each pollutant listed in Table 4 of §503.13 in the sewage sludge.

(iii) The following certification statement:

''I certify, under penalty of law, that the management practice in §503.14(e), the Class A pathogen requirement in §503.32(a), and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practice, pathogen requirements, and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(iv) A description of how the Class A pathogen requirements in §503.32(a) are met.

(v) A description of how one of the vector attraction requirements in §503.33 (b)(1) through (b)(8) is met.

(b) *Domestic septage.* When domestic septage is applied to agricultural land, forest, or a reclamation site, the person who applies the domestic septage shall develop the following information and shall retain the information for five years:

(1) The location, by either street address or latitude and longitude, of each site on which domestic septage is applied.

(2) The number of acres in each site on which domestic septage is applied.

(3) The date and time domestic septage is applied to each site.

(4) The nitrogen requirement for the crop or vegetation grown on each site during a 365 day period.

(5) The rate, in gallons per acre per 365 day period, at which domestic septage is applied to each site.

(6) The following certification statement:

''I certify, under penalty of law, that the pathogen requirements in [insert either §503.32(c)(1) or §503.32(c)(2)] and the vector attraction reduction requirements in [insert §503.33(b)(9), §503.33(b)(10), or §503.33(b)(12)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.''

(7) A description of how the pathogen requirements in either §503.33 (c)(1) or (c)(2) are met.

(8) A description of how the vector attraction reduction requirements in §503.33 (b)(9), (b)(10), or (b)(12) are met.

(Approved by the Office of Management and Budget under control number 2040–0157)

§503.18 Reporting.

(a) Class I sludge management facilities, POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more shall submit the following information to the permitting authority:

(1) The information in §503.17(a), except the information in §503.17 (a)(3)(ii), (a)(4)(ii) and in (a)(5)(ii), for the appropriate requirements on February 19 of each year.

(2) The information in §503.17 (a)(5)(ii)(A) through (a)(5)(ii)(G) on [insert the month and day from the date

of publication of this rule] of each year when 90 percent or more of any of the cumulative pollutant loading rates in Table 2 of § 503.13 is reached at a site.

(Approved by the Office of Management and Budget under control number 2040–0157)

Subpart C—Surface Disposal

§ 503.20 Applicability.

(a) This subpart applies to any person who prepares sewage sludge that is placed on a surface disposal site, to the owner/operator of a surface disposal site, to sewage sludge placed on a surface disposal site, and to a surface disposal site.

(b) This subpart does not apply to sewage sludge stored on the land or to the land on which sewage sludge is stored. It also does not apply to sewage sludge that remains on the land for longer than two years when the person who prepares the sewage sludge demonstrates that the land on which the sewage sludge remains is not an active sewage sludge unit. The demonstration shall include the following information, which shall be retained by the person who prepares the sewage sludge for the period that the sewage sludge remains on the land:

(1) The name and address of the person who prepares the sewage sludge.

(2) The name and address of the person who either owns the land or leases the land.

(3) The location, by either street address or latitude and longitude, of the land.

(4) An explanation of why sewage sludge needs to remain on the land for longer than two years prior to final use or disposal.

(5) The approximate time period when the sewage sludge will be used or disposed.

(c) This subpart does not apply to sewage sludge treated on the land or to the land on which sewage sludge is treated.

§ 503.21 Special definitions.

(a) *Active sewage sludge unit* is a sewage sludge unit that has not closed.

(b) *Aquifer* is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

(c) *Contaminate an aquifer* means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR 141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR 141.11.

(d) *Cover* is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

(e) *Displacement* is the relative movement of any two sides of a fault measured in any direction.

(f) *Fault* is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to strata on the other side.

(g) *Final cover* is the last layer of soil or other material placed on a sewage sludge unit at closure.

(h) *Holocene time* is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

(i) *Leachate collection system* is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

(j) *Liner* is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

(k) *Lower explosive limit for methane gas* is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

(l) *Qualified ground-water scientist* is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground-water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding ground-water monitoring, pollutant fate and transport, and corrective action.

(m) *Seismic impact zone* is an area that has a 10 percent or greater probability

that the horizontal ground level acceleration of the rock in the area exceeds 0.10 gravity once in 250 years.

(n) *Sewage sludge unit* is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR 122.2.

(o) *Sewage sludge unit boundary* is the outermost perimeter of an active sewage sludge unit.

(p) *Surface disposal site* is an area of land that contains one or more active sewage sludge units.

(q) *Unstable area* is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

§503.22 General requirements.

(a) No person shall place sewage sludge on an active sewage sludge unit unless the requirements in this subpart are met.

(b) An active sewage sludge unit located within 60 meters of a fault that has displacement in Holocene time; located in an unstable area; or located in a wetland, except as provided in a permit issued pursuant to section 402 of the CWA, shall close by March 22, 1994, unless, in the case of an active sewage sludge unit located within 60 meters of a fault that has displacement in Holocene time, otherwise specified by the permitting authority.

(c) The owner/operator of an active sewage sludge unit shall submit a written closure and post closure plan to the permitting authority 180 days prior to the date that the active sewage sludge unit closes. The plan shall describe how the sewage sludge unit will be closed and, at a minimum, shall include:

(1) A discussion of how the leachate collection system will be operated and maintained for three years after the sewage sludge unit closes if the sewage sludge unit has a liner and leachate collection system.

(2) A description of the system used to monitor for methane gas in the air in any structures within the surface disposal site and in the air at the property line of the surface disposal site, as required in §503.24(j)(2).

(3) A discussion of how public access to the surface disposal site will be restricted for three years after the last sewage sludge unit in the surface disposal site closes.

(d) The owner of a surface disposal site shall provide written notification to the subsequent owner of the site that sewage sludge was placed on the land.

§503.23 Pollutant limits (other than domestic septage).

(a) Active sewage sludge unit without a liner and leachate collection system.

(1) Except as provided in §503.23 (a)(2) and (b), the concentration of each pollutant listed in Table 1 of §503.23 in sewage sludge placed on an active sewage sludge unit shall not exceed the concentration for the pollutant in Table 1 of §503.23.

TABLE 1 OF §503.23.—POLLUTANT CONCENTRATIONS—ACTIVE SEWAGE SLUDGE UNIT WITHOUT A LINER AND LEACHATE COLLECTION

Pollutant	Concentration (milligrams per kilograms [1])
Arsenic	73
Chromium	600
Nickel	420

[1] Dry weight basis.

(2) Except as provided in §503.23(b), the concentration of each pollutant listed in Table 1 of §503.23 in sewage sludge placed on an active sewage sludge unit whose boundary is less than 150 meters from the property line of the surface disposal site shall not exceed the concentration determined using the following procedure.

(i) The actual distance from the active sewage sludge unit boundary to the property line of the surface disposal site shall be determined.

(ii) The concentration of each pollutant listed in Table 2 of §503.23 in the sewage sludge shall not exceed the concentration in Table 2 of §503.23 that corresponds to the actual distance in §503.23(a)(2)(i).

TABLE 2 OF § 503.23.—POLLUTANT CONCENTRATIONS—ACTIVE SEWAGE SLUDGE UNIT WITHOUT A LINER AND LEACHATE COLLECTION SYSTEM THAT HAS A UNIT BOUNDARY TO PROPERTY LINE DISTANCE LESS THAN 150 METERS

Unit boundary to property line	Pollutant concentration [1]		
Distance (meters)	Arsenic (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)
0 to less than 25	30	200	210
25 to less than 50	34	220	240
50 to less than 75	39	260	270
75 to less than 100	46	300	320
100 to less than 125	53	360	390
125 to less than 150	62	450	420

[1] Dry weight basis.

(b) Active sewage sludge unit without a liner and leachate collection system—site-specific limits.

(1) At the time of permit application, the owner/operator of a surface disposal site may request site-specific pollutant limits in accordance with § 503.23(b)(2) for an active sewage sludge unit without a liner and leachate collection system when the existing values for site parameters specified by the permitting authority are different from the values for those parameters used to develop the pollutant limits in Table 1 of § 503.23 and when the permitting authority determines that site-specific pollutant limits are appropriate for the active sewage sludge unit.

(2) The concentration of each pollutant listed in Table 1 of § 503.23 in sewage sludge placed on an active sewage sludge unit without a liner and leachate collection system shall not exceed either the concentration for the pollutant determined during a site-specific assessment, as specified by the permitting authority, or the existing concentration of the pollutant in the sewage sludge, whichever is lower.

§ 503.24 Management practices.

(a) Sewage sludge shall not be placed on an active sewage sludge unit if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

(b) An active sewage sludge unit shall not restrict the flow of a base flood.

(c) When a surface disposal site is located in a seismic impact zone, an active sewage sludge unit shall be designed to withstand the maximum recorded horizontal ground level acceleration.

(d) An active sewage sludge unit shall be located 60 meters or more from a fault that has displacement in Holocene time, unless otherwise specified by the permitting authority.

(e) An active sewage sludge unit shall not be located in an unstable area.

(f) An active sewage sludge unit shall not be located in a wetland, except as provided in a permit issued pursuant to section 402 or 404 of the CWA.

(g)(1) Run-off from an active sewage sludge unit shall be collected and shall be disposed in accordance with National Pollutant Discharge Elimination System permit requirements and any other applicable requirements.

(2) The run-off collection system for an active sewage sludge unit shall have the capacity to handle run-off from a 24-hour, 25-year storm event.

(h) The leachate collection system for an active sewage sludge unit that has a liner and leachate collection system shall be operated and maintained during the period the sewage sludge unit is active and for three years after the sewage sludge unit closes.

(i) Leachate from an active sewage sludge unit that has a liner and leachate collection system shall be collected and shall be disposed in accordance with the applicable requirements during the period the sewage sludge unit is active and for three years after the sewage sludge unit closes.

(j)(1) When a cover is placed on an active sewage sludge unit, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit for methane gas during the period that the sewage sludge unit is active and the concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas during the period that the sewage sludge unit is active.

(2) When a final cover is placed on a sewage sludge unit at closure, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit for methane gas

for three years after the sewage sludge unit closes and the concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas for three years after the sewage sludge unit closes, unless otherwise specified by the permitting authority.

(k) A food crop, a feed crop, or a fiber crop shall not be grown on an active sewage sludge unit, unless the owner/operator of the surface disposal site demonstrates to the permitting authority that through management practices public health and the environment are protected from any reasonably anticipated adverse effects of pollutants in sewage sludge when crops are grown.

(l) Animals shall not be grazed on an active sewage sludge unit, unless the owner/operator of the surface disposal site demonstrates to the permitting authority that through management practices public health and the environment are protected from any reasonably anticipated adverse effects of pollutants in sewage sludge when animals are grazed.

(m) Public access to a surface disposal site shall be restricted for the period that the surface disposal site contains an active sewage sludge unit and for three years after the last active sewage sludge unit in the surface disposal site closes.

(n)(1) Sewage sludge placed on an active sewage sludge unit shall not contaminate an aquifer.

(2) Results of a ground-water monitoring program developed by a qualified ground-water scientist or a certification by a qualified ground-water scientist shall be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

§503.25 Operational standards—pathogens and vector attraction reduction.

(a) *Pathogens—sewage sludge (other than domestic septage).* The Class A pathogens requirements in §503.32(a) or one of the Class B pathogen requirements in §503.32 (b)(2) through (b)(4) shall be met when sewage sludge is placed on an active sewage sludge unit, unless the vector attraction reduction requirement in §503.33(b)(11) is met.

(b) *Vector attraction reduction—sewage sludge (other than domestic septage).* One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(11) shall be met when sewage sludge is placed on an active sewage sludge unit.

(c) *Vector attraction reduction—domestic septage.* One of the vector attraction reduction requirement in §503.33 (b)(9) through (b)(12) shall be met when domestic septage is placed on an active sewage sludge unit.

§503.26 Frequency of monitoring.

(a) *Sewage sludge (other than domestic septage).* (1) The frequency of monitoring for the pollutants in Tables 1 and 2 of §503.23; the pathogen density requirements in §503.32(a) and in §503.32 (b)(2) through (b)(4); and the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) for sewage sludge placed on an active sewage sludge unit shall be the frequency in Table 1 of §503.26.

TABLE 1 OF §503.26.—FREQUENCY OF MONITORING—SURFACE DISPOSAL

Amount of sewage sludge [1] (metric tons per 365 day period)	Frequency
Greater than zero but less than 290.	Once per year.
Equal to or greater than 290 but less than 1,500.	Once per quarter (four times per year).
Equal to or greater than 1,500 but less than 15,000.	Once per 60 days (six times per year).
Equal to or greater than 15,000.	Once per month (12 times per year).

[1] Amount of sewage sludge placed on an active sewage sludge unit (dry weight basis).

(2) After the sewage sludge has been monitored for two years at the frequency in Table 1 of §503.26, the permitting authority may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in §503.32 (a)(5)(ii) and (a)(5)(iii), but in no case shall the frequency of monitoring be less than once per year when sewage sludge is placed on an active sewage sludge unit.

(b) *Domestic septage.* If the vector attraction reduction requirements in §503.33(b)(12) are met when domestic septage is placed on an active sewage

sludge unit, each container of domestic septage shall be monitored for compliance with those requirements.

(c) *Air.* Air in structures within a surface disposal site and at the property line of the surface disposal site shall be monitored continuously for methane gas during the period that the surface disposal site contains an active sewage sludge unit on which the sewage sludge is covered and for three years after a sewage sludge unit closes when a final cover is placed on the sewage sludge.

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§ 503.27 Recordkeeping.

(a) When sewage sludge (other than domestic septage) is placed on an active sewage sludge unit:

(1) The person who prepares the sewage sludge shall develop the following information and shall retain the information for five years.

(i) The concentration of each pollutant listed in Table 1 of § 503.23 in the sewage sludge when the pollutant concentrations in Table 1 of § 503.23 are met.

(ii) The following certification statement:

"I certify, under penalty of law, that the pathogen requirements in [insert § 503.32(a), § 503.32(b)(2), § 503.32(b)(3), or § 503.32(b)(4) when one of those requirements is met] and the vector attraction reduction requirements in [insert one of the vector attraction reduction requirements in § 503.33(b)(1) through § 503.33(b)(8) when one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine the [pathogen requirements and vector attraction reduction requirements if appropriate] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iii) A description of how the pathogen requirements in § 503.32 (a), (b)(2), (b)(3), or (b)(4) are met when one of those requirements is met.

(iv) A description of how one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) is met when one of those requirements is met.

(2) The owner/operator of the surface disposal site, shall develop the following information and shall retain that information for five years.

(i) The concentration of each pollutant listed in Table 2 of § 503.23 in the sewage sludge when the pollutant concentrations in Table 2 of § 503.23 are met or when site-specific pollutant limits in § 503.23(b) are met.

(ii) The following certification statement:

"I certify, under penalty of law, that the management practices in § 503.24 and the vector attraction reduction requirement in [insert one of the requirements in § 503.33 (b)(9) through (b)(11) if one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices [and the vector attraction reduction requirements if appropriate] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iii) A description of how the management practices in § 503.24 are met.

(iv) A description of how the vector attraction reduction requirements in § 503.33 (b)(9) through (b)(11) are met if one of those requirements is met.

(b) When domestic septage is placed on a surface disposal site:

(1) If the vector attraction reduction requirements in § 503.33(b)(12) are met, the person who places the domestic septage on the surface disposal site shall develop the following information and shall retain the information for five years:

(i) The following certification statement:

"I certify, under penalty of law, that the vector attraction reduction requirements in § 503.33(b)(12) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the vector attraction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(ii) A description of how the vector attraction reduction requirements in § 503.33(b)(12) are met.

(2) The owner/operator of the surface disposal site shall develop the following information and shall retain that information for five years:

(i) The following certification statement:

''I certify, under penalty of law, that the management practices in §503.24 and the vector attraction reduction requirements in [insert §503.33(b)(9) through §503.33(b)(11) when one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices [and the vector attraction reduction requirements if appropriate] have been met. I am aware that there are significant penalties for false certification including the possibility of fine or imprisonment.''

(ii) A description of how the management practices in §503.24 are met.

(iii) A description how the vector attraction reduction requirements in §503.33(b)(9) through §503.33(b)(11) are met if one of those requirements is met.

(Approved by the Office of Management and Budget under control number 2040–0157)

§503.28 Reporting.

Class I sludge management facilities, POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more shall submit the information in §503.27(a) to the permitting authority on February 19 of each year.

(Approved by the Office of Management and Budget under control number 2040–0157)

Subpart D—Pathogens and Vector Attraction Reduction

§503.30 Scope.

(a) This subpart contains the requirements for a sewage sludge to be classified either Class A or Class B with respect to pathogens.

(b) This subpart contains the site restrictions for land on which a Class B sewage sludge is applied.

(c) This subpart contains the pathogen requirements for domestic septage applied to agricultural land, forest, or a reclamation site.

(d) This subpart contains alternative vector attraction reduction requirements for sewage sludge that is applied to the land or placed on a surface disposal site.

§503.31 Special definitions.

(a) *Aerobic digestion* is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

(b) *Anaerobic digestion* is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

(c) *Density of microorganisms* is the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

(d) *Land with a high potential for public exposure* is land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g, a construction site located in a city).

(e) *Land with a low potential for public exposure* is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

(f) *Pathogenic organisms* are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

(g) *pH* means the logarithm of the reciprocal of the hydrogen ion concentration.

(h) *Specific oxygen uptake rate (SOUR)* is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in the sewage sludge.

(i) *Total solids* are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

(j) *Unstabilized solids* are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

(k) *Vector attraction* is the characteristic of sewage sludge that attracts rodents, flies, mosquitos, or

other organisms capable of transporting infectious agents.

(l) *Volatile solids* is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius in the presence of excess air.

§ 503.32 Pathogens.

(a) *Sewage sludge—Class A.* (1) The requirement in § 503.32(a)(2) and the requirements in either § 503.32(a)(3), (a)(4), (a)(5), (a)(6), (a)(7), or (a)(8) shall be met for a sewage sludge to be classified Class A with respect to pathogens.

(2) The Class A pathogen requirements in § 503.32 (a)(3) through (a)(8) shall be met either prior to meeting or at the same time the vector attraction reduction requirements in § 503.33, except the vector attraction reduction requirements in § 503.33 (b)(6) through (b)(8), are met.

(3) *Class A—Alternative 1.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii) The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time.

(A) When the percent solids of the sewage sludge is seven percent or higher, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 20 minutes or longer; and the temperature and time period shall be determined using equation (2), except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid.

$$D = \frac{131{,}700{,}000}{10^{0.1400t}} \quad \text{Eq. (2)}$$

Where,
D=time in days.
t=temperature in degrees Celsius.

(B) When the percent solids of the sewage sludge is seven percent or higher and small particles of sewage sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 15 seconds or longer; and the temperature and time period shall be determined using equation (2).

(C) When the percent solids of the sewage sludge is less than seven percent and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using equation (2).

(D) When the percent solids of the sewage sludge is less than seven percent; the temperature of the sewage sludge is 50 degrees Celsius or higher; and the time period is 30 minutes or longer, the temperature and time period shall be determined using equation (3).

$$D = \frac{50{,}070{,}000}{10^{0.1400t}} \quad \text{Eq. (3)}$$

Where,
D=time in days.
t=temperature in degrees Celsius.

(4) *Class A—Alternative 2.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii)(A) The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

(B) The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period

that the pH of the sewage sludge is above 12.

(C) At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

(5) *Class A—Alternative 3.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii)(A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses.

(B) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses until the next monitoring episode for the sewage sludge.

(C) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented.

(D) After the enteric virus reduction in paragraph (a)(5)(ii)(C) of this section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(ii)(C) of this section.

(iii)(A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains viable helminth ova.

(B) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is less than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova until the next monitoring episode for the sewage sludge.

(C) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is equal to or greater than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova when the density of viable helminth ova in the sewage sludge after pathogen treatment is less than one per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the viable helminth ova density requirement are documented.

(D) After the viable helminth ova reduction in paragraph (a)(5)(iii)(C) of this section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(iii)(C) of this section.

(6) *Class A—Alternative 4.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage

sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii) The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(iii) The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(7) *Class A—Alternative 5.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella,* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in one of the Processes to Further Reduce Pathogens described in appendix B of this part.

(8) *Class A—Alternative 6.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella,* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Further Reduce Pathogens, as determined by the permitting authority.

(b) *Sewage sludge—Class B.* (1)(i) The requirements in either § 503.32(b)(2), (b)(3), or (b)(4) shall be met for a sewage sludge to be classified Class B with respect to pathogens.

(ii) The site restrictions in § 503.32(b)(5) shall be met when sewage sludge that meets the Class B pathogen requirements in § 503.32(b)(2), (b)(3), or (b)(4) is applied to the land.

(2) *Class B—Alternative 1.* (i) Seven samples of the sewage sludge shall be collected at the time the sewage sludge is used or disposed.

(ii) The geometric mean of the density of fecal coliform in the samples collected in paragraph (b)(2)(i) of this section shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(3) *Class B—Alternative 2.* Sewage sludge that is used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in appendix B of this part.

(4) *Class B—Alternative 3.* Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority.

(5) *Site restrictions.* (i) Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

(ii) Food crops with harvested parts below the surface of the land shall not

be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil.

(iii) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil.

(iv) Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

(v) Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

(vi) Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

(vii) Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge.

(viii) Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

(c) *Domestic septage.* (1) The site restrictions in §503.32(b)(5) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site; or

(2) The pH of domestic septage applied to agricultural land, forest, or a reclamation site shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes and the site restrictions in §503.32 (b)(5)(i) through (b)(5)(iv) shall be met.

§503.33 Vector attraction reduction.

(a)(1) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(10) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(4) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(11) shall be met when sewage sludge (other than domestic septage) is placed on an active sewage sludge unit.

(5) One of the vector attraction reduction requirements in §503.33 (b)(9), (b)(10), or (b)(12) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site and one of the vector attraction reduction requirements in §503.33 (b)(9) through (b)(12) shall be met when domestic septage is placed on an active sewage sludge unit.

(b)(1) The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent (see calculation procedures in ''Environmental Regulations and Technology—Control of Pathogens and Vector Attraction in Sewage Sludge'', EPA–625/R–92/013, 1992, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268).

(2) When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

(3) When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When at the end

of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

(4) The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

(5) Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

(6) The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

(7) The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.

(8) The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

(9)(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When the sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(10)(i) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

(11) Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.

(12) The pH of domestic septage shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes.

Subpart E—Incineration

§ 503.40 Applicability.

(a) This subpart applies to a person who fires sewage sludge in a sewage sludge incinerator, to a sewage sludge incinerator, and to sewage sludge fired in a sewage sludge incinerator.

(b) This subpart applies to the exit gas from a sewage sludge incinerator stack.

(c) The management practice in § 503.45(a), the frequency of monitoring requirement for total hydrocarbon concentration in § 503.46(b) and the recordkeeping requirements for total hydrocarbon concentration in § 503.47(c) and (n) do not apply if the following conditions are met:

(1) The exit gas from a sewage sludge incinerator stack is monitored continuously for carbon monoxide.

(2) The monthly average concentration of carbon monoxide in the exit gas from a sewage sludge incinerator stack, corrected for zero percent moisture and to seven percent oxygen, does not exceed 100 parts per million on a volumetric basis.

(3) The person who fires sewage sludge in a sewage sludge incinerator retains the following information for five years:

(i) The carbon monoxide concentrations in the exit gas; and

(ii) A calibration and maintenance log for the instrument used to measure the carbon monoxide concentration.

(4) Class I sludge management facilities, POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per

day, and POTWs that serve a population of 10,000 people or greater submit the monthly average carbon monoxide concentrations in the exit gas to the permitting authority on February 19 of each year.

[58 FR 9387, Feb. 19, 1993, as amended at 59 FR 9099, Feb. 25, 1994]

§ 503.41 Special definitions.

(a) *Air pollution control device* is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

(b) *Auxiliary fuel* is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

(c) *Control efficiency* is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

(d) *Dispersion factor* is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

(e) *Fluidized bed incinerator* is an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

(f) *Hourly average* is the arithmetic mean of all measurements, taken during an hour. At least two measurements must be taken during the hour.

(g) *Incineration* is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

(h) *Monthly average* is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

(i) *Risk specific concentration* is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of the site where the sewage sludge incinerator is located.

(j) *Sewage sludge feed rate* is either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

(k) *Sewage sludge incinerator* is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

(l) *Stack height* is the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR 51.100 (ii).

(m) *Total hydrocarbons* means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

(n) *Wet electrostatic precipitator* is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

(o) *Wet scrubber* is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

§ 503.42 General requirements.

No person shall fire sewage sludge in a sewage sludge incinerator except in compliance with the requirements in this subpart.

§ 503.43 Pollutant limits.

(a) Firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the National Emission Standard for Beryllium in subpart C of 40 CFR part 61.

(b) Firing of sewage sludge in a sewage sludge incinerator shall not violate

the requirements in the National Emission Standard for Mercury in subpart E of 40 CFR part 61.

(c) *Pollutant limit—lead.* (1) The daily concentration of lead in sewage sludge fed to a sewage sludge incinerator shall not exceed the concentration calculated using Equation (4).

$$C = \frac{0.1 \times NAAQS \times 86{,}400}{DF \times (1 - CE) \times SF} \quad \text{Eq. (4)}$$

Where:

C=Daily concentration of lead in sewage sludge in milligrams per kilogram of total solids (dry weight basis).

NAAQS=National Ambient Air Quality Standard for lead in micrograms per cubic meter.

DF=Dispersion factor in micrograms per cubic meter per gram per second.

CE=Sewage sludge incinerator control efficiency for lead in hundredths.

SF=Sewage sludge feed rate in metric tons per day (dry weight basis).

(2)(i) When the sewage sludge stack height is 65 meters or less, the actual sewage sludge incinerator stack height shall be used in an air dispersion model specified by the permitting authority to determine the dispersion factor (DF) in equation (4).

(ii) When the sewage sludge incinerator stack height exceeds 65 meters, the creditable stack height shall be determined in accordance with 40 CFR 51.100(ii) and the creditable stack height shall be used in an air dispersion model specified by the permitting authority to determine the dispersion factor (DF) in equation (4).

(3) The control efficiency (CE) in equation (5) shall be determined from a performance test of the sewage sludge incinerator, as specified by the permitting authority.

(d) *Pollutant limit—arsenic, cadmium, chromium, and nickel.* (1) The daily concentration for arsenic, cadmium, chromium, and nickel in sewage sludge fed to a sewage sludge incinerator each shall not exceed the concentration calculated using equation (5).

$$C = \frac{RSC \times 86{,}400}{DF \times (1 - CE) \times SF} \quad \text{Eq. (5)}$$

Where:

C=Daily concentration of arsenic, cadmium, chromium, or nickel in sewage sludge in milligrams per kilogram of total solids (dry weight basis).

CE=Sewage sludge incinerator control efficiency for arsenic, cadmium, chromium, or nickel in hundredths.

DF=Dispersion factor in micrograms per cubic meter per gram per second.

RSC=Risk specific concentration in micrograms per cubic meter. S

F=Sewage sludge feed rate in met,ric tons per day (dry weight basis).

(2) The risk specific concentrations for arsenic, cadmium, and nickel used in equation (6) shall be obtained from Table 1 of § 503 .43.

TABLE 1 OF § 503.43.—RISK SPECIFIC CONCENTRATION ARSENIC, CADMIUM, AND NICKEL

Pollutant	Risk specific concentration (micrograms per cubic meter)
Arsenic	0.023
Cadmium	0.057
Nickel	2.0

(3) The risk specific concentration for chromium used in equation (5) shall be obtained from Table 2 of § 503.43 or shall be calculated using equation (6), as specified by the permitting authority.

TABLE 2 OF § 503.43.—RISK SPECIFIC CONCENTRATION—CHROMIUM

Type of incinerator	Risk specific concentration (micrograms per cubic meter)
Fluidized bed with wet scrubber	0.65
Fluidized bed with wet scrubber and wet electrostatic precipitator	0.23
Other types with wet scrubber	0.064
Other types with wet scrubber and wet electrostatic precipitator	0.016

$$RSC = \frac{0.0085}{r} \quad \text{Eq. (6)}$$

Where:

RSC=risk specific concentration for chromium in micrograms per cubic meter used in equation (5).

r=decimal fraction of the hexavalent chromium concentration in the total chromium concentration measured in the

exit gas from the sewage sludge incinerator stack in hundredths.

(4)(i) When the sewage sludge incinerator stack height is equal to or less than 65 meters, the actual sewage sludge incinerator stack height shall be used in an air dispersion model, as specified by the permitting authority, to determine the dispersion factor (DF) in equation (5).

(ii) When the sewage sludge incinerator stack height is greater than 65 meters, the creditable stack height shall be determined in accordance with 40 CFR 51.100(ii) and the creditable stack height shall be used in an air dispersion model, as specified by the permitting authority, to determine the dispersion factor (DF) in equation (5).

(5) The control efficiency (CE) in equation (5) shall be determined from a performance test of the sewage sludge incinerator, as specified by the permitting authority.

§503.44 Operational standard—total hydrocarbons.

(a) The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected for zero percent moisture by multiplying the measured total hydrocarbons concentration by the correction factor calculated using equation (7).

$$\text{Correction factor (percent moisture)} = \frac{1}{(1-X)} \quad \text{Eq. (7)}$$

Where:

X=decimal fraction of the percent moisture in the sewage sludge incinerator exit gas in hundredths.

(b) The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected to seven percent oxygen by multiplying the measured total hydrocarbons concentration by the correction factor calculated using equation (8).

$$\text{Correction factor (oxygen)} = \frac{14}{(21-Y)} \quad \text{Eq. (8)}$$

Where:

Y=Percent oxygen concentration in the sewage sludge incinerator stack exit gas (dry volume/dry volume).

(c) The monthly average concentration for total hydrocarbons in the exit gas from a sewage sludge incinerator stack, corrected for zero percent moisture using the correction factor from equation (7) and to seven percent oxygen using the correction factor from equation (8), shall not exceed 100 parts per million on a volumetric basis when measured using the instrument required by §503.45(a).

§503.45 Management practices.

(a)(1) An instrument that measures and records the total hydrocarbons concentration in the sewage sludge incinerator stack exit gas continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(2) The total hydrocarbons instrument shall employ a flame ionization detector; shall have a heated sampling line maintained at a temperature of 150 degrees Celsius or higher at all times; and shall be calibrated at least once every 24-hour operating period using propane.

(b) An instrument that measures and records the oxygen concentration in the sewage sludge incinerator stack exit gas continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(c) An instrument that measures and records information used to determine the moisture content in the sewage sludge incinerator stack exit gas continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(d) An instrument that measures and records combustion temperatures continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(e) The maximum combustion temperature for a sewage sludge incinerator shall be specified by the permitting authority and shall be based on information obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies.

(f) The values for the operating parameters for the sewage sludge incinerator air pollution control device shall be specified by the permitting authority and shall be based on information obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies.

(g) Sewage sludge shall not be fired in a sewage sludge incinerator if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

§ 503.46 Frequency of monitoring.

(a) *Sewage sludge.* (1) The frequency of monitoring for beryllium and mercury shall be specified by the permitting authority.

(2) The frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel in sewage sludge fed to a sewage sludge incinerator shall be the frequency in Table 1 of § 503.46.

TABLE 1 OF § 503.46.—FREQUENCY OF MONITORING—INCINERATION

Amount of sewage sludge [1] (metric tons per 365 day period)	Frequency
Greater than zero but less than 290	Once per year.
Equal to or greater than 290 but less than 1,500.	Once per quarter (four times per year).
Equal to or greater than 1,500 but less than 15,000.	Once per 60 days (six times per year).
Equal to or greater than 15,000	Once per month (12 times per year).

[1] Amount of sewage sludge fired in a sewage sludge incinerator (dry weight basis).

(3) After the sewage sludge has been monitored for two years at the frequency in Table 1 of § 503.46, the permitting authority may reduce the frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel, but in no case shall the frequency of monitoring be less than once per year when sewage sludge is fired in a sewage sludge incinerator.

(b) *Total hydrocarbons, oxygen concentration, information to determine moisture content, and combustion temperatures.* The total hydrocarbons concentration and oxygen concentration in the exit gas from a sewage sludge incinerator stack, the information used to measure moisture content in the exit gas, and the combustion temperatures for the sewage sludge incinerator shall be monitored continuously.

(c) *Air pollution control device operating parameters.* The frequency of monitoring for the sewage sludge incinerator air pollution control device operating parameters shall be specified by the permitting authority.

(Approved by the Office of Management and Budget under control number 2040–0157)

§ 503.47 Recordkeeping.

(a) The person who fires sewage sludge in a sewage sludge incinerator shall develop the information in § 503.47(b) through § 503.47(n) and shall retain that information for five years.

(b) The concentration of lead, arsenic, cadmium, chromium, and nickel in the sewage sludge fed to the sewage sludge incinerator.

(c) The total hydrocarbons concentrations in the exit gas from the sewage sludge incinerator stack.

(d) Information that indicates the requirements in the National Emission Standard for beryllium in subpart C of 40 CFR part 61 are met.

(e) Information that indicates the requirements in the National Emission Standard for mercury in subpart E of 40 CFR part 61 are met.

(f) The combustion temperatures, including the maximum combustion temperature, for the sewage sludge incinerator.

(g) Values for the air pollution control device operating parameters.

(h) The oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack.

(i) The sewage sludge feed rate.

(j) The stack height for the sewage sludge incinerator.

(k) The dispersion factor for the site where the sewage sludge incinerator is located.

(l) The control efficiency for lead, arsenic, cadmium, chromium, and nickel for each sewage sludge incinerator.

(m) The risk specific concentration for chromium calculated using equation (6), if applicable.

(n) A calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures.

(Approved by the Office of Management and Budget under control number 2040–0157)

§ 503.48 Reporting.

Class I sludge management facilities, POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve a population of 10,000 people or greater shall submit the information in § 503.47(b) through § 503.47(h) to the permitting authority on February 19 of each year.

(Approved by the Office of Management and Budget under control number 2040–0157)

APPENDIX A TO PART 503—PROCEDURE TO DETERMINE THE ANNUAL WHOLE SLUDGE APPLICATION RATE FOR A SEWAGE SLUDGE

Section 503.13(a)(4)(ii) requires that the product of the concentration for each pollutant listed in Table 4 of § 503.13 in sewage sludge sold or given away in a bag or other container for application to the land and the annual whole sludge application rate (AWSAR) for the sewage sludge not cause the annual pollutant loading rate for the pollutant in Table 4 of § 503.13 to be exceeded. This appendix contains the procedure used to determine the AWSAR for a sewage sludge that does not cause the annual pollutant loading rates in Table 4 of § 503.13 to be exceeded.

The relationship between the annual pollutant loading rate (APLR) for a pollutant and the annual whole sludge application rate (AWSAR) for 1a sewage sludge is shown in equation (1).

$$APLR = C \times AWSAR \times 0.001 \qquad (1)$$

Where:

APLR=Annual pollutant loading rate in kilograms per hectare per 365 day period.

C=Pollutant concentration in milligrams, per kilogram of total solids (dry weight basis).

AWSAR=Annual whole sludge application rate in metric tons per hectare per 365 day period (dry weight basis).

0.001=A conversion factor.

To determine the AWSAR, equation (1) is rearranged into equation (2):

$$AWSAR = \frac{APLR}{C \times 0.001} \qquad (2)$$

The procedure used to determine the AWSAR for a sewage sludge is presented below.

Procedure:

1. Analyze a sample of the sewage sludge to determine the concentration for each of the pollutants listed in Table 4 of § 503.13 in the sewage sludge.
2. Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of § 503.13, calculate an AWSAR for each pollutant using equation (2) above.
3. The AWSAR for the sewage sludge is the lowest AWSAR calculated in Step 2.

APPENDIX B TO PART 503—PATHOGEN TREATMENT PROCESSES

A. Processes to Significantly Reduce Pathogens (PSRP)

1. Aerobic digestion—Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.
2. Air drying—Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above zero degrees Celsius.
3. Anaerobic digestion—Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.
4. Composting—Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55 degrees Celsius.
5. Lime stabilization—Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

B. Processes to Further Reduce Pathogens (PFRP)

1. Composting—Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55 degrees Celsius or higher for three days.

Using the windrow composting method, the temperature of the sewage sludge is maintained at 55 degrees or higher for 15 days or longer. During the period when the compost is maintained at 55 degrees or higher, there shall be a minimum of five turnings of the windrow.

2. Heat drying—Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80 degrees Celsius or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80 degrees Celsius.

3. Heat treatment—Liquid sewage sludge is heated to a temperature of 180 degrees Celsius or higher for 30 minutes.

4. Thermophilic aerobic digestion—Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is 10 days at 55 to 60 degrees Celsius.

5. Beta ray irradiation—Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (ca. 20 degrees Celsius).

6. Gamma ray irradiation—Sewage sludge is irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at room temperature (ca. 20 degrees Celsius).

7. Pasteurization—The temperature of the sewage sludge is maintained at 70 degrees Celsius or higher for 30 minutes or longer.

SUBCHAPTER P [RESERVED]
SUBCHAPTER Q—ENERGY POLICY

PART 600—FUEL ECONOMY OF MOTOR VEHICLES

Subpart A—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—General Provisions

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600.006–86 Data and information requirements for fuel economy vehicles.
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600.008–77 Review of fuel economy data, testing by the Administrator.
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Subpart B—Fuel Economy Regulations for 1978 and Later Model Year Automobiles—Test Procedures

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Subpart C—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—Procedures for Calculating Fuel Economy Values

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600.202–77 Definitions.
600.203–77 Abbreviations.
600.204–77 Section numbering, construction.
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600.206–86 Calculation and use of fuel economy values for gasoline-fueled, diesel, and electric vehicle configurations.
600.206–93 Calculation and use of fuel economy values for gasoline-fueled, diesel-fueled, electric, alcohol-fueled, natural gas-fueled, alcohol dual fuel, and natural gas dual fuel vehicle configurations.
600.207–86 Calculation of fuel economy values for a model type.
600.207–93 Calculation of fuel economy values for a model type.
600.208–77 Sample calculation.
600.209–85 Calculation of fuel economy values for labeling.
600.209–95 Calculation of fuel economy values for labeling.

Subpart D—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—Labeling

600.301–86 General applicability.
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600.302–77 Definitions.
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600.306–86 Labeling requirements.
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600.310–86 Labeling of high altitude vehicles.
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600.312–86 Labeling, reporting, and recordkeeping; Administrator reviews.
600.313–86 Timetable for data and information submittal and review.
600.314–86 Updating label values, annual fuel cost, Gas Guzzler Tax, and range of fuel economies for comparable automobiles.
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Subpart E—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—Dealer Availability of Fuel Economy Information

600.401–77 General applicability.
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600.404–77 Section numbering, construction.
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600.406–77 [Reserved]
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Subpart F—Fuel Economy Regulations for Model Year 1978 Passenger Automobiles and for 1979 and Later Model Year Automobiles (Light Trucks and Passenger Automobiles)—Procedures for Determining Manufacturer's Average Fuel Economy

600.501–85 General applicability.
600.501–86 General applicability.
600.501–93 General applicability.
600.502–81 Definitions.
600.503–78 Abbreviations.
600.504–78 Section numbering, construction.
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600.507–86 Running change data requirements.
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600.511–80 Determination of domestic production.
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APPENDIX I TO PART 600—HIGHWAY FUEL ECONOMY DRIVING SCHEDULE
APPENDIX II TO PART 600—SAMPLE TEST VALUE CALCULATIONS
APPENDIX III TO PART 600—SAMPLE FUEL ECONOMY LABEL CALCULATION (1977 MODEL YEAR)
APPENDICES IV–VII TO PART 600 [RESERVED]
APPENDIX VIII TO PART 600—FUEL ECONOMY LABEL FORMATS

AUTHORITY: 15 U.S.C. 2001, 2002, 2003, 2005, 2006, and 2013.

SOURCE: 41 FR 38685, Sept. 10, 1976, unless otherwise noted.

EDITORIAL NOTE: For a document removing the OMB control number wherever it appeared in part 600, see 58 FR 34370, June 25, 1993.

Subpart A—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—General Provisions

§ 600.001–86 General applicability.

(a) The provisions of this subpart are applicable to 1986 and later model year gasoline-fueled and diesel automobiles.

(b)(1) Manufacturers that produce only electric vehicles are exempt from the requirement of this subpart, except with regard to the requirements in those sections pertaining specifically to electric vehicles.

(2) Manufacturers with worldwide production (excluding electric vehicle production) of less than 10,000 gasoline-fueled and/or diesel powered passenger automobiles and light trucks may optionally comply with the electric vehicle requirements in this subpart.

[49 FR 13847, Apr. 6, 1984]

§ 600.001–93 General applicability.

(a) The provisions of this subpart are applicable to 1993 and later model year gasoline-fueled, diesel-fueled, alcohol-fueled, natural gas-fueled, alcohol dual fuel, and natural gas dual fuel automobiles.

(b)(1) Manufacturers that produce only electric vehicles are exempt from the requirement of this subpart, except with regard to the requirements in those sections pertaining specifically to electric vehicles.

(2) Manufacturers with worldwide production (excluding electric vehicle production) of less than 10,000 gasoline-fueled and/or diesel powered passenger automobiles and light trucks may optionally comply with the electric vehicle requirements in this subpart.

[59 FR 39649, Aug. 3, 1994]

§ 600.002–85 Definitions.

(a) As used in this subpart, all terms not defined herein shall have the meaning given them in the Act:

(1) ''Act'' means part I of title V of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 1901 et seq.).

(2) ''Administrator'' means the Administrator of the Environmental Protection Agency or his authorized representative.

(3) ''Secretary'' means the Secretary of Transportation or his authorized representative.

(4) ''Automobile'' means:

(i) Any four-wheel vehicle propelled by a combustion engine using onboard fuel or by an electric motor drawing current from rechargeable storage batteries or other portable energy storage devices (rechargeable using energy from a source off the vehicle such as residential electric service),

(ii) Which is manufactured primarily for use on public streets, roads, or highways (except any vehicle operated on a rail or rails),

(iii) Which is rated at not more than 8,500 pounds gross vehicle weight, which has a curb weight of not more than 6,000 pounds, and which has a basic vehicle frontal area of not more than 45 square feet, or

(iv) Is a type of vehicle which the Secretary determines is substantially used for the same purposes.

(5) ''Passenger Automobile'' means any automobile which the Secretary determines is manufactured primarily for use in the transportation of no more than 10 individuals.

(6) ''Model Year'' means the manufacturer's annual production period (as determined by the Administrator) which includes January 1 of such calendar year. If a manufacturer has no annual production period, the term ''model year'' means the calendar year.

(7) ''Federal Emission Test Procedure'' refers to the dynamometer driving schedule, dynamometer procedure, and sampling and analytical procedures described in part 86 for the respective model year, which are used to derive city fuel economy data for gasoline-fueled or diesel vehicles.

(8) ''Federal Highway Fuel Economy Test Procedure'' refers to the dynamometer driving schedule, dynamometer procedure, and sampling and analytical procedures described in subpart B of this part and which are used to derive highway fuel economy data for gasoline-fueled or diesel vehicles.

(9) ''Fuel'' means (i) gasoline and diesel fuel for gasoline- or diesel-powered automobiles or (ii) electrical energy for electrically powered automobiles.

(10) ''Fuel Economy'' means (i) the average number of miles traveled by an automobile or group of automobiles per gallon of gasoline or diesel fuel consumed as computed in §600.113 or §600.207 or (ii) the equivalent petroleum-based fuel economy for an electrically powered automobile as determined by the Secretary of Energy.

(11) ''City Fuel Economy'' means the fuel economy determined by operating a vehicle (or vehicles) over the driving schedule in the Federal emission test procedure.

(12) ''Highway Fuel Economy'' means the fuel economy determined by operating a vehicle (or vehicles) over the driving schedule in the Federal highway fuel economy test procedure.

(13)(i) ''Combined Fuel Economy'' means the fuel economy value determined for a vehicle (or vehicles) by harmonically averaging the city and highway fuel economy values, weighted 0.55 and 0.45 respectively, for gasoline-fueled and diesel vehicles.

(ii) For electric vehicles, the term means the equivalent petroleum-based fuel economy value as determined by the calculation procedure promulgated by the Secretary of Energy.

(14) ''Average Fuel Economy'' means the unique fuel economy value as computed under §600.510 for a specific class of automobiles produced by a manufacturer that is subject to average fuel economy standards.

(15) ''Certification Vehicle'' means a vehicle which is selected under §86.084–24(b)(1) and used to determine compliance under §86.084–30 for issuance of an original certificate of conformity.

(16) ''Fuel Economy Data Vehicle'' means a vehicle used for the purpose of determining fuel economy which is not a certification vehicle.

(17) ''Label'' means a sticker that contains fuel economy information and is affixed to new automobiles in accordance with subpart D of this part.

(18) ''Dealer'' means a person who resides or is located in the United States, any territory of the United States, or the District of Columbia and who is engaged in the sale or distribution of new automobiles to the ultimate purchaser.

(19) ''Model Type'' means a unique combination of car line, basic engine, and transmission class.

(20) ''Car Line'' means a name denoting a group of vehicles within a make or car division which has a degree of commonality in construction (e.g., body, chassis). Car line does not consider any level of decor or opulence and is not generally distinguished by characteristics as roof line, number of doors, seats, or windows, except for station wagons or light-duty trucks. Station wagons and light-duty trucks are considered to be different car lines than passenger cars.

(21) ''Basic Engine'' means a unique combination of manufacturer, engine displacement, number of cylinders, fuel system (as distinguished by number of carburetor barrels or use of fuel injection), catalyst usage, and other engine and emission control system characteristics specified by the Administrator. For electric vehicles, basic engine means a unique combination of manufacturer and electric traction motor, motor controller, battery configuration, electrical charging system, energy storage device, and other components as specified by the Administrator.

(22) ''Transmission Class'' means a group of transmissions having the following common features: Basic transmission type (manual, automatic, or semi-automatic); number of forward gears used in fuel economy testing (e.g., manual four-speed, three-speed automatic, two-speed semi-automatic); drive system (e.g., front wheel drive, rear wheel drive; four wheel drive), type of overdrive, if applicable (e.g., final gear ratio less than 1.00, separate overdrive unit); torque converter type, if applicable (e.g., non-lockup, lockup, variable ratio); and other transmission characteristics that may be determined to be significant by the Administrator.

(23) ''Base Level'' means a unique combination of basic engine inertia weight class and transmission class.

(24) ''Vehicle Configuration'' means a unique combination of basic engine, engine code, inertia weight class, transmission configuration, and axle ratio within a base level.

(25) ''Engine Code'' means, for gasoline-fueled and diesel vehicles, a unique combination, within an engine-system combination (as defined in part 86 of this chapter), of displacement, carburetor (or fuel injection) calibration, distributor calibration, choke calibration, auxiliary emission control devices, and other engine and emission control system components specified by the Administrator. For electric vehicles, engine code means a unique combination of manufacturer, electric traction motor, motor configuration, motor controller, and energy storage device.

(26) ''Inertia Weight Class'' means the class, which is a group of test weights, into which a vehicle is grouped based on its loaded vehicle weight in accordance with the provisions of part 86.

(27) ''Transmission Configuration'' means the Administrator may further subdivide within a transmission class if the Administrator determines that sufficient fuel economy differences exist. Features such as gear ratios, torque converter multiplication ratio, stall speed, shift calibration, or shift speed may be used to further distinguish characteristics within a transmission class.

(28) ''Axle Ratio'' means the number of times the input shaft to the differential (or equivalent) turns for each turn of the drive wheels.

(29) ''Auxiliary Emission Control Device (AECD)'' means an element of design as defined in part 86.

(30) ''Rounded'' means a number shortened to the specific number of decimal places in accordance with the ''Round Off Method'' specified in ASTM E 29–67.

(31) ''Calibration'' means the set of specifications, including tolerances, unique to a particular design, version of application of a component, or component assembly capable of functionally describing its operation over its working range.

(32) ''Production Volume'' means, for a domestic manufacturer, the number of vehicle units domestically produced in a particular model year but not exported, and for a foreign manufacturer, means the number of vehicle units of a particular model imported into the United States.

(33) ''Body Style'' means a level of commonality in vehicle construction as defined by number of doors and roof treatment (e.g., sedan, convertible, fastback, hatchback) and number of seats (i.e., front, second, or third seat) requiring seat belts pursuant to National Highway Traffic Safety Administration safety regulations. Station wagons and light trucks are identified as car lines.

(34) ''Hatchback'' means a passenger automobile where the conventional luggage compartment, i.e., trunk, is replaced by a cargo area which is open to the passenger compartment and

accessed vertically by a rear door which encompasses the rear window.

(35) ''Pickup Truck'' means a nonpassenger automobile which has a passenger compartment and an open cargo bed.

(36) ''Station Wagon'' means a passenger automobile with an extended roof line to increase cargo or passenger capacity, cargo compartment open to the passenger compartment, a tailgate, and one or more rear seats readily removed or folded to facilitate cargo carrying.

(37) ''Gross Vehicle Weight Rating'' means the manufacturer's gross weight rating for the individual vehicle.

(38) ''Ultimate Consumer'' means the first person who purchases an automobile for purposes other than resale or leases an automobile.

(39) ''Van'' means any light truck having an integral enclosure fully enclosing the driver compartment and load-carrying device, and having no body sections protruding more than 30 inches ahead of the leading edge of the windshield.

(40) ''Base Vehicle'' means the lowest priced version of each body style that makes up a car line.

(41) ''Nonpassenger Automobile'' means an automobile that is not a passenger automobile, as defined by the Secretary of Transportation at 49 CFR 523.5.

(42) ''Four-Wheel-Drive General Utility Vehicle'' means a four-wheel-drive, general purpose automobile capable of off-highway operation that has a wheelbase not more than 110 inches and that has a body shape similar to a 1977 Jeep CJ–5 or CJ–7, or the 1977 Toyota Land Cruiser, as defined by the Secretary of Transportation at 49 CFR 553.4.

(43) ''Test Weight'' means the weight within an inertia weight class which is used in the dynamometer testing of a vehicle, and which is based on its loaded vehicle weight in accordance with the provisions of part 86.

(44) ''Secretary of Energy'' means the Secretary of Energy or his authorized representative.

(45) ''Electric Traction Motor'' means an electrically powered motor which provides tractive energy to the wheels of a vehicle.

(46) ''Energy Storage Device'' means a rechargeable means of storing tractive energy on board a vehicle such as storage batteries or a flywheel.

(47) ''Motor Controller'' means an electronic or electro-mechanical device to convert energy stored in an energy storage device into a form suitable to power the traction motor.

(48) ''Electrical Charging System'' means a device to convert 60Hz alternating electric current, as commonly available in residential electric service in the United States, to a proper form for recharging the energy storage device.

(49) ''Battery Configuration'' means the electrochemical type, voltage, capacity (in Watt-hours at the c/3 rate), and physical characteristics of the battery used as the tractive energy storage device.

(50) ''Drive System'' is determined by the number and location of drive axles (e.g., front wheel drive, rear wheel drive, four wheel drive) and any other feature of the drive system if the Administrator determines that such other features may result in a fuel economy difference.

(51) ''Subconfiguration'' means a unique combination, within a vehicle configuration of equivalent test weight, road-load horsepower, and any other operational characteristics or parameters which the Administrator determines may significantly affect fuel economy within a vehicle configuration.

[49 FR 13841, Apr. 6, 1984, as amended at 49 FR 48049, Dec. 10, 1984]

§600.002–93 Definitions.

(a) As used in this subpart, all terms not defined in this section shall have the meaning given them in the Act:

(1) *Act* means part I of title V of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 1901 *et seq.*).

(2) *Administrator* means the Administrator of the Environmental Protection Agency or his authorized representative.

(3) *Secretary* means the Secretary of Transportation or his authorized representative.

(4) *Automobile* means:

(i) Any four-wheel vehicle propelled by a combustion engine using onboard

fuel, or by an electric motor drawing current from rechargeable storage batteries or other portable energy storage devices (rechargeable using energy from a source off the vehicle such as residential electric service);

(ii) Which is manufactured primarily for use on public streets, roads, or highways (except any vehicle operated on a rail or rails);

(iii) Which is rated at not more than 8,500 pounds gross vehicle weight, which has a curb weight of not more than 6,000 pounds, and which has a basic vehicle frontal area of not more than 45 square feet; or

(iv) Is a type of vehicle which the Secretary determines is substantially used for the same purposes.

(5) *Passenger automobile* means any automobile which the Secretary determines is manufactured primarily for use in the transportation of no more than 10 individuals.

(6) *Model year* means the manufacturer's annual production period (as determined by the Administrator) which includes January 1 of such calendar year. If a manufacturer has no annual production period, the term ''model year'' means the calendar year.

(7) *Federal emission test procedure* refers to the dynamometer driving schedule, dynamometer procedure, and sampling and analytical procedures described in part 86 for the respective model year, which are used to derive city fuel economy data.

(8) *Federal highway fuel economy test procedure* refers to the dynamometer driving schedule, dynamometer procedure, and sampling and analytical procedures described in subpart B of this part and which are used to derive highway fuel economy data.

(9) *Fuel* means:

(i) Gasoline and diesel fuel for gasoline- or diesel-powered automobiles; or

(ii) Electrical energy for electrically powered automobiles; or

(iii) Alcohol for alcohol-powered automobiles; or

(iv) Natural gas for natural gas-powered automobiles.

(10) *Fuel economy* means:

(i) The average number of miles traveled by an automobile or group of automobiles per volume of fuel consumed as computed in § 600.113 or § 600.207; or

(ii) The equivalent petroleum-based fuel economy for an electrically powered automobile as determined by the Secretary of Energy.

(11) *City fuel economy* means the fuel economy determined by operating a vehicle (or vehicles) over the driving schedule in the Federal emission test procedure.

(12) *Highway fuel economy* means the fuel economy determined by operating a vehicle (or vehicles) over the driving schedule in the Federal highway fuel economy test procedure.

(13) *Combined fuel economy* means:

(i) The fuel economy value determined for a vehicle (or vehicles) by harmonically averaging the city and highway fuel economy values, weighted 0.55 and 0.45 respectively.

(ii) For electric vehicles, the term means the equivalent petroleum-based fuel economy value as determined by the calculation procedure promulgated by the Secretary of Energy.

(14) *Average fuel economy* means the unique fuel economy value as computed under § 600.510 for a specific class of automobiles produced by a manufacturer that is subject to average fuel economy standards.

(15) *Certification vehicle* means a vehicle which is selected under § 86.084–24(b)(1) of this chapter and used to determine compliance under § 86.084–30 of this chapter for issuance of an original certificate of conformity.

(16) *Fuel economy data vehicle* means a vehicle used for the purpose of determining fuel economy which is not a certification vehicle.

(17) *Label* means a sticker that contains fuel economy information and is affixed to new automobiles in accordance with subpart D of this part.

(18) *Dealer* means a person who resides or is located in the United States, any territory of the United States, or the District of Columbia and who is engaged in the sale or distribution of new automobiles to the ultimate purchaser.

(19) *Model type* means a unique combination of car line, basic engine, and transmission class.

(20) *Car line* means a name denoting a group of vehicles within a make or car

division which has a degree of commonality in construction (e.g., body, chassis). Car line does not consider any level of decor or opulence and is not generally distinguished by characteristics as roof line, number of doors, seats, or windows, except for station wagons or light-duty trucks. Station wagons and light-duty trucks are considered to be different car lines than passenger cars.

(21) *Basic engine* means a unique combination of manufacturer, engine displacement, number of cylinders, fuel system (as distinguished by number of carburetor barrels or use of fuel injection), catalyst usage, and other engine and emission control system characteristics specified by the Administrator. For electric vehicles, basic engine means a unique combination of manufacturer and electric traction motor, motor controller, battery configuration, electrical charging system, energy storage device, and other components as specified by the Administrator.

(22) *Transmission class* means a group of transmissions having the following common features: Basic transmission type (manual, automatic, or semi-automatic); number of forward gears used in fuel economy testing (e.g., manual four-speed, three-speed automatic, two-speed semi-automatic); drive system (e.g., front wheel drive, rear wheel drive; four wheel drive), type of overdrive, if applicable (e.g., final gear ratio less than 1.00, separate overdrive unit); torque converter type, if applicable (e.g., non-lockup, lockup, variable ratio); and other transmission characteristics that may be determined to be significant by the Administrator.

(23) *Base level* means a unique combination of basic engine, inertia weight class and transmission class.

(24) *Vehicle configuration* means a unique combination of basic engine, engine code, inertia weight class, transmission configuration, and axle ratio within a base level.

(25) *Engine code* means a unique combination, within an engine-system combination (as defined in part 86 of this chapter), of displacement, carburetor (or fuel injection) calibration, distributor calibration, choke calibration, auxiliary emission control devices, and other engine and emission control system components specified by the Administrator. For electric vehicles, engine code means a unique combination of manufacturer, electric traction motor, motor configuration, motor controller, and energy storage device.

(26) *Inertia weight class* means the class, which is a group of test weights, into which a vehicle is grouped based on its loaded vehicle weight in accordance with the provisions of part 86 of this chapter.

(27) *Transmission configuration* means the Administrator may further subdivide within a transmission class if the Administrator determines that sufficient fuel economy differences exist. Features such as gear ratios, torque converter multiplication ratio, stall speed, shift calibration, or shift speed may be used to further distinguish characteristics within a transmission class.

(28) *Axle ratio* means the number of times the input shaft to the differential (or equivalent) turns for each turn of the drive wheels.

(29) *Auxiliary emission control device (AECD)* means an element of design as defined in part 86 of this chapter.

(30) *Rounded* means a number shortened to the specific number of decimal places in accordance with the ''Round Off Method'' specified in ASTM E 29 (Incorporated by reference as specified in § 600.011–93).

(31) *Calibration* means the set of specifications, including tolerances, unique to a particular design, version of application of a component, or component assembly capable of functionally describing its operation over its working range.

(32) *Production volume* means, for a domestic manufacturer, the number of vehicle units domestically produced in a particular model year but not exported, and for a foreign manufacturer, means the number of vehicle units of a particular model imported into the United States.

(33) *Body style* means a level of commonality in vehicle construction as defined by number of doors and roof treatment (e.g., sedan, convertible, fastback, hatchback) and number of seats (i.e., front, second, or third seat)

requiring seat belts pursuant to National Highway Traffic Safety Administration safety regulations in 49 CFR part 571. Station wagons and light trucks are identified as car lines.

(34) *Hatchback* means a passenger automobile where the conventional luggage compartment, i.e., trunk, is replaced by a cargo area which is open to the passenger compartment and accessed vertically by a rear door which encompasses the rear window.

(35) *Pickup truck* means a nonpassenger automobile which has a passenger compartment and an open cargo bed.

(36) *Station wagon* means a passenger automobile with an extended roof line to increase cargo or passenger capacity, cargo compartment open to the passenger compartment, a tailgate, and one or more rear seats readily removed or folded to facilitate cargo carrying.

(37) *Gross vehicle weight rating* means the manufacturer's gross weight rating for the individual vehicle.

(38) *Ultimate consumer* means the first person who purchases an automobile for purposes other than resale or leases an automobile.

(39) *Van* means any light truck having an integral enclosure fully enclosing the driver compartment and load carrying device, and having no body sections protruding more than 30 inches ahead of the leading edge of the windshield.

(40) *Base vehicle* means the lowest priced version of each body style that makes up a car line.

(41) *Nonpassenger automobile* means an automobile that is not a passenger automobile, as defined by the Secretary of Transportation at 49 CFR 523.5.

(42) *Four-wheel-drive general utility vehicle* means a four-wheel-drive, general purpose automobile capable of off-highway operation that has a wheelbase not more than 110 inches and that has a body shape similar to a 1977 Jeep CJ–5 or CJ–7, or the 1977 Toyota Land Cruiser, as defined by the Secretary of Transportation at 49 CFR 553.4.

(43) *Test weight* means the weight within an inertia weight class which is used in the dynamometer testing of a vehicle, and which is based on its loaded vehicle weight in accordance with the provisions of part 86 of this chapter.

(44) *Secretary of Energy* means the Secretary of Energy or his authorized representative.

(45) *Electric traction motor* means an electrically powered motor which provides tractive energy to the wheels of a vehicle.

(46) *Energy storage device* means a rechargeable means of storing tractive energy on board a vehicle such as storage batteries or a flywheel.

(47) *Motor controller* means an electronic or electro-mechanical device to convert energy stored in an energy storage device into a form suitable to power the traction motor.

(48) *Electrical charging system* means a device to convert 60Hz alternating electric current, as commonly available in residential electric service in the United States, to a proper form for recharging the energy storage device.

(49) *Battery configuration* means the electrochemical type, voltage, capacity (in Watt-hours at the c/3 rate), and physical characteristics of the battery used as the tractive energy device.

(50) *Drive system* is determined by the number and location of drive axles (e.g., front wheel drive, rear wheel drive, four wheel drive) and any other feature of the drive system if the Administrator determines that such other features may result in a fuel economy difference.

(51) *Subconfiguration* means a unique combination within a vehicle configuration of equivalent test weight, road-load horsepower, and any other operational characteristics or parameters which the Administrator determines may significantly affect fuel economy within a vehicle configuration.

(52) *Alcohol* means a mixture containing 85 percent or more by volume methanol, ethanol, or other alcohols, in any combination.

(53) *Alcohol-fueled automobile* means an automobile designed to operate exclusively on alcohol.

(54) *Alcohol dual fuel automobile* means an automobile:

(i) Which is designed to operate on alcohol and on gasoline or diesel fuel;

(ii) Which provides equal or greater energy efficiency as calculated in accordance with §600.510(g)(1) while operating on alcohol as it does while operating on gasoline or diesel fuel;

(iii) Which, for model years 1993 through 1995, provides equal or superior energy efficiency, as determined in §600.510(g)(2) while operating on a mixture of alcohol and gasoline or diesel fuel containing 50 percent gasoline or diesel fuel as it does while operating on gasoline or diesel fuel; and

(iv) Which, in the case of passenger automobiles, meets or exceeds the minimum driving range established by the Department of Transportation in 49 CFR part 538.

(55) ''Natural gas-fueled automobile'' means an automobile designed to operate exclusively on natural gas.

(56) ''Natural gas dual fuel automobile'' means an automobile:

(i) Which is designed to operate on natural gas and on gasoline or diesel fuel;

(ii) Which provides equal or greater energy efficiency as calculated in §600.510(g)(1) while operating on natural gas as it does while operating on gasoline or diesel fuel; and

(iii) Which, in the case of passenger automobiles, meets or exceeds the minimum driving range established by the Department of Transportation in 49 CFR part 538.

(b) [Reserved]

[59 FR 39650, Aug. 3, 1994]

§600.003–77 Abbreviations.

(a) The abbreviations used in this subpart have the same meaning as those in 40 CFR part 86, with the addition of the following: ''MPG'' means miles per gallon. GVWR—Gross Vehicle Weight Rating.

[41 FR 38685, Sept. 10, 1976, as amended at 41 FR 49759, Nov. 10, 1976]

§600.004–77 Section numbering, construction.

(a) The model year of initial applicability is indicated by the section number. The two digits following the hyphen designate the first model year for which a section is effective. A section is effective until superseded.

EXAMPLE: Section 600.111–78 applies to the 1978 and subsequent model years until superseded. If a §600.111–81 is promulgated, it would take effect beginning with the 1981 model year; §600.111–78 would apply to model years 1978 through 1980.

(b) A section reference without a model year suffix refers to the section applicable for the appropriate model year.

[59 FR 39651, Aug. 3, 1994]

§600.005–81 Maintenance of records and rights of entry.

The provisions of this section are applicable to all fuel economy data vehicles. Certification vehicles are required to meet the provisions of §86.007–77:

(a) The manufacturer of any new motor vehicle subject to any of the standards or procedures prescribed in this part shall establish, maintain, and retain the following adequately organized and indexed records:

(1) *General records.* (i) Identification and description of all vehicles for which data are submitted to meet the requirements of this part.

(ii) A description of all procedures used to test each vehicle.

(iii) A copy of the information required to be submitted under §600.006 fulfills the requirements of paragraph (a)(1)(i) of this section.

(2) *Individual records.* (i) A brief history of each vehicle for which data are submitted to meet the requirements of this part, in the form of a separate booklet or other document for each separate vehicles, in which must be recorded:

(A) The steps taken to ensure that the vehicle with respect to its engine, drive train, fuel system, emission control system components, exhaust after treatment device, vehicle weight, or any other device or component, as applicable, will be representative of production vehicles. In the case of electric vehicles, the manufacturer should describe the steps taken to ensure that the vehicle with respect to its electic traction motor, motor controller, battery configuration, or any other device or component, as applicable, will be representative of production vehicles.

(B) A complete record of all emission tests performed under part 86, all fuel economy tests performed under part

600 (except tests actually performed by EPA personnel), and all electic vehicle tests performed according to procedures promulgated by DOE, including all individual worksheets and other documentation relating to each such test or exact copies thereof; the date, time, purpose, and location of each test; the number of miles accumulated on the vehicle when the tests began and ended; and the names of supervisory personnel responsible for the conduct of the tests.

(C) A description of mileage accumulated since selection of buildup of such vehicles including the date and time of each mileage accumulation listing both the mileage accumulated and the name of each driver, or each operator of the automatic mileage accumulation device, if applicable. Additionally, a description of mileage accumulated prior to selection or buildup of such vechicle must be maintained in such detail as is available.

(D) If used, the record of any devices employed to record the speed of mileage, or both, of the test vehicle in relationship to time.

(E) A record and description of all maintenance and other servicing performed, within 2,000 miles prior to fuel economy testing under this part, giving the date and time of the maintenance or service, the reason for it, the person authorizing it, and the names of supervisory personnel responsible for the conduct of the maintenance or service. A copy of the maintenance information to be submitted under § 600,006–81 fulfills the requirements of this paragraph.

(F) A brief description of any significant events affecting the vehicle during any time of the period covered by the history not described in an entry under one of the previous headings including such extraordinary events as vehicle accidents or driver speeding citations or warnings.

(3) The manufacturer shall retain all records required under this subpart for a period of five years after the end of the model year to which they relate. Records may be retained as hard copy or reduced to microfilm, punch cards, etc., depending on the record retention procedures of the manufacturer, provided that in every case all the information contained in hard copy shall be retained.

(b)(1) Any manufacturer who has supplied fuel economy data to meet the requirements of this part shall admit any EPA Enforcement Officer during operating hours upon presentation of credentials at any of the following:

(i) Any facility where any fuel economy tests from which data are submitted or any procedures or activities connected with these tests are performed.

(ii) Any facility where any new motor vehicle which is being, was, or is to be tested is present.

(iii) Any facility where any construction process used in the modification or buildup of a vehicle into a fuel economy data vehicle is taking place or has taken place.

(iv) Any facility where any record or other document relating to any of the above is located.

(2) Upon admission to any facility referred to in paragraph (b)(1) of this section, the manufacturer shall allow any EPA Enforcement Officer:

(i) To inspect and monitor any part or aspect of procedures, activities, and testing facilities, including, but not limited to, monitoring vehicle preconditioning; emission and fuel economy tests and mileage accumulation; maintenance; vehicle soak and storage procedures; and to verify correlation of calibration of test equipment;

(ii) To inspect and make copies of any required records, designs, or other documents; and

(iii) To inspect and photograph any part or aspect of any fuel economy vehicle and any components to be used in the construction thereof.

(3) Any EPA Enforcement Officer will be furnished, by those in charge of facility being inspected, with such reasonable assistance as may be required to help discharge any function listed in this paragraph (b). Each manufacturer is required to have those in charge of the facility furnish such reasonable assistance without charge to EPA whether or not the manufacturer controls the facility.

(4) The duty to admit any EPA Enforcement Officer shall be applicable whether or not the manufacturer owns or controls the facility in question and

is applicable to both domestic and foreign manufacturers and facilities. An EPA Enforcement Officer will not attempt to make any inspections which the officer has been informed are in contravention of any law. However, if local law makes it impossible for the EPA Enforcement Officer to verify or to ensure the accuracy of data generated at a facility such that no informed judgment can properly be made as to the accuracy or reliability of data generated by or obtained for the facility, then a vehicle or data from that vehicle shall not be accepted for use in subpart C or F of this part (unless the Administrator is otherwise convinced of the accuracy and reliability of such data).

(5) For purposes of this paragraph (b):

(i) ''Presentation of credentials'' means display of the document designating a person as an EPA Enforcement Officer.

(ii) Where vehicle, component, or engine storage areas or facilities are concerned, ''operating hours'' shall mean all times during which personnel other than custodial personnel are at work in the vicinity of the area or facility and have access to it.

(iii) For facilities or areas other than those covered by paragraph (b)(5)(ii) of this section, the term, ''operating hours'' will mean all times during which an assembly line is in operation or all times during which testing, maintenance, mileage accumulation, production or compilation of records, or any other procedure or activity related to fuel economy testing, or to vehicle manufacturer or assembly, is being carried out in a facility.

(iv) ''Reasonable assistance'' means providing timely and unobstructed access to and opportunity for the copying of any record, book, paper, or document required to be maintained under this section and providing timely and unobstructed access to any motor vehicle, testing facility, or testing equipment.

(v) Any entry without 24 hours prior written or oral notification to the affected manufacturer shall be authorized in writing by the Assistant Administrator for Enforcement.

[45 FR 49259, July 24, 1980]

§600.006–86 Data and information requirements for fuel economy vehicles.

(a) For certification vehicles with less than 10,000 miles, the requirements of this section are considered to have been met except as noted in paragraph (c) of this section.

(b)(1) The manufacturer shall submit the following information for each fuel economy data vehicle:

(i) A description of the vehicle, exhaust emission test results, applicable deterioration factors, and adjusted exhaust emission levels.

(ii) A statement of the origin of the vehicle including total mileage accumulation, and modifications (if any) from the vehicle configuration in which the mileage was accumulated. (For modifications requiring advance approval by the Administrator, the name of the Administrator's representative approving the modification and date of approval are required.) If the vehicle was previously used for testing for compliance with part 86 of this chapter or previously accepted by the Administrator as a fuel economy data vehicle in a different configuration, the requirements of this paragraph may be satisfied by reference to the vehicle number and previous configuration.

(iii) A statement that the fuel economy data vehicle, with respect to which data are submitted:

(A) Has been tested in accordance with applicable test procedures,

(B) Is, to the best of the manufacturer's knowledge, representative of the vehicle configuration listed, and

(C) Is in compliance with the applicable exhaust emission standards.

(2) The manufacturer shall retain the following information for each fuel economy data vehicle, and make it available to the Administrator upon request:

(i) A description of all maintenance to engine, emission control system, or fuel system components performed within 2,000 miles prior to fuel economy testing.

(ii) In the case of electric vehicles, the manufacturer should provide a description of all maintenance to electric

motor, motor controller, battery configuration, or other components performed within 2,000 miles prior to fuel economy testing.

(iii) A copy of calibrations for engine, fuel system, and emission control devices, showing the calibration of the actual components on the test vehicle as well as the design tolerances.

(iv) In the case of electric vehicles, the manufacturer should provide a copy of calibrations for the electric motor, motor controller, battery configuration, or other components on the test vehicle as well as the design tolerances.

(v) If calibrations for components in paragraph (b) of this section were submitted previously as part of the description of another vehicle or configuration, the original submittal may be referenced.

(c) The manufacturer shall submit the following fuel economy data:

(1) For vehicles tested to meet the requirements of part 86 (other than those chosen in accordance with § 86.084–24 (c) and (h)), the city and highway fuel economy results from all tests on that vehicle, and the test results adjusted in accordance with paragraph (g) of this section.

(2) For each fuel economy data vehicle, all individual test results (excluding results of invalid and zero mile tests) and, if the data are used in fuel economy label calculations, the test results adjusted in accordance with paragraph (g) of this section.

(d) The manufacturer shall submit an indication of the intended purpose of the data (e.g., data required by the general labeling program or voluntarily submitted for specific labeling).

(e) In lieu of submitting actual data from a test vehicle, a manufacturer may provide fuel economy values derived from an analytical expression, e.g., regression analysis. In order for fuel economy values derived from analytical methods to be accepted, the expression (form and coefficients) must have been approved by the Administrator.

(f) If, in conducting tests required or authorized by this part, the manufacturer utilizes procedures, equipment, or facilities not described in the Application for Certification required in § 86.084–21, the manufacturer shall submit to the Administrator a description of such procedures, equipment, and facilities.

(g)(1) The manufacturer shall adjust all test data used for fuel economy label calculations generated by vehicles with engine-drive system combinations with more than 6,200 miles by using the following equation:

$$FE_{4,000mi} = FE_T\,[0.979 + 5.25\times10^{-6}(mi)]^{-1}$$

Where:

$FE_{4,000mi}$=Fuel economy data adjusted to 4,000-mile test point rounded to the nearest 0.1 mpg.

FE_T=Tested fuel economy value rounded to the nearest 0.1 mpg.

mi=System miles accumulated at the start of the test rounded to the nearest whole mile.

(2) For vehicles with 6,200 miles (10,000 kilometers) or less accumulated, the manufacturer is not required to adjust the data.

[49 FR 13848, Apr. 6, 1984, as amended at 50 FR 27185, July 1, 1985]

§ 600.006–87 Data and information requirements for fuel economy vehicles.

(a) For certification vehicles with less than 10,000 miles, the requirements of this section are considered to have been met except as noted in paragraph (c) of this section.

(b)(1) The manufacturer shall submit the following information for each fuel economy data vehicle:

(i) A description of the vehicle, exhaust emission test results, applicable deterioration factors, and adjusted exhaust emission levels.

(ii) A statement of the origin of the vehicle including total mileage accumulation, and modifications (if any) from the vehicle configuration in which the mileage was accumulated. (For modifications requiring advance approval by the Administrator, the name of the Administrator's representative approving the modification and date of approval are required.) If the vehicle was previously used for testing for compliance with part 86 of this chapter or previously accepted by the Administrator as a fuel economy data vehicle in a different configuration, the requirements of this paragraph may be

satisfied by reference to the vehicle number and previous configuration.

(iii) A statement that the fuel economy data vehicle, with respect to which data are submitted:

(A) Has been tested in accordance with applicable test procedures,

(B) Is, to the best of the manufacturer's knowledge, representative of the vehicle configuration listed, and

(C) Is in compliance with applicable exhaust emission standards.

(2) The manufacturer shall retain the following information for each fuel economy data vehicle, and make it available to the Administrator upon request:

(i) A description of all maintenance to engine, emission control system, or fuel system components performed within 2,000 miles prior to fuel economy testing.

(ii) In the case of electric vehicles, a description of all maintenance to electric motor, motor controller, battery configuration, or other components performed within 2,000 miles prior to fuel economy testing.

(iii) A copy of calibrations for engine, fuel system, and emission control devices, showing the calibration of the actual components on the test vehicle as well as the design tolerances.

(iv) In the case of electric vehicles, a copy of calibrations for the electric motor, motor controller, battery configuration, or other components on the test vehicle as well as the design tolerances.

(v) If calibrations for components specified in paragraph (b)(2) (iii) or (iv) of this section were submitted previously as part of the description of another vehicle or configuration, the original submittal may be referenced.

(c) The manufacturer shall submit the following fuel economy data:

(1) For vehicles tested to meet the requirements of part 86 (other than those chosen in accordance with § 86.085–24 (c) and (h)), the city and highway fuel economy results from all tests on that vehicle, and the test results adjusted in accordance with paragraph (g) of this section.

(2) For each fuel economy data vehicle, all individual test results (excluding results of invalid and zero mile tests) and these test results adjusted in accordance with paragraph (g) of this section.

(d) The manufacturer shall submit an indication of the intended purpose of the data (e.g., data required by the general labeling program or voluntarily submitted for specific labeling).

(e) In lieu of submitting actual data from a test vehicle, a manufacturer may provide fuel economy values derived from an analytical expression, e.g., regression analysis. In order for fuel economy values derived from analytical methods to be accepted, the expression (form and coefficients) must have been approved by the Administrator.

(f) If, in conducting tests required or authorized by this part, the manufacturer utilizes procedures, equipment, or facilities not described in the Application for Certification required in § 86.087–21, the manufacturer shall submit to the Administrator a description of such procedures, equipment, and facilities.

(g)(1) The manufacturer shall adjust all test data used for fuel economy label calculations in subpart D and average fuel economy calculations in subpart F for passenger automobiles within the categories identified in paragraphs (a)(1) and (a)(2) of § 600.510. The test data shall be adjusted in accordance with (g)(3) or (g)(4) as applicable.

(2) The manufacturer shall only adjust the test data used for fuel economy label calculations, in subpart D for light trucks within the categories identified in paragraphs (a)(3) through (a)(6) of § 600.510. The test data shall be adjusted in accordance with (g)(3) or (g)(4) as applicable.

(3) The manufacturer shall adjust all test data generated by vehicles with engine-drive system combinations with more than 6,200 miles by using the following equation:

$$FE_{4,000mi} = FE_T[0.979 + 5.25 \times 10^{-6}\,(mi)]^{-1}$$

Where:

$FE_{4,000mi}$ = Fuel economy data adjusted to 4,000-mile test point rounded to the nearest 0.1 mpg.

FE_T = Tested fuel economy value rounded to the nearest 0.1 mpg.

mi = System miles accumulated at the start of the test rounded to the nearest whole mile.

(4) For vehicles with 6,200 miles or less accumulated, the manufacturer is not required to adjust the data.

[50 FR 27185, July 1, 1985]

§ 600.006–89 Data and information requirements for fuel economy vehicles.

(a) For certification vehicles with less than 10,000 miles, the requirements of this section are considered to have been met except as noted in paragraph (c) of this section.

(b)(1) The manufacturer shall submit the following information for each fuel economy data vehicle:

(i) A description of the vehicle, exhaust emission test results, applicable deterioration factors, adjusted exhaust emission levels, and test fuel property values as specified in § 600.113–93 except as specified in paragraph (h) of this section.

(ii) A statement of the origin of the vehicle including total mileage accumulation, and modification (if any) form the vehicle configuration in which the mileage was accumulated. (For modifications requiring advance approval by the Administrator, the name of the Administrator's representative approving the modification and date of approval are required.) If the vehicle was previously used for testing for compliance with part 86 of this chapter or previously accepted by the Administrator as a fuel economy data vehicle in a different configuration, the requirements of this paragraph may be satisfied by reference to the vehicle number and previous configuration.

(iii) A statement that the fuel economy data vehicle, with respect to which data are submitted:

(A) Has been tested in accordance with applicable test procedures,

(B) Is, to the best of the manufacturer's knowledge, representative of the vehicle configuration listed, and

(C) Is in compliance with applicable exhaust emission standards.

(2) The manufacturer shall retain the following information for each fuel economy data vehicle, and make it available to the Administrator upon request:

(i) A description of all maintenance to engine, emission control system, or fuel system, or fuel system components performed within 2,000 miles prior to fuel economy testing.

(ii) In the case of electric vehicles, a description of all maintenance to electric motor, motor controller, battery configuration, or other components performed within 2,000 miles prior to fuel economy testing.

(iii) A copy of calibrations for engine, fuel system, and emission control devices, showing the calibration of the actual components on the test vehicle as well as the design tolerances.

(iv) In the case of electric vehicles, a copy of calibrations for the electric motor, motor controller, battery configuration, or other components on the test vehicle as well as the design tolerances.

(v) If calibrations for components specified in paragraph (b)(2) (iii) or (iv) of this section were submitted previously as part of the description of another vehicle or configuration, the original submittal may be referenced.

(c) The manufacturer shall submit the following fuel economy data:

(1) For vehicles tested to meet the requirements of part 86 (other than those chosen in accordance with § 86.085–24 (c) and (h)), the city and highway fuel economy results from all tests on that vehicle, and the test results adjusted in accordance with paragraph (g) of this section.

(2) For each fuel economy data vehicle, all individual test results (excluding results of invalid and zero mile tests) and these test results adjusted in accordance with paragraph (g) of this section.

(d) The manufacturer shall submit an indication of the intended purpose of the data (e.g., data required by the general labeling program or voluntarily submitted for specific labeling).

(e) In lieu of submitting actual data from a test vehicle, a manufacturer may provide fuel economy values derived from an analytical expression, e.g., regression analysis. In order for fuel economy values derived from analytical methods to be accepted, the expression (form and coefficients) must have been approved by the Administrator.

(f) If, in conducting tests required or authorized by this part, the manufacturer utilizes procedures, equipment,

or facilities not described in the Application for Certification required in §86.087–21, the manufacturer shall submit to the Administrator a description of such procedures, equipment, and facilities.

(g)(1) The manufacturer shall adjust all test data used for fuel economy label calculations in subpart D and average fuel economy calculations in subpart F for the classes of automobiles within the categories identified in paragraphs (a)(1) through (6) of §600.510. The test data shall be adjusted in accordance with paragraph (g) (3) or (4) as applicable.

(2) [Reserved]

(3) The manufacturer shall adjust all test data generated by vehicles with engine-drive system combinations with more than 6,200 miles by using the following equation:

$$FE_{4,000mi}=FE_T[0.979+5.25\times10^{-6}\,(mi)]^{-1}$$

Where:

$FE_{4,000\ mi}$=Fuel economy data adjusted to 4,000-mile test point rounded to the nearest 0.1 mpg.

FE_T=Tested fuel economy value rounded to the nearest 0.1 mpg.

mi=System miles accumulated at the start of the test rounded to the nearest whole mile.

(4) For vehicles with 6,200 miles or less accumulated, the manufacturer is not required to adjust the data.

(h) For light-duty fuel economy trucks over 6000 lbs GVWR, the manufacturer must submit emissions data generated while using the following test weight basis:

(1) Adjusted Loaded Vehicle Weight (ALVW) as defined in §86.094–2 of this chapter; or

(2) Loaded Vehicle Weight (LVW) as defined in §86.082–2 of this chapter, in which case the Administrator reserves the right to either require the manufacturer to test using ALVW and submit the data or submit the vehicle for testing by the Administrator for emission standards compliance.

[51 FR 37850, Oct. 24, 1986, as amended at 59 FR 39652, Aug. 3, 1994]

§600.007–80 Vehicle acceptability.

(a) All certification vehicles and other vehicles tested to meet the requirements of part 86 (other than those chosen per §86.080–24(c) are considered to have met the requirements of this section.

(b) Any vehicle not meeting the provisions of paragraph (a) must be judged acceptable by the Administrator under this section in order for the test results to be reviewed for use in subpart C or F of this part. The Administrator will judge the acceptability of a fuel economy data vehicle on the basis of the information supplied by the manufacturer under §600.006(b). The criteria to be met are:

(1) A fuel economy data vehicle may have accumulated not more than 10,000 miles. A vehicle will be considered to have met this requirement if the engine and drivetrain have accumulated 10,000 or fewer miles. The components installed for a fuel economy test are not required to be the ones with which the mileage was accumulated, e.g., axles, transmission types, and tire sizes may be changed. The Administrator will determine if vehicle/engine component changes are acceptable.

(2) A vehicle may be tested in different vehicle configurations by change of vehicle components, as specified in paragraph (b)(1) of this section, or by testing in different inertia weight classes. Also, a single vehicle may be tested under different test conditions, i.e., test weight and/or road load horsepower, to generate fuel economy data representing various situations within a vehicle configuration. For purposes of this part, data generated by a single vehicle tested in various test conditions will be treated as if the data were generated by the testing of multiple vehicles.

(3) The mileage on a fuel economy data vehicle must be, to the extent possible, accumulated according to §86.079–26(a)(2).

(4) Each fuel economy data vehicle must meet the same exhaust emission standards as certification vehicles of the respective engine-system combination during the test in which the city fuel economy test results are generated. The deterioration factors established for the respective engine-system combination per §86.079–28 will be used.

(5) The calibration information submitted under § 600.006(b) must be representative of the vehicle configuration for which the fuel economy data were submitted.

(6) Any vehicle tested for fuel economy purposes must be representative of a vehicle which the manufacturer intends to produce under the provisions of a certificate of conformity.

(7) For vehicles imported under § 85.1509 or § 85.1511 (b)(2), (b)(4), (c)(2), (c)(4), or (e)(2) (when applicable) only the following requirements must be met:

(i) For vehicles imported under § 85.1509, a highway fuel economy value must be generated contemporaneously with the emission test used for purposes of demonstrating compliance with § 85.1509. No modifications or adjustments should be made to the vehicles between the highway fuel economy and the FTP emissions test.

(ii) For vehicles imported under § 85.1509 or § 85.1511 (b)(2), (b)(4), (c)(2), (c)(4) or (e)(2) (when applicable) with over 10,000 miles, the equation in § 600.006–86 (g)(1) shall be used as though only 10,000 miles had been accumulated.

(iii) Any required fuel economy testing must take place after any safety modifications are completed for each vehicle as required by regulations of the Department of Transportation.

(iv) Every vehicle imported under § 85.1509 or § 85.1511 (b)(2), (b)(4), (c)(2), (c)(4) or (e)(2) (when applicable) shall be considered a separate type for the purposes of calculating a fuel economy label for a manufacturer's average fuel economy.

(c) If, based on review of the information submitted under § 600.006(b), the Administrator determines that a fuel economy data vehicle meets the requirements of this section, the fuel economy data vehicle will be judged to be acceptable and fuel economy data from that fuel economy data vehicle will be reviewed pursuant to § 600.008.

(d) If, based on the review of the information submitted under § 600.006(b), the Administrator determines that a fuel economy data vehicle does not meet the requirements of this section, the Administrator will reject that fuel economy data vehicle and inform the manufacturer of the rejection in writing.

(e) If, based on a review of the emission data for a fuel economy data vehicle, submitted under § 600.006(b), or emission data generated by a vehicle tested under § 600.008(e), the Administrator finds an indication of non-compliance with section 202 of the Clean Air Act, 42 U.S.C. 1857 et seq. of the regulation thereunder, he may take such investigative actions as are appropriate to determine to what extent emission non-compliance actually exists.

(1) The Administrator may, under the provisions of § 86.079–37(a) request the manufacturer to submit production vehicles of the configuration(s) specified by the Administrator for testing to determine to what extent emission non-compliance of a production vehicle configuration or of a group of production vehicle configurations may actually exist.

(2) If the Administrator determines, as a result of his investigation, that substantial emission non-compliance is exhibited by a production vehicle configuration or group of production vehicle configurations, he may proceed with respect to the vehicle configuration(s) as provided under section 206(b)(2) or section 207(c)(1), as applicable of the Clean Air Act, 42 U.S.C. 1857 et seq.

(f) All vehicles used to generate fuel economy data, and for which emission standards apply, must be covered by a certificate of conformity under part 86 of this chapter before:

(1) The data may be used in the calculation of any approved general or specific label value, or

(2) The data will be used in any calculations under subpart F, except that vehicles imported under §§ 85.1509 and 85.1511 need not be covered by a certificate of conformity.

[42 FR 45657, Sept. 12, 1977, as amended at 43 FR 52928, Nov. 14, 1978; 49 FR 48149, Dec. 10, 1984; 52 FR 36164, Sept. 25, 1987; 59 FR 39652, Aug. 3, 1994]

§ 600.008–77 Review of fuel economy data, testing by the Administrator.

(a) Fuel economy data must be judged acceptable by the Administrator in order for the test results to be

used for the purposes of subpart C or F of this part. The Administrator will evaluate the acceptability of the fuel economy data from either a fuel economy data vehicle or a certification vehicle on the basis of the data submitted under §600.006 or test data generated by the Administrator, as applicable, in accordance with good engineering practice.

(b) If, in the Administrator's judgment, the city and highway fuel economy results (or the harmonic averages, as applicable, if more than one test were conducted) for a fuel economy data vehicle, or for a certification vehicle, are reasonable and representative, the Administrator will accept the fuel economy data (or harmonic averages, as applicable, of the city and highway fuel economy data if more than one test was conducted) for use in subpart C or F of this part. In making this determination, the Administrator will, when possible, compare the results of a test vehicle to those of other similar test vehicles.

(c) If, in the Administrator's judgment, the city and highway fuel economy results (or the harmonic averages if more than one test were conducted) for a fuel economy data vehicle or for a certification vehicle are not reasonable or representative, the Administrator will notify the manufacturer in writing of his finding and require the manufacturer to submit the test vehicle(s) in question, at a place he may designate, for the purpose of fuel economy testing.

(d) The Administrator may require that any fuel economy data vehicle or certification vehicle be submitted, at a place he may designate, for the purpose of confirmation of fuel economy testing.

(e) For any fuel economy data vehicle that the Administrator has required to be submitted, at a place he may designate for the purpose of fuel economy testing, and for any certification vehicle, the Administrator will follow this procedure:

(1) The manufacturer's data (or harmonically averaged data if more than one test was conducted) will be compared with the results of the Administrator's test.

(2) If, in the Administrator's judgment, the comparison in paragraph (e)(1) of this section indicates a disparity in the data, the Administrator will repeat the city test or the highway test or both as applicable.

(i) The manufacturer's average test results and the results of the Administrator's first test will be compared with the results of the Administrator's second test as in paragraph (e)(1) of this section.

(ii) If, in the Administrator's judgment, both comparisons in (e)(2)(i) of this section, indicate a disparity in the data, the Administrator will repeat the city fuel economy test or highway fuel economy test or both as applicable until:

(A) In the Administrator's judgment no disparity in the data is indicated by comparison of two tests by the Administrator or by comparison of the manufacturer's average test results and a test by the Administrator, or

(B) Four city tests or four highway tests or both, as applicable, are conducted by the Administrator in which a disparity in the data is indicated when compared as in paragraph (e)(2) of this section.

(3) If there is, in the Administrator's judgment, no disparity indicated by comparison of manufacturer's average test results with a test by the Administrator, the test values generated by the Administrator will be used to represent the vehicle.

(4) If there is, in the Administrator's judgment, no disparity indicated by comparison of two tests by the Administrator, the harmonic averages of the city and highway fuel economy results from those tests will be used to represent the vehicle.

(5) If the situation in paragraph (e)(2)(ii)(B) of this section occurs, the Administrator will notify the manufacturer, in writing, that the Administrator rejects that fuel economy data vehicle.

(f) The fuel economy data determined by the Administrator under paragraph (e) (3) or (4) of this section, together with all other fuel economy data submitted for that vehicle under §600.006 (c) or (e) will be evaluated for reasonableness and representativeness per paragraph (b) of this section. The fuel

economy data which are determined to best meet the criteria of paragraph (b) of this section will be accepted for use in subpart C or F of this part.

(g) If, based on a review of the fuel economy data generated by testing under paragraph (e) of this section, the Administrator determines that an unacceptable level of correlation exists between fuel economy data generated by a manufacturer and fuel economy data generated by the Administrator, he may reject all fuel economy data submitted by the manufacturer until the cause of the discrepancy is determined and the validity of the data is established by the manufacturer.

(h)(1) If, based on the results of an inspection conducted under § 600.005(b) or any other information, the Administrator has reason to believe that the manufacturer has not followed proper testing procedures or that the testing equipment is faulty or improperly calibrated, or if records do not exist that will enable him to make a finding of proper testing, the Administrator may notify the manufacturer in writing of his finding and require the manufacturer to:

(i) Submit the test vehicle(s) upon which the data are based or additional test vehicle(s) at a place he may designate for the purpose of fuel economy testing.

(ii) Conduct such additional fuel economy testing as may be required to demonstrate that prior fuel economy test data are reasonable and representative.

(2) Previous acceptance by the Administrator of any fuel economy test data submitted by the manufacturer shall not limit the Administrator's right to require additional testing under paragraph (h)(1) of this section.

(3) If, based on tests required under paragraph (h)(1) of this section, the Administrator determines that any fuel economy data submitted by the manufacturer and used to calculate the manufacturer's fuel economy average was unrepresentative, the Administrator may recalculate the manufacturer's fuel economy average based on fuel economy data that he deems representative.

(4) A manufacturer may request a hearing as provided in § 600.009 if the Administrator decides to recalculate the manufacturer's average pursuant to determinations made relative to this section.

[41 FR 38685, Sept. 10, 1976, as amended at 41 FR 49760, Nov. 10, 1976]

§ 600.009–85 Hearing on acceptance of test data.

(a)(1) If the Administrator rejects the following:

(i) The use of a manufacturer's fuel economy data vehicle, in accordance with § 600.008 (e) or (g), or

(ii) The use of fuel economy data, in accordance with § 600.008 (c), or (f), or

(iii) The determination of a vehicle configuration, in accordance with § 600.206(a), or

(iv) The identification of a car line, in accordance with § 600.002(a)(20), or

(v) The fuel economy label values determined by the manufacturer under § 600.312(a), then

(2)(i) The manufacturer may, within 30 days following receipt of notification of rejection, request a hearing on the Administrator's decision.

(ii) The request must be in writing, signed by an authorized representative of the manufacturer, and include a statement specifying the manufacturer's objections to the Administrator's determinations, and data in support of such objection.

(iii) If, after the review of the request and supporting data, the Administrator finds that the request raises a substantial factual issue(s), the Administrator shall provide the manufacturer with an opportunity to request a hearing in accordance with the provisions of this section with respect to such issue(s).

(b)(1) After granting a request for a hearing under paragraph (a) of this section the Administrator will designate a Presiding Officer for the hearing.

(2) The General Counsel will represent the Environmental Protection Agency in any hearing under this section.

(3) If a time and place for the hearing has not been fixed by the Administrator under paragraph (a) of this section the hearing will be held as soon as practicable at a time and place fixed by the Administrator or by the Presiding Officer.

(c)(1) Upon his appointment pursuant to paragraph (a) of this section, the Presiding Officer shall establish a hearing file. The file consists of the notice issued by the Administrator under paragraph (a) of this section together with any accompanying material, the request for a hearing and the supporting data submitted therewith and correspondence and other data material to the hearing.

(2) The hearing file will be available for inspection by the applicant at the office of the Presiding Officer.

(d) A manufacturer may appear in person, or may be represented by counsel or by any other duly authorized representative.

(e)(1) The Presiding Officer upon the request of any party, or in his discretion, may arrange for a prehearing conference at a time and place specified by the Presiding Officer to consider the following:

(i) Simplification and clarification of the issue;

(ii) Stipulations, admissions of fact, and the introduction of documents;

(iii) Limitation of the number of expert witnesses;

(iv) Possibility of agreement disposing of all or any of the issues in dispute;

(v) Such other matters as may aid in the disposition of the hearing, including such additional tests as may be agreed upon by the parties.

(2) The results of the conference shall be reduced to writing by the Presiding Officer and made part of the record.

(f)(1) Hearings shall be conducted by the Presiding Officer in an informal but orderly and expeditious manner. The parties may offer oral or written evidence, subject to the exclusion by the Presiding Officer of irrelevant, immaterial and repetitious evidence.

(2) Witnesses will not be required to testify under oath. However, the Presiding Officer shall call to the attention of witnesses that their statements may be subject to the provisions of 19 U.S.C. 1001 which imposes penalties for knowingly making false statements or representations, or using false documents in any matter within the jurisdiction of any department or agency of the United States.

(3) Any witnesses may be examined or cross-examined by the Presiding Officer, the parties, or their representatives.

(4) Hearings shall be reported verbatim. Copies of transcripts of proceedings may be purchased by the applicant from the reporter.

(5) All written statements, charts, tabulations, and similar data offered in evidence at the hearing shall, upon a showing satisfactory to the Presiding Officer of their authority, relevancy, and materiality, be received in evidence and shall constitute a part of the record.

(6) Oral argument may be permitted in the discretion of the Presiding Officer and will be reported as part of the record unless otherwise ordered.

(g)(1) The Presiding Officer will make an initial decision which shall include written findings and conclusions and the reasons or basis therefore on all material issues of fact, law or discretion presented on the record. The findings, conclusions, and written decisions shall be provided to the parties and made a part of the record. The initial decision shall become the decision of the Administrator without further proceedings unless there is an appeal to the Administrator or motion for review by the Administrator within 20 days of the date the initial decision was filed.

(2) On appeal from or review of the initial decision the Administrator will have all the powers which he would have in making the initial decision including the discretion to require or allow briefs, oral argument, the taking of additional evidence or the remanding to the Presiding Officer for additional proceedings. The decision by the Administration will include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law or discretion presented on the appeal or considered in the review.

(h) A manufacturer's use of any fuel economy data which the manufacturer challenges pursuant to this section shall not constitute final acceptance by the manufacturer nor prejudice the

manufacturer in the exercise of any appeal pursuant to this section challenging such fuel economy data.

[49 FR 13844, Apr. 6, 1984; 49 FR 48149, Dec. 10, 1984]

§ 600.010–86 Vehicle test requirements and minimum data requirements.

(a) For each certification vehicle defined in this part, and for each vehicle tested according to the emission test procedures in part 86 for addition of a model after certification § 86.079–32 or, approval of a running change (§§ 86.079–33 and 86.082–34):

(1) The manufacturer shall generate city fuel economy data by testing according to the applicable procedures.

(2) The manufacturer shall generate highway fuel economy data by:

(i) Testing according to applicable procedures, or

(ii) Using an analytical technique, as described in § 600.006(e).

(3) The data generated in paragraphs (a) (1) and (2) of this section, shall be submitted to the Administrator in combination with other data for the vehicle required to be submitted in part 86.

(b) For each fuel economy data vehicle:

(1) The manufacturer shall generate city fuel economy data and highway fuel economy data by:

(i) Testing according to applicable procedures, or

(ii) Use of an analytical technique as described in § 600.006(e), in addition to testing (e.g., city fuel economy data by testing, highway fuel economy data by analytical technique).

(2) The data generated shall be submitted to the Administrator according to the procedures in § 600.006.

(c) *Minimum data requirements for labeling.* (1) In order to establish fuel economy label values under § 600.306, the manufacturer shall use only test data accepted in accordance with § 600.008 (b) and (f) and meeting the minimum coverage of:

(i) Data required for emission certification under §§ 86.084–24, 86.079–32, 86.079–33, and 86.082–34,

(ii) Data from the highest projected model year sales subconfiguration within the highest projected model year sales configuration for each base level, and

(iii) For additional model types established under §600.207(a)(2), data from each subconfiguration included within the model type.

(2) For the purpose of recalculating fuel economy label values as required under §600.314(b), the manufacturer shall submit data required under § 600.507.

(d) *Minimum data requirements for the manufacturer's average fuel economy.* For the purpose of calculating the manufacturer's average fuel economy under § 600.510, the manufacturer shall submit data representing at least 90 percent of the manufacturer's actual model year production, by configuration, for each category identified for calculation under § 600.510(a).

[49 FR 13848, Apr. 6, 1984]

§ 600.011–93 Reference materials.

(a) *Incorporation by reference.* The documents in paragraph (b) of this section have been incorporated by reference. The incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be inspected at USEPA, OAR, 401 M Street, SW., Washington DC 20460, or at the Office of the Federal Register, 800 N. Capitol Street, NW., suite 700, Washington, DC.

(b) The following paragraphs and tables set forth the material that has been incorporated by reference in this part.

(1) *ASTM material.* The following table sets forth material from the American Society for Testing and Materials which has been incorporated by reference. The first column lists the number and name of the material. The second column lists the section(s) of this part, other than § 600.011, in which the matter is referenced. Copies of these materials may be obtained from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

Document number and name	40 CFR part 600 reference
ASTM E 29–67 (Reapproved 1973) Standard Recommended Practice for Indicating which Places of Figures are to be Considered Significant in Specified Limiting Values.	600.002–93(a)(30); 600.113–93(d)
ASTM D 1298–85 (Reapproved 1990) Standard Practice for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method.	600.113–93(c)(1)(i), (c)(2)(i)(A), (c)(2)(i)(B), (c)(2)(ii); 600.510–93 (g)(1)(ii)(B), (g)(2)(ii)(B).
ASTM D 3343–90 Standard Test Method for Estimation of Hydrogen Content of Aviation Fuels ..	600.113–93(c)(1)(ii), (c)(2)(ii).
ASTM D 3338–92 Standard Test Method for Estimation of Net Heat of Combustion of Aviation Fuels.	600.113–93(c)(1)(iii).
ASTM D 240–92 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter.	600.113–93(c)(2)(iii); 600.510–93 (g)(1)(ii)(A), (g)(2)(ii)(A).

(2) [Reserved]

[59 FR 39652, Aug. 3, 1994]

Subpart B—Fuel Economy Regulations for 1978 and Later Model Year Automobiles—Test Procedures

SOURCE: 42 FR 45657, Sept. 12, 1977, unless otherwise noted.

§600.101–86 General applicability.

(a) The provisions of this subpart are applicable to 1986 and later model year gasoline-fueled and diesel automobiles.

[49 FR 13849, Apr. 6, 1984]

§600.101–93 General applicability.

The provisions of this subpart are applicable to 1993 and later model year gasoline-fueled, diesel-fueled, alcohol-fueled, natural gas-fueled, alcohol dual fuel, and natural gas dual fuel automobiles.

[59 FR 39652, Aug. 3, 1994]

§600.102–78 Definitions.

The definitions in §600.002 apply to this subpart.

§600.103–78 Abbreviations.

The abbreviations in §600.003 apply to this subpart.

§600.104–78 Section numbering, construction.

The section numbering system set forth in §600.004 applies to this subpart.

§600.105–78 Recordkeeping.

The recordkeeping requirements set forth in §600.005 apply to this subpart.

§600.106–78 Equipment requirements.

The requirements for test equipment to be used for all fuel economy testing are given in §§86.106, 86.107, 86.108, 86.109, and 86.111 of this chapter, as applicable.

§600.107–78 Fuel specifications.

(a) The test fuel specifications for gasoline-fueled automobiles are given in paragraph (a)(1) of §86.113 of this chapter.

(b) The test fuel specifications for diesel automobiles are given in paragraphs (b) (1) and (2) of §86.113 of this chapter.

§600.107–93 Fuel specifications.

(a) The test fuel specifications for gasoline-fueled automobiles are given in §86.113(a) (1) and (2) of this chapter.

(b) The test fuel specifications for diesel-fueled automobiles are given in §86.113(b) (1) through (3) of this chapter.

(c) The test fuel specifications for methanol fuel used in Otto-cycle automobiles are given in §86.113(a) (3) and (4) of this chapter.

(d) The test fuel specifications for methanol fuel used in diesel cycle automobiles are given in §86.113(b) (4) through (6) of this chapter.

(e) The test fuel specifications for mixtures of petroleum and methanol fuels for methanol dual fuel vehicles are given in §86.113(d) of this chapter.

(f) The specification range of the fuels to be used under paragraphs (c) and (d) of this section shall be reported in accordance with §86.090–21(b)(3) of this chapter.

[59 FR 39652, Aug. 3, 1994]

§ 600.108–78 Analytical gases.

The analytical gases for all fuel economy testing must meet the criteria given in § 86.114 of this chapter.

§ 600.109–78 EPA driving cycles.

(a) The driving cycle to be utilized for generation of the city fuel economy data is prescribed in § 86.115 of this chapter.

(b) The driving cycle to be utilized for generation of the highway fuel economy data is specified in this paragraph.

(1) The Highway Fuel Economy Driving Schedule is set forth in appendix I to this part. The driving schedule is defined by a smooth trace drawn through the specified speed versus time relationships.

(2) The speed tolerance at any given time on the dynamometer driving schedule specified in appendix I, or as printed on a driver's aid chart approved by the Administrator, when conducted to meet the requirements of paragraph (b) of § 600.111 is defined by upper and lower limits. The upper limit is 2 mph higher than the highest point on trace within 1 second of the given time. The lower limit is 2 mph lower than the lowest point on the trace within 1 second of the given time. Speed variations greater than the tolerances (such as may occur during gear changes) are acceptable provided they occur for less than 2 seconds on any occasion. Speeds lower than those prescribed are acceptable provided the vehicle is operated at maximum available power during such occurrences.

(3) A graphic representation of the range of acceptable speed tolerances is found in paragraph (c) of § 86.115 of this chapter.

§ 600.110–78 Equipment calibration.

The equipment used for fuel economy testing must be calibrated according to the provisions of § 86.116 of this chapter.

§ 600.111–80 Test procedures.

(a) The test procedures to be followed for generation of the city fuel economy data are those prescribed in §§ 86.127–94 through 86.138–78 of this chapter, as applicable. (The evaporative and refueling loss portions of the test procedure may be omitted unless specifically required by the Administrator.)

(b) The test procedures to be followed for generation of the highway fuel economy data are those specified in § 600.111–78 (b) through (h) inclusive.

(1) The Highway Fuel Economy Dynamometer Procedure consists of a preconditioning highway driving sequence and a measured highway driving sequence.

(2) The highway fuel economy test is designated to simulate non-metropolitan driving with an average speed of 48.6 mph and a maximum speed of 60 mph. The cycle is 10.2 miles long with 0.2 stops per mile and consists of warmed-up vehicle operation on a chassis dynamometer through a specified driving cycle. A proportional part of the diluted exhaust emissions is collected continuously for subsequent analysis using a constant volume (variable dilution) sampler. Diesel dilute exhaust is continuously analyzed for hydrocarbons using a heated sample line and analyzer.

(3) Except in cases of component malfunction or failure, all emission control systems installed on or incorporated in a new motor vehicle must be functioning during all procedures in this subpart. The Administrator may authorize maintenance to correct component malfunction or failure.

(c) *Transmission.* The provisions of § 86.128 of this chapter apply for vehicle transmission operation during highway fuel economy testing under this subpart.

(d) *Road load power and test weight determination.* Section 86.129 of this chapter applies for determination of road load power and test weight for highway fuel economy testing. The test weight for the testing of a certification vehicle will be that test weight specified by the Administrator under the provisions of part 86. The test weight for a fuel economy data vehicle will be that test weight specified by the Administrator from the test weights covered by that vehicle configuration. The Administrator will base his selection of a test weight on the relative projected sales volumes of the various test weights within the vehicle configuration.

(e) *Vehicle preconditioning.* The Highway Fuel Economy Dynamometer Procedure is designed to be performed immediately following the Federal Emission Test Procedure, §§ 86.127 through 86.138 of this chapter. When conditions allow, the tests should be scheduled in this sequence. In the event the tests cannot be scheduled within three hours of the Federal Emission Test Procedure (including one hour hot soak evaporation loss test, if applicable) the vehicle should be preconditioned as in paragraph (e)(1) or (2) of this section, as applicable.

(1) If the vehicle has experienced more than three hours of soak (68° F–86° F) since the completion of the Federal Emission Test Procedure, or has experienced periods of storage outdoors, or in environments where soak temperature is not controlled to 68° F–86° F, the vehicle must be preconditioned by operation on a dynamometer through one cycle of the EPA Urban Dynamometer Driving Schedule, § 86.115 of this chapter.

(2) In unusual circumstances where additional preconditioning is desired by the manufacturer, the provisions of paragraph (a)(3) of § 86.132 of this chapter apply.

(f) *Highway fuel economy dynamometer procedure.* (1) The dynamometer procedure consists of two cycles of the Highway Fuel Economy Driving Schedule (§ 600.109 (b)) separated by 15 seconds of idle. The first cycle of the Highway Fuel Economy Driving Schedule is driven to precondition the test vehicle and the second is driven for the fuel economy measurement.

(2) The provisions of paragraphs (b), (c), (e), (f), (g), and (h) of § 86.135 *Dynamometer procedure* of this chapter, apply for highway fuel economy testing.

(3) Only one exhaust sample and one background sample are collected and analyzed for hydrocarbons (except diesel hydrocarbons which are analyzed continuously), carbon monoxide, and carbon dioxide.

(4) The fuel economy measurement cycle of the test includes two seconds of idle indexed at the beginning of the second cycle and two seconds of idle indexed at the end of the second cycle.

(g) *Engine starting and restarting.* (1) If the engine is not running at the initiation of the highway fuel economy test (preconditioning cycle), the start-up procedure must be according to the manufacturer's recommended procedures.

(2) False starts and stalls during the preconditioning cycle must be treated as in paragraphs (d) and (e) of § 86.136 of this chapter. If the vehicle stalls during the measurement cycle of the highway fuel economy test, the test is voided, corrective action may be taken according to § 86.079–25 of this chapter, and the vehicle may be rescheduled for test. The person taking the corrective action shall report the action so that the test records for the vehicle contain a record of the action.

(h) *Dynamometer test run.* The following steps must be taken for each test:

(1) Place the drive wheels of the vehicle on the dynamometer. The vehicle may be driven onto the dynamometer.

(2) Open the vehicle engine compartment cover and position the cooling fan(s) required. Manufacturers may request the use of additional cooling fans for additional engine compartment or under-vehicle cooling and for controlling high tire or brake temperatures during dynamometer operation.

(3) Preparation of the CVS must be performed before the measurement highway driving cycle.

(4) Equipment preparation. The provisions of paragraphs (b) (3) through (5) inclusive of § 86.137 of this chapter apply for highway fuel economy test except that only one exhaust sample collection bag and one dilution air sample collection bag need be connected to the sample collection systems.

(5) Operate the vehicle over one Highway Fuel Economy Driving Schedule cycle according to the dynamometer driving schedule specified in paragraph (b) of § 600.109.

(6) When the vehicle reaches zero speed at the end of the preconditioning cycle, the driver has 17 seconds to prepare for the emission measurement cycle of the test. Reset and enable the roll revolution counter.

(7) Operate the vehicle over one Highway Fuel Economy Driving Schedule cycle according to the dynamometer driving schedule specified in paragraph

(b) of § 600.109 while sampling the exhaust gas.

(8) Sampling must begin two seconds before beginning the first acceleration of the fuel economy measurement cycle and must end two seconds after the end of the deceleration to zero. At the end of the deceleration to zero speed, the roll or shaft revolutions must be recorded.

[42 FR 45657, Sept. 12, 1977, as amended at 43 FR 52929, Nov. 14, 1978; 59 FR 16309, Apr. 6, 1994]

§ 600.111–93 Test procedures.

(a) The test procedures to be followed for generation of the city fuel economy data are those prescribed in §§ 86.127 through 86.138 of this chapter, as applicable, except as provided for in paragraph (d) of this section. (The evaporative loss portion of the test procedure may be omitted unless specifically required by the Administrator.)

(b) The test procedures to be followed for generation of the highway fuel economy data are those specified in paragraphs (b) through (j) of this section.

(1) The Highway Fuel Economy Dynamometer Procedure consists of preconditioning highway driving sequence and a measured highway driving sequence.

(2) The highway fuel economy test is designated to simulate non-metropolitan driving with an average speed of 48.6 mph and a maximum speed of 60 mph. The cycle is 10.2 miles long with 0.2 stop per mile and consists of warmed-up vehicle operation on a chassis dynamometer through a specified driving cycle. A proportional part of the diluted exhaust emission is collected continuously for subsequent analysis of hydrocarbons, carbon monoxide, carbon dioxide using a constant volume (variable dilution) sampler. Diesel dilute exhaust is continuously analyzed for hydrocarbons using a heated sample line and analyzer. Methanol and formaldehyde samples are collected and individually analyzed for methanol-fueled vehicles (measurement of methanol and formaldehyde may be omitted for 1993 through 1994 model year methanol-fueled vehicles provided a HFID calibrated on methanol is used for measuring HC plus methanol).

(3) Except in cases of component malfunction or failure, all emission control systems installed on or incorporated in a new motor vehicle must be functioning during all procedures in this subpart. The Administrator may authorize maintenance to correct component malfunction or failure.

(c) *Transmission.* The provisions of § 86.128 of this chapter apply for vehicle transmission operation during highway fuel economy testing under this subpart.

(d) *Road load power and test weight determination.* Section 86.129 of this chapter applies for determination of road load power and test weight for highway fuel economy testing. The test weight for the testing of a certification vehicle will be that test weight specified by the Administrator under the provisions of part 86 of this chapter. The test weight for a fuel economy data vehicle will be that test weight specified by the Administrator from the test weights covered by that vehicle configuration. The Administrator will base his selection of a test weight on the relative projected sales volumes of the various test weights within the vehicle configuration.

(e) *Vehicle preconditioning.* The Highway Fuel Economy Dynamometer Procedure is designed to be performed immediately following the Federal Emission Test Procedure, §§ 86.127 through 86.138 of this chapter. When conditions allow, the tests should be scheduled in this sequence. In the event the tests cannot be scheduled within three hours of the Federal Emission Test Procedure (including one hour hot soak evaporative loss test, if applicable) the vehicle should be preconditioned as in paragraph (e) (1) or (2) of this section, as applicable.

(1) If the vehicle has experienced more than three hours of soak (68 °F–86 °F) since the completion of the Federal Emission Test Procedure, or has experienced periods of storage outdoors, or in environments where soak temperature is not controlled to 68 °F–86 °F, the vehicle must be preconditioned by operation on a dynamometer through

one cycle of the EPA Urban Dynamometer Driving Schedule, § 86.115 of this chapter.

(2) In unusual circumstances where additional preconditioning is desired by the manufacturer, the provisions of § 86.132(a)(3) of this chapter apply.

(f) *Highway fuel economy dynamometer procedure.* (1) The dynamometer procedure consists of two cycles of the Highway Fuel Economy Driving Schedule (§ 600.109(b)) separated by 15 seconds of idle. The first cycle of the Highway Fuel Economy Driving Schedule is driven to precondition the test vehicle and the second is driven for the fuel economy measurement.

(2) The provisions of paragraphs (b), (c), (e), (f), (g) and (h) of § 86.135 *Dynamometer procedure* of this chapter, apply for highway fuel economy testing.

(3) Only one exhaust sample and one background sample are collected and analyzed for hydrocarbons (except diesel hydrocarbons which are analyzed continuously), carbon monoxide, and carbon dioxide. Methanol and formaldehyde samples (exhaust and dilution air) are collected and analyzed for methanol-fueled vehicles (measurement of methanol and formaldehyde may be omitted for 1993 through 1994 model year methanol-fueled vehicles provided a HFID calibrated on methanol is used for measuring HC plus methanol).

(4) The fuel economy measurement cycle of the test includes two seconds of idle indexed at the beginning of the second cycle and two seconds of idle indexed at the end of the second cycle.

(g) *Engine starting and restarting.* (1) If the engine is not running at the initiation of the highway fuel economy test (preconditioning cycle), the start-up procedure must be according to the manufacturer's recommended procedures.

(2) False starts and stalls during the preconditioning cycle must be treated as in § 86.136(d) and (e) of this chapter. If the vehicle stalls during the measurement cycle of the highway fuel economy test, the test is voided, corrective action may be taken according to § 86.079–25 of this chapter, and the vehicle may be rescheduled for test. The person taking the corrective action shall report the action so that the test records for the vehicle contain a record of the action.

(h) *Dynamometer test run.* The following steps must be taken for each test:

(1) Place the drive wheels of the vehicle on the dynamometer. The vehicle may be driven onto the dynamometer.

(2) Open the vehicle engine compartment cover and position the cooling fans(s) required. Manufacturers may request the use of additional cooling fans for additional engine compartment or under-vehicle cooling and for controlling high tire or brake temperatures during dynamometer operation.

(3) Preparation of the CVS must be performed before the measurement highway driving cycle.

(4) Equipment preparation. The provisions of § 86.137(b)(3) through (6) of this chapter apply for highway fuel economy test except that only one exhaust sample collection bag and one dilution air sample collection bag need be connected to the sample collection systems.

(5) Operate the vehicle over one Highway Fuel Economy Driving Schedule cycle according to the dynamometer driving schedule specified in § 600.109(b).

(6) When the vehicle reaches zero speed at the end of the preconditioning cycle, the driver has 17 seconds to prepare for the emission measurement cycle of the test. Reset and enable the roll revolution counter.

(7) Operate the vehicle over one Highway Fuel Economy Driving Schedule cycle according to the dynamometer driving schedule specified in § 600.109(b) while sampling the exhaust gas.

(8) Sampling must begin two seconds before beginning the first acceleration of the fuel economy measurement cycle and must end two seconds after the end of the deceleration to zero. At the end of the deceleration to zero speed, the roll or shaft revolutions must be recorded.

(i) For methanol dual fuel automobiles, the procedures of § 600.111 (a) and (b) shall be performed for each of the required test fuels:

(1) Gasoline or diesel fuel as specified in § 600.107 (a) and (b); and

(2) Methanol fuel as specified in § 600.107 (c) and (d); and

(3) A mixture containing 50% gasoline or diesel and 50% methanol by volume, applicable during model years 1993 through 1995; or

(4) In lieu of testing using the mixture containing 50% gasoline or diesel and 50% methanol by volume, the manufacturer must provide a written statement attesting that the equal or superior energy efficiency is attained while using the 50% gasoline or diesel and 50% methanol mixture compared to using gasoline.

[59 FR 39652, Aug. 3, 1994]

§ 600.112–78 Exhaust sample analysis.

The exhaust sample analysis must be performed according to § 86.140 of this chapter.

§ 600.113–78 Fuel economy calculations.

The calculations of vehicle fuel economy values require the weighted grams/mile values for HC, CO, and CO_2 for the city fuel economy test and the grams/mile values for HC, CO, and CO_2 for the highway fuel economy test. The city and highway fuel economy values must be calculated by the procedures of this section. A sample calculation appears in appendix II to this part.

(a) Calculate the weighted grams/mile values for the city fuel economy test for HC, CO, and CO_2 as specified in § 86.144 of this chapter.

(b)(1) Calculate the mass values for the highway fuel economy test for HC, CO, and CO_2 as specified in paragraph (b) of § 86.144 of this chapter.

(2) Calculate the grams/mile values for the highway test for HC, CO, and CO_2 by dividing the mass values obtained in (b)(1) by the actual distance traveled, measured in miles, as specified in paragraph (h) of § 86.135 of this chapter.

(c) Calculate the city fuel economy and highway fuel economy from grams/mile values for HC, CO, and CO_2. The emission values (obtained per paragraph (a) or (b) as applicable) used in each calculation of this section shall be rounded in accordance with § 86.079–26(a)(6)(ii). The CO_2 values (obtained per paragraph (a) or (b) of this section as applicable) used in each calculation in this section are rounded to the nearest gram/mile.

(d) For gasoline-fueled automobiles, calculate the fuel economy in miles per gallon of gasoline by dividing 2421 by the sum of three terms:

(1) 0.866 multiplied by HC (in grams/miles as obtained in paragraph (c)),

(2) 0.429 multiplied by CO (in grams/miles as obtained in paragraph (c), and

(3) 0.273 multiplied by CO_2 (in grams/mile as obtained in paragraph (c) of this section).

Round to quotient to the nearest 0.1 mile per gallon.

(e) For diesel powered automobiles, calculate the fuel economy in miles per gallon of diesel fuel by dividing 2778 by the sum of three terms:

(1) 0.866 multiplied by HC (in grams/mile as obtained in paragraph (c) of this section),

(2) 0.429 multiplied by CO (in grams/mile as obtained in paragraph (c)), and

(3) 0.273 multiplied by CO_2 (in grams/mile as obtained in paragraph (c)).

Round the quotient to the nearest 0.1 mile per gallon.

[42 FR 45657, Sept. 12, 1977, as amended at 43 FR 52929, Nov. 14, 1978]

§ 600.113–88 Fuel economy calculations.

The Administrator will use the calculation procedure set forth in this paragraph for all official EPA tests. For the 1988 model year, manufacturers may choose to use this procedure or use the calculation procedure described in § 600.113–78. However, once a manufacturer uses this procedure, it must be used for all subsequent tests. This procedure must be used by manufacturers for 1989 and later model years. The calculations of the weighted fuel economy values require input of the weighted grams/mile values for HC, CO and CO_2 for both the city fuel economy test and the highway fuel economy test. Additionally, for tests of gasoline-fueled vehicles, the specific gravity, carbon weight fraction and net heating value of the test fuel must be determined. The city and highway fuel economy values shall be calculated as specified in this section. A sample appears in appendix II to this part.

(a) Calculate the weighted grams/mile values for the city fuel economy test for HC, CO, and CO_2 as specified in

§ 86.144 of this chapter. For tests of gasoline-fueled vehicles, measure and record the test fuel's properties as specified in paragraph (c) of this section.

(b)(1) Calculate the mass values for the highway fuel economy test for HC, CO, and CO_2 as specified in paragraph (b) of § 86.144 of this chapter. For tests of gasoline-fueled vehicles, measure and record the test fuel's properties as specified in paragraph (c) of this section.

(2) Calculate the grams/mile values for the highway fuel economy test for HC, CO, and CO_2 by dividing the mass values obtained in paragraph (b)(1) of this section, by the actual distance traveled, measured in miles, as specified in paragraph (h) of § 86.135 of this chapter.

(c) Gasoline test fuel properties shall be determined by analysis of a fuel sample taken from the fuel supply. A sample shall be taken after each addition of fresh fuel to the fuel supply. Additionally, the fuel shall be resampled once a month to account for any fuel property changes during storage. Less frequent resampling may be permitted if EPA concludes, on the basis of manufacturer-supplied data, that the properties of test fuel in the manufacturer's storage facility will remain stable for a period longer than one month. The fuel samples shall be analyzed to determine the following fuel properties:

(1) Specific gravity per ASTM D 1298.

(2) Carbon weight fraction per ASTM D 3343.

(3) Net heating value (Btu/lb) per ASTM D 3338.

(d) Calculate the city fuel economy and highway fuel economy from the grams/mile values for HC, CO, CO_2 and, for test of gasoline-fueled vehicles, the test fuel's specific gravity, carbon weight fraction and net heating value. The emission values (obtained per paragraph (a) or (b) of this section, as applicable) used in each calculation of this section shall be rounded in accordance with § 86.084–26(a)(6)(iii). The CO_2 values (obtained per paragraph (a) or (b) of this section, as applicable) used in each calculation of this section shall be rounded to the nearest gram/mile. The specific gravity and the carbon weight fraction (obtained per paragraph (c) of this section) shall be recorded using three places to the right of the decimal point. The net heating value (obtained per paragraph (c) of this section) shall be recorded to the nearest whole Btu/lb. These numbers shall be rounded in accordance with the ''Rounding Off Method'' specified in ASTM E 29–67.

(e) For gasoline-fueled automobiles, the fuel economy in miles per gallon is to be calculated using the following equation:

$$mpg=(5174\times10^4\times CWF\times SG)/[((CWF\times HC)+(0.429\times CO))+(0.273\times CO_2))\times((0.6\times SG\times NHV)+5471)]$$

Where:

HC=Grams/mile HC as obtained in paragraph (d) of this section.

CO=Grams/mile CO as obtained in paragraph (d) of this section.

CO_2=Grams/mile CO_2 as obtained in paragraph (d) of this section.

CWF=Carbon weight fraction of test fuel as obtained in paragraph (d) of this section.

NHV=Net heating value by mass of test fuel as obtained in paragraph (D) of this section.

SG=Specific gravity of test fuel as obtained in paragraph (d) of this section.

Round the calculated result to the nearest 0.1 miles per gallon.

(f) For diesel automobiles, calculate the fuel economy in miles per gallon of diesel fuel by dividing 2778 by the sum of three terms:

(1) 0.866 multiplied by HC (in grams/miles as obtained in paragraph (d) of this section),

(2) 0.429 multiplied by CO (in grams/mile as obtained in paragraph (d) of this section), and

(3) 0.273 multiplied by CO_2 (in grams/mile as obtained in paragraph (d) of this section).

Round the quotient to the nearest 0.1 mile per gallon.

[51 FR 37851, Oct. 24, 1986]

§ 600.113–93 Fuel economy calculations.

The Administrator will use the calculation procedure set forth in this paragraph for all official EPA testing of vehicles fueled with gasoline, diesel, methanol or natural gas fuel. The calculations of the weighted fuel economy values require input of the weighted grams/mile values for total hydrocarbons (HC), carbon monoxide (CO),

and carbon dioxide (CO_2); and, additionally for methanol-fueled automobiles, methanol (CH_3OH) and formaldehyde (HCHO); and additionally for natural gas-fueled vehicles non-methane hydrocarbons (NMHC) and methane (CH_4) for both the city fuel economy test and the highway fuel economy test. Additionally, the specific gravity, carbon weight fraction and net heating value of the test fuel must be determined. The city and highway fuel economy values shall be calculated as specified in this section. A sample appears in appendix II to this part.

(a) Calculate the weighted grams/mile values for the city fuel economy test for HC, CO and CO_2; and, additionally for methanol-fueled automobiles, CH_3OH and HCHO; and additionally for natural gas-fueled automobiles NMHC and CH_4 as specified in § 86.144 of this chapter. Measure and record the test fuel's properties as specified in paragraph (c) of this section.

(b)(1) Calculate the mass values for the highway fuel economy test for HC, CO and CO_2, and where applicable CH_3OH, HCHO, NMHC and CH_4 as specified in § 86.144(b) of this chapter. Measure and record the test fuel's properties as specified in paragraph (c) of this section.

(2) Calculate the grams/mile values for the highway fuel economy test for HC, CO and CO_2, and where applicable CH_3OH, HCHO, NMHC and CH_4 by dividing the mass values obtained in paragraph (b)(1) of this section, by the actual distance traveled, measured in miles, as specified in § 86.135(h) of this chapter.

(c)(1) Gasoline test fuel properties shall be determined by analysis of a fuel sample taken from the fuel supply. A sample shall be taken after each addition of fresh fuel to the fuel supply. Additionally, the fuel shall be resampled once a month to account for any fuel property changes during storage. Less frequent resampling may be permitted if EPA concludes, on the basis of manufacturer-supplied data, that the properties of test fuel in the manufacturer's storage facility will remain stable for a period longer than one month. The fuel samples shall be analyzed to determine the following fuel properties:

(i) Specific gravity per ASTM D 1298 (Incorporated by reference as specified in § 600.011–93).

(ii) Carbon weight fraction per ASTM D 3343 (Incorporated by reference as specified in § 600.011–93).

(iii) Net heating value (Btu/lb) per ASTM D 3338 (Incorporated by reference as specified in § 600.011–93).

(2) Methanol test fuel shall be analyzed to determine the following fuel properties:

(i) Specific gravity using either:

(A) ASTM D 1298 (incorporated by reference as specified in § 600.011–93) for the blend or:

(B) ASTM D 1298 (incorporated by reference as specified in § 600.011–93) for the gasoline fuel component and also for the methanol fuel component and combining as follows:

$SG = SG_g \times$ volume fraction gasoline $+ SG_m \times$ volume fraction methanol.

(ii)(A) Carbon weight fraction using the following equation:

$CWF = CWF_g \times MF_g + 0.375 \times MF_m$

Where:

CWF_g=Carbon weight fraction of gasoline portion of blend per ASTM D 3343 (incorporated by reference as specified in § 600.011–93).

MF_g=Mass fraction gasoline=$(G x SG_g)/(G x SG_g + M x SG_m)$

MF_m=Mass fraction methanol=$(M x SG_m)/(G x SG_g + M x SG_m)$

Where:

G=Volume fraction gasoline

M=Volume fraction methanol

SG_g=Specific gravity of gasoline as measured by ASTM D 1298 (Incorporated by reference as specified in § 600.011–93).

SG_m=Specific gravity of methanol as measured by ASTM D 1298 (Incorporated by reference as specified in § 600.011–93).

(B) Upon the approval of the Administrator, other procedures to measure the carbon weight fraction of the fuel blend may be used if the manufacturer can show that the procedures are superior to or equally as accurate as those specified in this paragraph (c)(2)(ii).

(iii) Net heating value (BTU/lb) per ASTM D 240 (Incorporated by reference as specified in § 600.011–93).

(3) Natural gas test fuel shall be analyzed to determine the following fuel properties:

(i) Fuel composition per ASTM D 1945–91, Standard Test Method for Analysis of Natural Gas By Gas Chromatography. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103. Copies may be inspected at U.S. EPA, OAR, 401 M Street, SW., Washington, DC 20460, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(ii) Specific gravity (based on fuel composition per ASTM D 1945).

(iii) Carbon weight fraction based on the carbon contained only in the HC constituents of the fuel=weight of carbon in HC constituents divided by the total weight of fuel.

(iv) Carbon weight fraction of fuel=total weight of carbon in the fuel (i.e., includes carbon contained in HC and in CO_2) divided by total weight of fuel.

(d) Calculate the city fuel economy and highway fuel economy from the grams/mile values for total HC, CO, CO_2 and, where applicable, CH_3OH, HCHO, NMHC and CH_4 and, the test fuel's specific gravity, carbon weight fraction, net heating value, and additionally for natural gas, the test fuel's composition. The emission values (obtained per paragraph (a) or (b) of this section, as applicable) used in each calculation of this section shall be rounded in accordance with § 86.084–26(a)(6)(iii) of this chapter. The CO_2 values (obtained per paragraph (a) or (b) of this section, as applicable) used in each calculation of this section shall be rounded to the nearest gram/mile. The specific gravity and the carbon weight fraction (obtained per paragraph (c) of this section) shall be recorded using three places to the right of the decimal point. The net heating value (obtained per paragraph (c) of this section) shall be recorded to the nearest whole Btu/lb. These numbers shall be rounded in accordance with the ''Rounding Off Method'' specified in ASTM E 29–67.

(e)(1) For gasoline-fueled automobiles, the fuel economy in miles per gallon is to be calculated using the following equation:

$$mpg=(5174\times10^4\times CWF\times SG)/[((CWF\times HC)+(0.429\times CO)+(0.273\times CO_2))\times((0.6\times SG x NHV)+5471)]$$

Where:

HC=Grams/mile HC as obtained in paragraph (d) of this section.

CO=Grams/mile CO as obtained in paragraph (d) of this section.

CO_2=Grams/mile CO_2 as obtained in paragraph (d) of this section.

CWF=Carbon weight fraction of test fuel as obtained in paragraph (d) of this section.

NHV=Net heating value by mass of test fuel as obtained in paragraph (d) of this section.

SG=Specific gravity of test fuel as obtained in paragraph (d) of this section.

(2) Round the calculated result to the nearest 0.1 miles per gallon.

(f)(1) For diesel-fueled automobiles, calculate the fuel economy in miles per gallon of diesel fuel by dividing 2778 by the sum of three terms:

(i) 0.866 multiplied by HC (in grams/miles as obtained in paragraph (d) of this section);

(ii) 0.429 multiplied by CO (in grams/mile as obtained in paragraph (d) of this section); and

(iii) 0.273 multiplied by CO_2 (in grams/mile as obtained in paragraph (d) of this section).

(2) Round the quotient to the nearest 0.1 mile per gallon.

(g) For methanol-fueled automobiles and automobiles designed to operate on mixtures of gasoline and methanol, the fuel economy in miles per gallon is to be calculated using the following equation:

$$mpg=(CWF\times SG\times3781.8)/((CWF_{exHC}\times HC)+(0.429\times CO)+(0.273\times CO_2)+(0.375\times CH_3OH)+(0.400\times HCHO))$$

Where:

CWF=Carbon weight fraction of the fuel as determined in paragraph (c)(2)(ii) of this section.

SG=Specific gravity of the fuel as determined in paragraph (c)(2)(i) of this section.

CWF_{exHC}=Carbon weight fraction of exhaust hydrocarbons= CWF_g as determined in (c)(2)(ii) of this section (for M100 fuel, CWF_{exHC}=0.866).

HC=Grams/mile HC as obtained in paragraph (d) of this section.

CO=Grams/mile CO as obtained in paragraph (d) of this section.

CO_2=Grams/mile CO_2 as obtained in paragraph (d) of this section.

CH_3OH=Grams/mile CH_3OH (methanol) as obtained in paragraph (d) of this section.

HCHO=Grams/mile HCHO (formaldehyde) as obtained in paragraph (d) of this section.

(h) For automobiles fueled with natural gas, the fuel economy in miles per gallon of natural gas is to be calculated using the following equation:

$$mpg_e = \frac{CWF_{HC/NG} D_{NG}\ 121.5}{(0.749)CH_4 + (CWF_{NMHC})NMHC + (0.429)CO + (0.273)(CO_2 - CO_{2NG})}$$

Where:

mpg_e=miles per equivalent gallon of natural gas.

$CWF_{HC/NG}$=carbon weight fraction based on the hydrocarbon constituents in the natural gas fuel as obtained in paragraph (d) of this section.

D_{NG}=density of the natural gas fuel [grams/ft³ at 68 °F (20 °C) and 760 mm Hg (101.3 kPa)] pressure as obtained in paragraph (d) of this section.

CH_4, NMHC, CO, and CO_2=weighted mass exhaust emissions [grams/mile] for methane, non-methane HC, carbon monoxide, and carbon dioxide as calculated in § 600.113.

CWF_{NMHC}=carbon weight fraction of the non-methane HC constituents in the fuel as determined from the speciated fuel composition per paragraph (c)(2) of this section.

CO_{2NG}=grams of carbon dioxide in the natural gas fuel consumed per mile of travel.

CO_{2NG}= FC_{NG} D_{NG} WF_{CO2}

where:

$$FC_{NG} = \text{cubic feet of natural gas fuel consumed per mile}$$

$$= \frac{(0.749)CH_4 + (CWF_{NMHC})NMHC + (0.429)CO + (0.273)(CO_2)}{CWF_{NG} D_{NG}}$$

where:

CWF_{NG}=the carbon weight fraction of the natural gas fuel as calculated in paragraph (d) of this section.

WF_{CO2}=weight fraction carbon dioxide of the natural gas fuel calculated using the mole fractions and molecular weights of the natural gas fuel constituents per ASTM D 1945.

[59 FR 39654, Aug. 3, 1994; 59 FR 44795, Aug. 30, 1994, as amended at 59 FR 48537, Sept. 21, 1994]

Subpart C—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—Procedures for Calculating Fuel Economy Values

§ 600.201–86 General applicability.

(a) The provisions of this subpart are applicable to 1986 and later model year gasoline-fueled and diesel automobiles.

[49 FR 13849, Apr. 6, 1984]

§ 600.201–93 General applicability.

The provisions of this subpart are applicable to 1993 and later model year

gasoline-fueled, diesel-fueled, alcohol-fueled, natural gas-fueled, alcohol dual fuel, and natural gas dual fuel automobiles.

[59 FR 39655, Aug. 3, 1994]

§600.202–77 Definitions.

The definitions in §600.002 apply to this subpart.

§600.203–77 Abbreviations.

The abbreviations in §600.003 apply to this subpart.

§600.204–77 Section numbering, construction.

The section numbering system set forth in §600.004 applies to this subpart.

§600.205–77 Recordkeeping.

The recordkeeping requirements set forth in §600.005 apply to this subpart.

§600.206–86 Calculation and use of fuel economy values for gasoline-fueled, diesel, and electric vehicle configurations.

(a) Fuel economy values determined for each vehicle, and as approved in §600.008 (b) or (f), are used to determine city, highway, and combined fuel economy values for each vehicle configuration (as determined by the Administrator) for which data are available.

(1) If only one set of city and highway fuel economy values is accepted for a vehicle configuration, these values, rounded to the nearest tenth of a mile per gallon, comprise the city and highway fuel economy values for that configuration.

(2) If more than one city or highway fuel economy value is accepted for a vehicle configuration:

(i) All data shall be grouped according to the subconfiguration for which the data were generated using sales projections supplied in accordance with §600.207(a)(3).

(ii) Within each group of data, all values are harmonically averaged and rounded to the nearest 0.0001 of a mile per gallon in order to determine city and highway fuel economy values for each subconfiguration at which the vehicle configuration was tested.

(iii) All city fuel economy values and all highway fuel economy values calculated in paragraph (a)(2)(ii) of this section are (separately for city and highway) averaged in proportion to the sales fraction (rounded to the nearest 0.0001) within the vehicle configuration (as provided to the Administrator by the manufacturer) of vehicles of each tested subconfiguration. The resultant values, rounded to the nearest 0.0001 mile per gallon, are the city and highway fuel economy values for the vehicle configuration.

(3) The combined fuel economy value for a vehicle configuration is calculated by harmonically averaging the city and highway fuel economy values, as determined in §600.206(a) (1) or (2), weighted 0.55 and 0.45 respectively, and rounded to the nearest 0.0001 mile per gallon. A sample of this calculation appears in appendix II to this part.

(b) If only one equivalent petroleum-based fuel economy value exists for an electric configuration, that value, rounded to the nearest tenth of a mile per gallon, will comprise the petroleum-based fuel economy for that configuration.

(c) If more than one equivalent petroleum-based fuel economy value exists for an electric vehicle configuration, all values for that vehicle configuration are harmonically averaged and rounded to the nearest 0.0001 mile per gallon for that configuration.

[49 FR 13849, Apr. 6, 1984]

§600.206–93 Calculation and use of fuel economy values for gasoline-fueled, diesel-fueled, electric, alcohol-fueled, natural gas-fueled, alcohol dual fuel, and natural gas dual fuel vehicle configurations.

(a) Fuel economy values determined for each vehicle, and as approved in §600.008 (b) or (f), are used to determine city, highway, and combined fuel economy values for each vehicle configuration (as determined by the Administrator) for which data are available.

(1) If only one set of city and highway fuel economy values is accepted for a vehicle configuration, these values, rounded to the nearest tenth of a mile per gallon, comprise the city and highway fuel economy values for that configuration.

(2) If more than one city or highway fuel economy value is accepted for a vehicle configuration:

(i) All data shall be grouped according to the subconfiguration for which the data were generated using sales projections supplied in accordance with § 600.207(a)(3).

(ii) Within each group of data, all values are harmonically averaged and rounded to the nearest 0.0001 of a mile per gallon in order to determine city and highway fuel economy values for each subconfiguration at which the vehicle configuration was tested.

(iii) All city fuel economy values and all highway fuel economy values calculated in paragraph (a)(2)(ii) of this section are (separately for city and highway) averaged in proportion to the sales fraction (rounded to the nearest 0.0001) within the vehicle configuration (as provided to the Administrator by the manufacturer) of vehicles of each tested subconfiguration. The resultant values, rounded to the nearest 0.0001 mile per gallon, are the city and highway fuel economy values for the vehicle configuration.

(3) The combined fuel economy value for a vehicle configuration is calculated by harmonically averaging the city and highway fuel economy values, as determined in § 600.206(a) (1) or (2), weighted 0.55 and 0.45 respectively, and rounded to the nearest 0.0001 mile per gallon. A sample of this calculation appears in Appendix II to this part.

(4) For alcohol dual fuel automobiles and natural gas dual fuel automobiles the procedures of paragraphs (a) (1) through (3) of this section shall be used to calculate two separate sets of city, highway, and combined fuel economy values for each configuration.

(i) Calculate the city, highway, and combined fuel economy values from the tests performed using gasoline or diesel test fuel.

(ii) Calculate the city, highway, and combined fuel economy values from the tests performed using alcohol or natural gas test fuel.

(b) If only one equivalent petroleum-based fuel economy value exists for an electric configuration, that value, rounded to the nearest tenth of a mile per gallon, will compose the petroleum-based fuel economy for that configuration.

(c) If more than one equivalent petroleum-based fuel economy value exists for an electric vehicle configuration, all values for that vehicle configuration are harmonically averaged and rounded to the nearest 0.0001 mile per gallon for that configuration.

[59 FR 39655, Aug. 3, 1994]

EFFECTIVE DATE NOTE: At 59 FR 39655, Aug. 3, 1994, § 600.206–93 was added. This section contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 600.207–86 Calculation of fuel economy values for a model type.

(a) Fuel economy values for a base level are calculated from vehicle configuration fuel economy values as determined in § 600.206(a) for low-altitude tests.

(1) If the Administrator determines that automobiles intended for sale in the State of California are likely to exhibit significant differences in fuel economy from those intended for sale in other states, he will calculate fuel economy values for each base level for vehicles intended for sale in California and for each base level for vehicles intended for sale in the rest of the states.

(2) In order to highlight the fuel efficiency of certain designs otherwise included within a model type, a manufacturer may wish to subdivide a model type into one or more additional model types. This is accomplished by separating subconfigurations from an existing base level and placing them into a new base level. The new base level is identical to the existing base level except that it shall be considered, for the purposes of this paragraph, as containing a new basic engine. The manufacturer will be permitted to designate such new basic engines and base level(s) if:

(i) Each additional model type resulting from division of another model type has a unique car line name and that name appears on the label and on the vehicle bearing that label,

(ii) The subconfigurations included in the new base levels are not included in any other base level which differs only

by basic engine (i.e., they are not included in the calculation of the original base level fuel economy values), and

(iii) All subconfigurations within the new base level are represented by test data in accordance with §600.010(c)(ii).

(3) The manufacturer shall supply total model year sales projections for each car line/vehicle subconfiguration combination.

(i) Sales projections must be supplied separately for each car line-vehicle subconfiguration intended for sale in California and each car line/vehicle subconfiguration intended for sale in the rest of the states if required by the Administrator under paragraph (a)(1) of this section.

(ii) Manufacturers shall update sales projections at the time any model type value is calculated for a label value.

(iii) The requirements of this paragraph may be satisfied by providing an amended application for certification, as described in §86.084–21.

(4) Vehicle configuration fuel economy values, as determined in §600.206(a), are grouped according to base level.

(i) If only one vehicle configuration within a base level has been tested, the fuel economy value from that vehicle configuration constitutes the fuel economy for that base level.

(ii) If more than one vehicle configuration within a base level has been tested, the vehicle configuration fuel economy values are harmonically averaged in proportion to the respective sales fraction (rounded to the nearest 0.0001) of each vehicle configuration and the resultant fuel economy value rounded to the nearest 0.0001 mile per gallon.

(5) The procedure specified in §600.207(a) will be repeated for each base level, thus establishing city, highway, and combined fuel economy values for each base level.

(6) For the purposes of calculating a base level fuel economy value, if the only vehicle configuration(s) within the base level are vehicle configuration(s) which are intended for sale at high altitude, the Administrator may use fuel economy data from tests conducted on these vehicle configuration(s) at high altitude to calculate the fuel economy for the base level.

(b) For each model type, as determined by the Administrator, a city, highway, and combined fuel economy value will be calculated by using the projected sales and fuel economy values for each base level within the model type.

(1) If the Administrator determines that automobiles intended for sale in the State of California are likely to exhibit significant differences in fuel economy from those intended for sale in other states, he will calculate fuel economy values for each model type for vehicles intended for sale in California and for each model type for vehicles intended for sale in the rest of the states.

(2) The sales fraction for each base level is calculated by dividing the projected sales of the base level within the model type by the projected sales of the model type and rounding the quotient to the nearest 0.0001.

(3) The city fuel economy values of the model type (calculated to the nearest 0.0001 mpg) are determined by dividing one by a sum of terms, each of which corresponds to a base level and which is a fraction determined by dividing:

(i) The sales fraction of a base level, by

(ii) The city fuel economy value for the respective base level.

(4) The procedure specified in paragraph (b)(3) of this section is repeated in an analogous manner to determine the highway and combined fuel economy values for the model type.

[49 FR 13849, Apr. 6, 1984]

§600.207–93 Calculation of fuel economy values for a model type.

(a) Fuel economy values for a base level are calculated from vehicle configuration fuel economy values as determined in §600.206(a) for low-altitude tests.

(1) If the Administrator determines that automobiles intended for sale in the State of California are likely to exhibit significant differences in fuel economy from those intended for sale in other states, he will calculate fuel economy values for each base level for vehicles intended for sale in California

and for each base level for vehicles intended for sale in the rest of the states.

(2) In order to highlight the fuel efficiency of certain designs otherwise included within a model type, a manufacturer may wish to subdivide a model type into one or more additional model types. This is accomplished by separating subconfigurations from an existing base level and placing them into a new base level. The new base level is identical to the existing base level except that it shall be considered, for the purposes of this paragraph, as containing a new basic engine. The manufacturer will be permitted to designate such new basic engines and base level(s) if:

(i) Each additional model type resulting from division of another model type has a unique car line name and that name appears on the label and on the vehicle bearing that label;

(ii) The subconfigurations included in the new base levels are not included in any other base level which differs only by basic engine (i.e., they are not included in the calculation of the original base level fuel economy values); and

(iii) All subconfigurations within the new base level are represented by test data in accordance with § 600.010(c)(ii).

(3) The manufacturer shall supply total model year sales projections for each car line/vehicle subconfiguration combination.

(i) Sales projections must be supplied separately for each car line-vehicle subconfiguration intended for sale in California and each car line/vehicle subconfiguration intended for sale in the rest of the states if required by the Administrator under paragraph (a)(1) of this section.

(ii) Manufacturers shall update sales projections at the time any model type value is calculated for a label value.

(iii) The requirements of this paragraph may be satisfied by providing an amended application for certification, as described in § 86.084–21 of this chapter.

(4) Vehicle configuration fuel economy values, as determined in § 600.206(a), are grouped according to base level.

(i) If only one vehicle configuration within a base level has been tested, the fuel economy value from that vehicle configuration constitutes the fuel economy for that base level.

(ii) If more than one vehicle configuration within a base level has been tested, the vehicle configuration fuel economy values are harmonically averaged in proportion to the respective sales fraction (rounded to the nearest 0.0001) of each vehicle configuration and the resultant fuel economy value rounded to the nearest 0.0001 mile per gallon.

(5) The procedure specified in § 600.207(a) will be repeated for each base level, thus establishing city, highway, and combined fuel economy values for each base level.

(6) For the purposes of calculating a base level fuel economy value, if the only vehicle configuration(s) within the base level are vehicle configuration(s) which are intended for sale at high altitude, the Administrator may use fuel economy data from tests conducted on these vehicle configuration(s) at high altitude to calculate the fuel economy for the base level.

(7) For alcohol dual fuel automobiles and natural gas dual fuel automobiles the procedures of paragraphs (a)(1) through (6) of this section shall be used to calculate two separate sets of city, highway, and combined fuel economy values for each base level.

(i) Calculate the city, highway, and combined fuel economy values from the tests performed using gasoline or diesel test fuel.

(ii) Calculate the city, highway, and combined fuel economy values from the tests performed using alcohol or natural gas test fuel.

(b) For each model type, as determined by the Administrator, a city, highway, and combined fuel economy value will be calculated by using the projected sales and fuel economy values for each base level within the model type.

(1) If the Administrator determines that automobiles intended for sale in the State of California are likely to exhibit significant differences in fuel economy from those intended for sale in other states, he will calculate fuel economy values for each model type

for vehicles intended for sale in California and for each model type for vehicles intended for sale in the rest of the states.

(2) The sales fraction for each base level is calculated by dividing the projected sales of the base level within the model type by the projected sales of the model type and rounding the quotient to the nearest 0.0001.

(3) The city fuel economy values of the model type (calculated to the nearest 0.0001 mpg) are determined by dividing one by a sum of terms, each of which corresponds to a base level and which is a fraction determined by dividing:

(i) The sales fraction of a base level; by

(ii) The city fuel economy value for the respective base level.

(4) The procedure specified in paragraph (b)(3) of this section is repeated in an analogous manner to determine the highway and combined fuel economy values for the model type.

(5) For alcohol dual fuel automobiles and natural gas dual fuel automobiles the procedures of paragraphs (b)(1) through (4) of this section shall be used to calculate two separate sets of city, highway, and combined fuel economy values for each model type.

(i) Calculate the city, highway, and combined fuel economy values from the tests performed using gasoline or diesel test fuel.

(ii) Calculate the city, highway, and combined fuel economy values from the tests performed using alcohol or natural gas test fuel.

[59 FR 39655, Aug. 3, 1994]

EFFECTIVE DATE NOTE: At 59 FR 39655, Aug. 3, 1994, §600.207–93 was added. This section contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§600.208–77 Sample calculation.

An example of the calculation required in this subpart appears in appendix III.

[41 FR 49761, Nov. 10, 1976]

§600.209–85 Calculation of fuel economy values for labeling.

(a) For the purposes of calculating the city model type fuel economy value for labeling the manufacturer shall:

(1) *For general labels* multiply the city model type fuel economy value determined in §600.207(b), by 0.90, rounding the product to the nearest whole mpg, or

(2) *For specific labels* multiply the city fuel economy value determined in §600.206(a)(iii), by 0.90, rounding the product to the nearest whole mpg, and

(b) For the purposes of calculating the highway model type fuel economy value for labeling the manufacturer shall:

(1) *For general labels* multiply the highway model type fuel economy value determined in §600.207(b) by 0.78, rounding the product to the nearest whole mpg, or

(2) *For specific labels* multiply the highway fuel economy value determined in §600.206(a)(iii) by 0.78.

(c) If the resulting city value determined in paragraph (a) of this section exceeds the resulting highway value determined in paragraph (b) of this section, the city value will be set equal to the highway value.

(d)(1) The combined fuel economy for a model type, to be used in determining annual fuel costs under §600.308(c), is determine (except as provided for in paragraph (d)(2) of this section), by harmonically averaging the unrounded city and highway values, determined in §209 (a) and (b), weighted 0.55 and 0.45 respectively, and rounded to the nearest whole mpg. (An example of this calculation procedure appears in appendix II of this part).

(2) If the resulting city value determined in paragraph (a) of this section exceeds the resulting highway value determined in paragraph (b) of this section, the combined fuel economy will be set equal to the highway value, rounded to the nearest whole mpg.

[49 FR 13845, Apr. 6, 1984, as amended at 49 FR 48149, Dec. 10, 1984]

§ 600.209–95 Calculation of fuel economy values for labeling.

(a) For the purposes of calculating the city model type fuel economy value for labeling the manufacturer shall:

(1)(i) For general labels for gasoline-fueled, diesel-fueled, alcohol-fueled, and natural gas-fueled automobiles multiply the city model type fuel economy value determined in § 600.207 (b), by 0.90, rounding the product to the nearest whole mpg; or

(ii) For general labels for alcohol dual fuel and natural gas dual fuel automobiles:

(A) Multiply the city model type fuel economy calculated from the tests performed using gasoline or diesel test fuel as determined in § 600.207 (b)(5)(i) by 0.90, rounding the product to the nearest whole mpg; and

(B) Multiply the city model type fuel economy calculated from the tests performed using alcohol or natural gas test fuel as determined in § 600.207 (b)(5)(ii) by 0.90, rounding the product to the nearest whole mpg; or

(2)(i) For specific labels for gasoline-fueled, diesel-fueled, alcohol-fueled, and natural gas-fueled automobiles, multiply the city model type fuel economy value determined in § 600.206 (a)(2)(iii), by 0.90, rounding the product to the nearest whole mpg; or

(ii) For specific labels for alcohol dual fuel and natural gas dual fuel automobiles:

(A) Multiply the city model type fuel economy calculated from the tests performed using gasoline or diesel test fuel as determined in § 600.206 (a)(2)(iii) and (4)(i) by 0.90, rounding the product to the nearest whole mpg; and

(B) Multiply the city model type fuel economy calculated from the tests performed using alcohol or natural gas test fuel as determined in § 600.206 (a)(2)(iii) and (4)(ii) by 0.90, rounding the product to the nearest whole mpg.

(b) For the purposes of calculating the highway model type fuel economy value for labeling the manufacturer shall:

(1)(i) For general labels for gasoline-fueled, diesel-fueled, alcohol-fueled, and natural gas-fueled automobiles, multiply the highway model type fuel economy value determined in § 600.207 (b), by 0.78, rounding the product to the nearest whole mpg; or

(ii) For general labels for alcohol dual fuel and natural gas dual fuel automobiles:

(A) Multiply the highway model type fuel economy calculated from the tests performed using gasoline or diesel test fuel as determined in § 600.207 (b)(5)(i) by 0.78, rounding the product to the nearest whole mpg; and

(B) Multiply the highway model type fuel economy calculated from the tests performed using alcohol or natural gas test fuel as determined in § 600.207 (b)(5)(ii) by 0.78, rounding the product to the nearest whole mpg; or

(2)(i) For specific labels for gasoline-fueled, diesel-fueled, alcohol-fueled, and natural gas-fueled automobiles, multiply the highway model type fuel economy value determined in § 600.206 (a)(iii), by 0.78, rounding the product to the nearest whole mpg; or

(ii) For specific labels for alcohol dual fuel and natural gas dual fuel automobiles:

(A) Multiply the highway model type fuel economy calculated from the tests performed using gasoline or diesel test fuel as determined in § 600.206 (a)(2)(iii) and (4)(i) by 0.78, rounding the product to the nearest whole mpg; and

(B) Multiply the highway model type fuel economy calculated from the tests performed using alcohol or natural gas test fuel as determined in § 600.206 (a)(2)(iii) and (4)(ii) by 0.78, rounding the product to the nearest whole mpg.

(c) If the resulting city value determined in paragraph (a) of this section exceeds the resulting highway value determined in paragraph (b) of this section, the city value will be set equal to the highway value.

(d) For the purposes of calculating the combined fuel economy for a model type, to be used in determining annual fuel costs under § 600.307, the manufacturer shall (except as provided for in paragraph (d)(2) of this section):

(1)(i) For gasoline-fueled, diesel-fueled, alcohol-fueled, and natural gas-fueled automobiles, harmonically average the unrounded city and highway values, determined in paragraphs (a)(1)(i) and (b)(1)(i), or (a)(2)(i) and (b)(2)(i) of this section weighted 0.55 and 0.45 respectively, and round to the

nearest whole mpg. (An example of this calculation procedure appears in appendix II of this part); or

(ii) For alcohol dual fuel and natural gas dual fuel automobiles, harmonically average the unrounded city and highway values from the tests performed using gasoline or diesel test fuel as determined in paragraphs (a)(1)(ii)(A) and (b)(1)(ii)(A), or (a)(2)(ii)(A) and (b)(2)(ii)(A) of this section.

(2) If the resulting city value determined in paragraph (a) of this section exceeds the resulting highway value determined in paragraph (b) of this section, the combined fuel economy will be set equal to the highway value, rounded to the nearest whole mpg.

[59 FR 39656, Aug. 3, 1994]

EFFECTIVE DATE NOTE: At 59 FR 39656, Aug. 3, 1994, §600.209–95 was added. This section contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

Subpart D—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—Labeling

SOURCE: 41 FR 49761, Nov. 10, 1976, unless otherwise noted.

§600.301–86 General applicability.

(a) The provisions of this subpart are applicable to 1986 and later model year gasoline-fueled and diesel automobiles.

(b)(1) Manufacturers that produce only electric vehicles are exempt from the requirement of this subpart, except with regard to the requirements in those sections pertaining specifically to electric vehicles.

(2) Manufacturers with worldwide production (excluding electric vehicle production) of less than 10,000 gasoline-fueled and/or diesel powered passenger automobiles and light trucks may optionally comply with the electric vehicle requirements in this subpart.

[49 FR 13850, Apr. 6, 1984]

§600.301–95 General applicability.

(a) The provisions of this subpart are applicable to 1995 and later model year gasoline-fueled, diesel-fueled, alcohol-fueled, natural gas-fueled, alcohol dual fuel, and natural gas dual fuel automobiles.

(b)(1) Manufacturers that produce only electric vehicles are exempt from the requirement of this subpart, except with regard to the requirements in those sections pertaining specifically to electric vehicles.

(2) Manufacturers with worldwide production (excluding electric vehicle production) of less than 10,000 gasoline-fueled and/or diesel powered passenger automobiles and light trucks may optionally comply with the electric vehicle requirements in this subpart.

[59 FR 39657, Aug. 3, 1994]

§600.302–77 Definitions.

The definitions in §600.002 apply to this subpart.

§600.303–77 Abbreviations.

The abbreviations in §600.003 apply to this subpart.

§600.304–77 Section numbering, construction.

The section numbering procedure set forth in §600.004 applies to this subpart.

§600.305–77 Recordkeeping.

The recordkeeping requirements set forth in §600.005 apply to this subpart.

§600.306–86 Labeling requirements.

(a) Prior to being offered for sale, each manufacturer shall affix or cause to be affixed and each dealer shall maintain or cause to be maintained on each automobile:

(1) A general fuel economy label (initial, or updated as required in §600.314) as described in §600.307(c) or:

(2) A specific label, as described in §600.307(d), for those automobiles manufactured or imported before the date that occurs 15 days after general labels have been determined by the manufacturer.

(i) If the manufacturer elects to use a specific label within a model type (as defined in §600.002(a)(19)), he shall also affix specific labels on all automobiles within this model type, except on those automobiles manufactured or imported before the date that labels are required to bear range values as required by

paragraph (b) of this section, or determined by the Administrator, or as permitted under § 600.310.

(ii) If a manufacturer elects to change from general to specific labels or vice versa within a model type, the manufacturer shall, within five calendar days, initiate or discontinue as applicable, the use of specific labels on all vehicles within a model type at all facilities where labels are affixed.

(3) For any vehicle for which a specific label is requested which has a combined unadjusted fuel economy value at or below the minimum tax-free value, the following statement must appear on the specific label:

[Manufacturer's name] may have to pay IRS a Gas Guzzler Tax on this vehicle because of the low fuel economy.

(4)(i) At the time a general fuel economy value is determined for a model type, a manufacturer shall, except as provided in paragraph (a)(4)(ii) of this section, relabel, or cause to be relabeled, vehicles which:

(A) Have not been delivered to the ultimate purchaser, and

(B) Have a combined model type fuel economy value of 0.1 mpg or more below the lowest fuel economy value at which a Gas Guzzler Tax of $0 is to be assessed.

(ii) The manufacturer has the option of relabeling vehicles during the first five working days after the general label value is known.

(iii) For those vehicle model types which have been issued a specific label and are subsequently found to have tax liability, the manufacturer is responsible for the tax liability regardless of whether the vehicle has been sold or not or whether the vehicle has been relabeled or not.

(b) The manufacturer shall include the current range of fuel economy of comparable automobiles (as described in §§ 600.311 and 600.314) in the label of each vehicle manufactured or imported more than 15 calendar days after the current range is made available by the Administrator.

(1) Automobiles manufactured before a date 16 or more calendar days after the initial label range is made available under § 600.311(c) may be labeled without a range of fuel economy of comparable automobiles. In place of the range of fuel economy of comparable automobiles, the label must contain a statement indicating that, as of the date of production or importation of this automobile, no range of fuel economy of comparable automobiles was available.

(2) Automobiles manufactured more than 15 calendar days after the initial or updated label range is made available under § 600.311 (c) or (d) will be labeled with the current range of fuel economy of comparable automobiles as approved for that label.

(c) The fuel economy label must be readily visible from the exterior of the automobile and remain affixed until the time the automobile is delivered to the ultimate consumer.

(1) The fuel economy label must be located on a side window. If the window is not large enough to contain both the Automobile Information Disclosure Act label and the fuel economy label, the manufacturer shall have the fuel economy label affixed on another window and as close as possible to the Automobile Information Disclosure Act label.

(2) The fuel economy label information may be included with the Automobile Information Disclosure Act label if the prominence and legibility of the fuel economy label is maintained. For this purpose, all fuel economy label information must be placed on a separate section in the label and may not be intermixed with the Automobile Information Disclosure Act label information, except for vehicle descriptions as noted in § 600.307–86(c).

(3) The manufacturer shall have the fuel economy label affixed in such a manner that appearance and legibility are maintained until after the vehicle is delivered to the ultimate consumer.

[49 FR 13850, Apr. 6, 1984, as amended at 49 FR 48149, Dec. 10, 1984; 52 FR 47877, Dec. 16, 1987]

§ 600.307–86 Fuel economy label format requirements.

(a)(1) Fuel economy labels must be:

(i) Rectangular in shape with a minimum height of 4.5 inches (114 mm) and a minimum length of 7.0 inches (178 mm) as depicted in Appendix VIII.

(ii) Printed in a color which contrasts with the paper color.

(iii) The label shall have a contrasting border at least 0.25 inches (6.4 mm) wide.

(2) The top 50 percent of the total fuel economy label area shall contain only the following information and in the same format depicted in the label format in Appendix VIII:

(i) The titles ''CITY MPG'' and ''HIGHWAY MPG'', centered over the applicable fuel economy estimates, in bold caps 10 points in size,

(ii) The city and highway fuel economy estimates calculated in accordance with § 600.209 (a) and (b),

(iii) The fuel pump logo, and

(iv) The phrase ''Compare this [vehicle/truck] to others in the FREE GAS MILEAGE GUIDE available at the dealer,'' shall be ''dropped-out'' of the top border as depicted in the sample label format in Appendix VIII. The phrase shall be in lower case in a medium condensed type except for the words ''FREE GAS MILEAGE GUIDE'' which shall be capitalized in a bold condensed type and no smaller than 12 points in size.

(3) The bottom 50 percent of the label shall contain the following information:

(i) The [vehicle/truck] description, as described in paragraph (c) or (d) of this section, when applicable.

(ii)(A) A statement: ''Actual mileage will vary with options, driving conditions, driving habits and [vehicle's/truck's] condition. Results reported to EPA indicate that the majority of [vehicle/truck] with these estimates will achieve between —— and —— mpg in the city, and between —— and —— mpg on the highway.''

(B) The range values for this statement are to be calculated in accordance with the following:

(*1*) The lower range values shall be determined by multiplying the city and highway estimates by 0.85, then rounding to the next lower integer value.

(*2*) The upper range values shall be determined by multiplying the city and highway estimates by 1.15 and rounding to the next higher integer value.

(iii)(A) A statement: ''For comparison shopping, all [vehicles/trucks] classified as [insert category as determined in § 600.315] have been issued mileage ratings ranging from —— to —— mpg city and —— to —— mpg highway.'' (The range values are those determined in accordance with § 600.311.) Or, when applicable,

(B) A statement: ''A range of fuel economy values for other [vehicles/trucks] classified as [insert category as determined in § 600.315] is not available at this time.'' or by the statement: ''Not available.''

(iv)(A) The statement: ''Estimated Annual Fuel Cost:'' followed by the appropriate value calculated in accordance with paragraph (g) or (h) of this section.

(B) At the manufacturers option, it may include the fuel cost and the annual mileage interval used to determine the annual fuel cost.

(v) For the 1986 model year only, the statement: ''Under EPA's previous fuel economy program, used prior to the 1985 model, year this [vehicle/truck] would have received a single estimate of [insert unadjusted city value, rounded to the nearest whole mpg, as determined in § 600.207(b)] mpg.''

(vi)(A) The Gas Guzzler statement, when applicable (see paragraph (f) of this section), must be centered on a separate line between the bottom border and the Estimated Annual Fuel Cost statements. The words ''Gas Guzzler'' shall be highlighted.

(B) The type size shall be at least as large as the largest type size in the bottom 50 percent of the label.

(4) The maximum type size for the statements located in the lower 50 percent of the label shall not exceed 10 points in size.

(b)(1) The city mpg number shall be displayed on the left and the highway mpg number displayed on the right.

(2)(i) Except for the digit ''one,'' each mpg digit shall measure at least 0.35 inches by 0.6 inches (9×15 mm) in width and height respectively.

(ii) The digit ''one,'' shall measure at least 0.2 inches by 0.6 inches (5 x 15 mm) in width and height respectively.

(3) The strike width of each mpg digit shall be at least 0.075 inches (1.9 mm).

(4)(i) MPG digits not printed as a single character shall be made of a matrix of smaller characters. This matrix shall be at least four characters wide

by five characters high (with the exception of three characters wide for the numerical character denoting ''one''.)

(ii) The small characters shall be made of successive overstrikes to form a reasonably dark and continuous line that approximates a single large character.

(5)(i) If manufacturer chooses to enlarge the label from that depicted in Appendix VIII the logo and the fuel economy label values, including the titles ''CITY MPG'' and ''HIGHWAY MPG'', must be increased in the same proportion.

(ii) The area bounded by the bottom of the fuel pump logo to the top of the border must continue to represent at least 50 percent of the available label area.

(c) The vehicle description on general labels will be as follows:

(1) Model year;

(2) Vehicle car line;

(3) Engine displacement, in cubic inches, cubic centi-meters, or liters whichever is consistent with the customary description of that engine;

(4) Number of engine cylinders or rotors;

(5) Additional engine description, if necessary to distinguish otherwise identical model types, as approved by the Administrator;

(6) Fuel metering system, including number of carburetor barrels, if applicable;

(7) Transmission class;

(8) Catalyst usage, if necessary to distinguish otherwise identical model types; and

(9) California emission control system usage, if applicable and if the Administrator determines that automobiles intended for sale in the State of California are likely to exhibit significant differences in fuel economy from those intended for sale in other states.

(d) The vehicle description on specific labels will be as follows:

(1) The descriptions of paragraph (c) of this section;

(2) Interia weight class;

(3) Axle ratio; and

(4) Other engine or vehicle parameters, if approved by the Administrator.

(e) Where the fuel economy label is incorporated with the pricing information sticker, the applicable vehicle description, as set forth in paragraph (c) or (d) of this section, does not have to be repeated if the information is readily found on the Motor Vehicle Information and Cost Savings Act label.

(f)(1) For fuel economy labels of passenger automobile model types requiring a tax statement under § 600.513, the phrase ''* * * Gas Guzzler Tax: $——— * * * ''.

(2) The tax value required by this paragraph shall be based on the combined fuel economy value for the model type calculated in accordance with § 600.207 and rounded to the nearest 0.1 mpg. Adjustments in accordance with § 600.209 will not be used to determine the tax liability.

(g) *General labels.* The annual fuel cost estimate for operating an automobile included in a model type shall be computed by using values for the fuel cost per gallon and average annual mileage, predetermined by the Administrator, and the fuel economy determined in § 600.209(d).

(1) The annual fuel cost estimate for a model type is computed by multiplying:

(i) Fuel cost per gallon expressed in dollars to the nearest 0.05 dollar, by

(ii) Average annual mileage, expressed in miles per year to the nearest, 1,000 miles per year, by

(iii) The average, rounded to the nearest 0.0001 gallons per mile of the fuel economy value determined in § 600.209(d) for a model type.

(2) The product computed in (g)(1) and rounded to the nearest dollar per year will comprise the annual fuel cost estimate that appears on general labels for the model type.

(h) *Specific labels.* The annual fuel cost estimate for operating an automobile included in a vehicle configuration will be computed by using values for the fuel cost per gallon and average annual mileage and the fuel economy determined in paragraph (h)(1)(iii) of this section.

(1) The annual fuel cost estimate for vehicle configuration is computed by multiplying:

(i) Fuel cost per gallon expressed in dollars to the nearest 0.05 dollar, by

(ii) Average annual mileage, expressed in miles per year to the nearest 1,000 miles per year, by

(iii) The inverse, rounded to the nearest 0.0001 gallons per mile, of the fuel economy value determined in §600.206(a)(2)(iii) for a vehicle configuration (city and highway values will be adjusted by the factors in §600.209 (a) and (b) and combined according to §600.209(d) before the calculation).

(2) The product computed in (h)(1) of this section and rounded to the nearest dollar per year will comprise the annual fuel cost estimate that appears on specific labels for that vehicle configuration.

[49 FR 13851, Apr. 6, 1984, as amended at 49 FR 48150, Dec. 10, 1984; 50 FR 10708, Mar. 15, 1985]

§600.307–95 Fuel economy label format requirements.

(a)(1) Fuel economy labels must be:

(i) Rectangular in shape with a minimum height of 4.5 inches (114 mm) and a minimum length of 7.0 inches (178 mm) as depicted in appendix VIII of this part.

(ii) Printed in a color which contrasts with the paper color.

(iii) The label shall have a contrasting border at least 0.25 inches (6.4 mm) wide.

(2) The top 50 percent of the total fuel economy label area shall contain only the following information and in the same format depicted in the label format in appendix VIII of this part:

(i) The titles ''CITY MPG'' and ''HIGHWAY MPG'', centered over the applicable fuel economy estimates, in bold caps 10 points in size.

(ii)(A) For gasoline-fueled, diesel-fueled, alcohol-fueled, and natural gas-fueled automobiles, the city and highway fuel economy estimates calculated in accordance with §600.209 (a) and (b).

(B) For alcohol dual fuel automobiles and natural gas dual fuel automobiles, the city and highway fuel economy estimates for operation on gasoline or diesel fuel as calculated in §600.209 (a)(1)(ii)(A) or (2)(ii)(A) and §600.209 (b)(1)(ii)(A) or (2)(ii)(A).

(iii) The fuel pump logo.

(iv) The phrase ''Compare this [vehicle/truck] to others in the FREE FUEL ECONOMY GUIDE available at the dealer,'' shall be ''dropped-out'' of the top border as depicted in the sample label format in appendix VIII of this part. The phase shall be in lower case in a medium condensed type except for the words ''FREE FUEL ECONOMY GUIDE'' which shall be capitalized in a bold condensed type and no smaller than 12 points in size.

(v)(A) For alcohol-fueled automobiles, the title ''(insert appropriate fuel (example ''METHANOL ''(M85))'')''. The title shall be positioned above the fuel pump logo and shall be in upper case in a bold condensed type and no smaller than 12 points in size.

(B) For natural gas-fueled automobiles, the title ''NATURAL GAS*''. The title shall be positioned above the fuel pump logo and shall be in upper-case in a bold condensed type and no smaller than 12 points in size.

(C) For alcohol dual fuel automobiles and natural gas dual fuel automobiles, the title ''DUAL FUEL*''. The title shall be positioned above the fuel pump logo and shall be in upper case in a bold condensed type and no smaller than 12 points in size.

(vi)(A) For alcohol-fueled automobiles, the title ''(insert appropriate fuel (example ''M85''))'' centered above the title ''CITY MPG'' and above the title ''HIGHWAY MPG'' in bold caps 10 points in size.

(B) For natural gas-fueled automobile, the title ''GASOLINE EQUIVALENT'' centered above the title ''CITY MPG'' and above the title ''HIGHWAY MPG'' in bold caps 10 points in size.

(C) For alcohol dual fuel automobiles and natural gas dual fuel automobiles, the title ''GASOLINE'' centered above the title ''CITY MPG'' and above the title ''HIGHWAY MPG'' in bold caps 10 points in size.

(3) The bottom 50 percent of the label shall contain the following information:

(i) The [vehicle/truck] description, as described in paragraph (c) or (d) of this section, when applicable.

(ii)(A) A statement: ''Actual mileage will vary with options, driving conditions, driving habits and [vehicle's/truck's] condition. Results reported to EPA indicate that the majority of [vehicles/trucks] with these estimates will

achieve between _____ and _____ mpg in the city, and between _____ and _____ mpg on the highway.''

(B) The range values for this statement are to be calculated in accordance with the following:

(*1*) The lower range values shall be determined by multiplying the city and highway estimates by 0.85, then rounding to the next lower integer value.

(*2*) The upper range values shall be determined by multiplying the city and highway estimates by 1.15 and rounding to the next higher integer value.

(iii)(A) A statement: ''For comparison shopping, all [vehicles/trucks] classified as [insert category as determined in § 600.315] have been issued mileage ratings ranging from _____ to _____ mpg city and _____ to _____ mpg highway.'' (The range values are those determined in accordance with § 600.311.); or, when applicable,

(B) A statement: ''A range of fuel economy values for other [vehicles/trucks] classified as [insert category as determined in § 600.315] is not available at this time.'' or by the statement: ''Not available.''

(iv)(A) The statement: ''Estimated Annual Fuel Cost:'' followed by the appropriate value calculated in accordance with paragraph (g) or (h) of this section. The estimated annual fuel cost value for alcohol dual fuel automobiles and natural gas dual fuel vehicles to appear on the fuel economy label shall be that calculated based on operating the vehicle on gasoline or diesel fuel as determined in § 600.307(g) and (h). At the manufacturers option, the label may also contain the estimated annual fuel cost value based on operating the vehicle on the alternative fuel.

(B) At the manufacturers option, it may include the fuel cost and the annual mileage interval used to determine the annual fuel cost.

(v) For the 1986 model year only, the statement: ''Under EPA's previous fuel economy program, used prior to the 1985 model year, this [vehicle/truck] would have received a single estimate of [insert unadjusted city value rounded to the nearest whole mpg, as determined in § 600.207(b)] mpg.''

(vi)(A) The Gas Guzzler statement, when applicable (see paragraph (f) of this section), must be centered on a separate line between the bottom border and the Estimated Annual Fuel Cost statements. The words ''Gas Guzzler'' shall be highlighted.

(B) The type size shall be at least as large as the largest type size in the bottom 50 percent of the label.

(vii)(A) For alcohol-fueled, and natural gas-fueled automobiles, the statement: ''*This vehicle operates on [insert appropriate fuel(s)] only.'' shall appear above the bottom border. The phrase shall be in lower case in a medium condensed type except for the fuels listed which shall be capitalized in a bold condensed type no smaller than 12 points in size.

(B) For natural gas-fueled automobiles, the statements: ''All fuel economy values on this label pertain to gasoline equivalent fuel economy. To convert these values into units of miles per 100 cubic feet of natural gas, multiply by 0.823.'' At the manufacturers option, the statement ''To convert these values into units of miles per 100 cubic feet of natural gas, multiply by 0.823.'' may be replaced by the statement ''The fuel economy in units of miles per (insert units used in retail) is estimated to be (insert city fuel economy value) in the city, and (insert highway fuel economy value) on the highway.

(C) For alcohol dual fuel automobiles and natural gas dual fuel automobiles, the statement: ''This vehicle operates on [insert gasoline or diesel as appropriate] and [insert other fuel(s) as appropriate].'' shall appear above the bottom border. The phrase shall be in lower case in a medium condensed type except for the words ''gasoline'' or ''diesel'' (as appropriate) and the other fuels listed, which shall be capitalized in a bold condensed type no smaller than 12 points in size.

(viii) For alcohol dual fuel automobiles and natural gas dual fuel automobiles, the statement: ''All fuel economy values on this label pertain to [insert gasoline or diesel as appropriate] fuel usage. [insert other fuel(s) as appropriate] fuel(s) usage will yield different values. See the FREE FUEL ECONOMY GUIDE for information on [insert other fuel(s)] .'' At the manufacturers option, the above statements may be replaced by the statement ''The

fuel economy while using [insert appropriate fuel (example ''M85)] is estimated to be [insert city fuel economy value and appropriate units] in the city and [insert highway fuel economy value and appropriate units] on the highway. See the FREE FUEL ECONOMY GUIDE for other information on [insert appropriate fuel].

(4) The maximum type size for the statements located in the lower 50 percent of the label shall not exceed 10 points in size, except as provided for in paragraphs (a)(3)(vii)(A) and (B) of this section.

(b)(1) The city mpg number shall be displayed on the left and the highway mpg number displayed on the right.

(2)(i) Except for the digit ''one,'' each mpg digit shall measure at least 0.35 inches by 0.6 inches (9x15mm) in width and height respectively.

(ii) The digit ''one,'' shall measure at least 0.2 inches by 0.6 inches (5x15mm) in width and height respectively.

(3) The strike width of each mpg digit shall be at least 0.075 inches (1.9mm).

(4)(i) MPG digits not printed as a single character shall be made of a matrix of smaller characters. This matrix shall be at least four characters wide by five characters high (with the exception of three characters wide for the numerical character denoting ''one''.)

(ii) The small characters shall be made of successive overstrikes to form a reasonably dark and continuous line that approximates a single large character.

(5)(i) If manufacturer chooses to enlarge the label from that depicted in Appendix VIII of this part, the logo and the fuel economy label values, including the titles ''CITY MPG'' and ''HIGHWAY MPG,'' must be increased in the same proportion.

(ii) The area bounded by the bottom of the fuel pump logo to the top of the border must continue to represent at least 50 percent of the available label area.

(c) The vehicle description on general labels will be as follows:

(1) Model year;

(2) Vehicle car line;

(3) Engine displacement, in cubic inches, cubic centimeters, or liters whichever is consistent with the customary description of that engine;

(4) Number of engine cylinders or rotors;

(5) Additional engine description, if necessary to distinguish otherwise identical model types, as approved by the Administrator;

(6) Fuel metering system, including number of carburetor barrels, if applicable;

(7) Transmission class;

(8) Catalyst usage, if necessary to distinguish otherwise identical model types; and

(9) California emission control system usage, if applicable and if the Administrator determines that automobiles intended for sale in the State of California are likely to exhibit significant differences in fuel economy from those intended for sale in other states.

(d) The vehicle description on specific labels will be as follows:

(1) The descriptions of paragraph (c) of this section;

(2) Inertia weight class;

(3) Axle ratio; and

(4) Other engine or vehicle parameters, if approved by the Administrator.

(e) Where the fuel economy label is incorporated with the pricing information sticker, the applicable vehicle description, as set forth in paragraph (c) or (d) of this section, does not have to be repeated if the information is readily found on the Motor Vehicle Information and Cost Savings Act label.

(f)(1) For fuel economy labels of passenger automobile model types requiring a tax statement under § 600.513, the phrase ''* * * Gas Guzzler Tax: $_____ * * *''.

(2) The tax value required by this paragraph shall be based on the combined fuel economy value for the model type calculated in accordance with § 600.207 and rounded to the nearest 0.1 mpg. Adjustments in accordance with § 600.209 will not be used to determine the tax liability.

(g) *General labels.* The annual fuel cost estimate for operating an automobile included in a model type shall be computed by using values for the fuel cost per volume (gallon for liquid fuels, cubic foot for gaseous fuels) and average annual mileage, predetermined

by the Administrator, and the fuel economy determined in § 600.209(d).

(1) The annual fuel cost estimate for a model type is computed by multiplying:

(i) Fuel cost per gallon (natural gas must be expressed in units of cost per equivalent gallon, where 100 SCF = 0.823 equivalent gallons) expressed in dollars to the nearest 0.05 dollar; by

(ii) Average annual mileage, expressed in miles per year to the nearest 1,000 miles per year; by

(iii) The average, rounded to the nearest 0.0001 gallons per mile (natural gas must be expressed in units of gallons equivalent per mile where 100 SCF=0.823 equivalent gallons) of the fuel economy value determined in § 600.209(d) for a model type.

(2) The product computed in paragraph (g)(1) of this section and rounded to the nearest dollar per year will comprise the annual fuel cost estimate that appears on general labels for the model type.

(h) *Specific labels.* The annual fuel cost estimate for operating an automobile included in a vehicle configuration will be computed by using the values for the fuel cost per volume (gallon for liquid fuels, cubic feet for gaseous fuels) and average mileage and the fuel economy determined in paragraph (h)(1)(iii) of this section.

(1) The annual fuel cost estimate for vehicle configuration is computed by multiplying:

(i) Fuel cost per gallon (natural gas must be expressed in units of cost per equivalent gallon, where 100 SCF=0.823 equivalent gallons) expressed in dollars to the nearest 0.05 dollar; by

(ii) Average annual mileage, expressed in miles per year to the nearest 1,000 miles per year; by

(iii) The inverse, rounded to the nearest 0.0001 gallons per mile (natural gas must be expressed in units of gallon equivalent per mile, where 100 SCF=0.823 equivalent gallons) of the fuel economy value determined in § 600.206(a)(2)(iii) for a vehicle configuration (city and highway values will be adjusted by the factors in § 600.209(a) and (b) and combined according to § 600.209(d) before the calculation).

(2) The product computed in paragraph (h)(1) of this section and rounded to the nearest dollar per year will comprise the annual fuel cost estimate that appears on specific labels for that vehicle configuration.

[59 FR 39657, Aug. 3, 1994]

EFFECTIVE DATE NOTE: At 59 FR 39657, Aug. 3, 1994, § 600.307–95 was added. This section contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 600.310–86 Labeling of high altitude vehicles.

(a) The Administrator may approve, at the request of the manufacturer, specific labels for high altitude vehicles according to § 600.306.

(b) A high altitude vehicle may be labeled with a general or specific label by a manufacturer without regard to the type of label (general or specific) used at low altitude for that model type or vehicle configuration.

[49 FR 13852, Apr. 6, 1984]

§ 600.311–86 Range of fuel economy for comparable automobiles.

(a) The Administrator will determine the range of city and the range of highway fuel economy values for each class of comparable automobiles.

(b) The range of city fuel economy values within a class is the maximum city and the minimum city fuel economy value for all general labels as determined in § 600.307(b)(3) regardless of manufacturer. The range of highway values is determined in the same manner.

(c) The initial range will be made available on a date specified by the Administrator that closely coincides to the date of the general model introduction for the industry.

(d) The ranges of comparable fuel economy values for a class of automobiles will be updated periodically and will be derived from the latest available label values reported to the Administrator for that class of automobiles.

(e) If the Administrator determines that automobiles intended for sale in California are likely to exhibit significant differences in fuel economy from those intended for sale in other states, he will compute separate ranges of fuel

economy values for each class of automobiles for California and for the other states.

(f) For high altitude vehicles determined under §600.310, both general and specific labels will contain the range of comparable fuel economy computed in this section.

(g) The manufacturer shall include the appropriate range of fuel economy determined by the Administrator in paragraph (c) or (d) of this section, on each label affixed to an automobile within the class, except as provided in §600.306(b)(1).

[49 FR 13852, Apr. 6, 1984, as amended at 49 FR 28150, Dec. 10, 1984]

§600.312–86 Labeling, reporting, and recordkeeping; Administrator reviews.

(a)(1) The manufacturer shall determine label values (general and specific) using the procedures specified in subparts C and D of this part and submit the label values, and the data sufficient to calculate the label values, to the Administrator according to the timetable specified in §600.313.

(2) Except under paragraph (a)(4) of this section, the manufacturer is not required to obtain Administrator approval of label values prior to the introduction of vehicles for sale.

(3) The label values that the manufacturer calculates and submits under paragraph (a)(1) of this section shall constitute the EPA fuel economy estimates unless the Administrator determines that they are not calculated according to the procedures specified in subparts C and D of this part.

(4) If required by the Administrator, the manufacturer shall obtain Administrator approval of label values prior to affixing labels to vehicles.

(5)(i) If at any time during the model year, any label values are determined not to be calculated according to the procedures specified in subparts C and D of this part, the Administrator shall notify the manufacturer in writing.

(ii) If the Administrator has sufficient information to enable calculation of the correct label values, this notification shall specify the correct label values which constitute the EPA Fuel Economy Estimates.

(iii) If additional information is required, the Administrator shall request such additional information and a recalculation of the label value by the manufacturer.

(6) If the Administrator determines revised label values under paragraph (a)(5) of this section are lower than the label values calculated by the manufacturer, the manufacturer shall affix the revised labels to all affected new vehicles which are unsold beginning no later than 15 calendar days after the date of notification by the Administrator.

(b)(1) The manufacturer is responsible for affixing vehicle labels that meet the format and content requirements of this subpart.

(2) The manufacturer shall retain for examination, at the Administrator's discretion, typical label formats representing all information required on the manufacturer's fuel economy labels. The information shall include the text of all required and voluntary information as well as the size and color of print and paper, spacing, and location of all printed information. Where the fuel economy label is incorporated with the Automobile Information Disclosure Act label, the above requirements pertain to those sections of the label concerning fuel economy labeling information.

(3) If the Administrator determines upon examination of record that the label format or content do not meet the requirements of this subpart, the Administrator may:

(i) Require the manufacturer to make specific changes in subsequent labels, and

(ii) Require such changes to be implemented on a reasonable timetable, but no sooner than 15 days from the date of notification to the manufacturer.

[49 FR 13852, Apr. 6, 1984]

§600.313–86 Timetable for data and information submittal and review.

(a) A manufacturer shall submit to the Administrator fuel economy label values and sufficient information to determine fuel economy label values within the following time constraints (except for manufacturers designated under §600.312(a)(4) who shall submit the information no later than thirty

calendar days prior to the date the model type [vehicle] is initially offered for sale.

(1) For initial general label values, no later than five working days before the date that the model type is initially offered for sale;

(2) For specific label values, no later than five working days before any vehicles are offered for sale.

(3) For model types having label values updated because of running changes (as required under § 600.314(b)), the submission must be made at least five working days before the date of implementation of the running change.

(b) A manufacturer may not proceed with any label calculation until the data from each vehicle used in such calculation satisfies the requirements of § 600.008.

(c) If the Administrator has waived any testing in paragraph (b) of this section and subsequently finds that the decision to waive testing was based on an incorrect data submission or that a fuel economy offset exists (based on subsequent testing of that manufacturer's product line), the Administrator may require confirmation of the data generated by any such waived vehicle.

[49 FR 13853, Apr. 6, 1984]

§ 600.314–86 Updating label values, annual fuel cost, Gas Guzzler Tax, and range of fuel economies for comparable automobiles.

(a) The label values established in § 600.312 shall remain in effect for the model year unless updated in accordance with paragraph (b) of this section.

(b)(1) The manufacturer shall recalculate the model type fuel economy values for any model type containing base levels affected by running changes specified in §600.507(a).

(2) For separate model types created in § 600.207(a)(2), the manufacturer shall recalculate the model type values for any additions or deletions of subconfigurations to the model type. Minimum data requirements specified in §600.010(c)(1)(ii) shall be met prior to recalculation.

(3) Label value recalculations shall be performed as follows:

(i) The manufacturer shall use updated total model year projected sales for label value recalculations.

(ii) All model year data approved by the Administrator at the time of the recalculation for that model type shall be included in the recalculation.

(iii) Using the additional data under paragraph (b) of this section, the manufacturer shall calculate new model type city and highway values in accordance with §§ 600.207 and 600.209 except that the values shall be rounded to the nearest 0.1 mpg.

(iv) The existing label values, calculated in accordance with §§ 600.207 and 600.209, shall be rounded to the nearest 0.1 mpg.

(4)(i) If the recalculated city or highway fuel economy value in paragraph (b)(3)(iii) of this section is less than the respective city or highway value in paragraph (b)(3)(iv) of this section by 1.0 mpg or more, the manufacturer shall affix labels with the recalculated model type values (rounded to whole mpg's) to all new vehicles of that model type beginning on the day of implementation of the running change.

(ii) If the recalculated city or highway fuel economy value in paragraph (b)(3)(iii) of this section is higher than the respective city or highway value in paragraph (b)(3)(iv) of this section by 1.0 mpg or more, then the manufacturer has the option to use the recalculated values for labeling the entire model type beginning on the day of implementation of the running change.

(c) For fuel economy labels updated using recalculated fuel economy values determined in accordance with paragraph (b) of this section, the manufacturer shall concurrently update all other label information (e.g., the annual fuel cost, range of comparable vehicles and the applicability of the Gas Guzzler Tax if required by Department of Treasury regulations).

(d) The Administrator shall periodically update the range of fuel economies of comparable automobiles based upon all label data supplied to the Administrator.

[49 FR 13853, Apr. 6, 1984]

§ 600.315–82 Classes of comparable automobiles.

(a) The Secretary will classify automobiles as passenger automobiles or

light trucks (nonpassenger automobiles) in accordance with 49 CFR part 523.

(1) The Administrator will classify passenger automobiles by car line into one of the following classes based on interior volume index or seating capacity except for those passenger automobiles which the Administrator determines are most appropriately classed as special purpose vehicles as provided in paragraph (a)(3) of this section:

(i) *Two seaters.* A car line shall be classed as ''Two Seater'' if the majority of the vehicles in that car line have no more than two designated seating positions as such term is defined in the regulations of the National Highway Traffic Safety Administration, Department of Transportation (DOT), 49 CFR 571.3.

(ii) *Minicompact cars.* Interior volume index less than 85 cubic feet.

(iii) *Subcompact cars.* Interior volume index greater than or equal to 85 cubic feet but less than 100 cubic feet.

(iv) *Compact cars.* Interior volume index greater than or equal to 100 cubic feet but less than 110 cubic feet.

(v) *Midsize cars.* Interior volume index greater than or equal to 110 cubic feet but less than 120 cubic feet.

(vi) *Large cars.* Interior volume index greater than or equal to 120 cubic feet.

(vii) *Small station wagons.* Station wagons with interior volume index less than 130 cubic feet.

(viii) *Midsize station wagons.* Station wagons with interior volume index greater than or equal to 130 cubic feet but less than 160 cubic feet.

(ix) *Large station wagons.* Station wagons with interior volume index greater than or equal to 160 cubic feet.

(2) The Administrator will classify nonpassenger automobiles into the following categories: small pickup trucks, standard pickup trucks, vans, and special purpose vehicles. Pickup trucks will be separated by car line on the basis of gross vehicle weight rating (GVWR). For pickup truck car lines with more than one GVWR, the GVWR of the pickup truck car line is the arithmetic average of all distinct GVWR's less than or equal to 8,500 pounds available for that car line.

(i) *Small pickup trucks.* Pickup trucks with a GVWR less than 4,500 pounds.

(ii) *Standard pickup trucks.* Pickup trucks with a GVWR of 4,500 pounds up to and including 8,500 pounds.

(iii) *Vans.*

(3) All automobiles with GVWR less than or equal to 8,500 pounds which possess special features and which the Administrator determines are more appropriately classified separately from typical automobiles or which do not meet the requirements of paragraphs (a) (1) and (2) of this section will be classified as *special purpose vehicles.*

(4) Once a certain car line is classified by the Administrator, the classification will remain in effect for the model year.

(b) *Interior volume index-passenger automobiles.* (1) The interior volume index shall be calculated for each car line which is not a ''two seater'' car line, in cubic feet rounded to the nearest 0.1 cubic foot. For car lines with more than one body style, the interior volume index for the car line is the arithmetic average of the interior volume indexes of each body style in the car line.

(2) For all body styles except station wagons and hatchbacks with more than one seat (e.g., with a second or third seat) equipped with seatbelts as required by DOT safety regulations, interior volume index is the sum, rounded to the nearest 0.1 cubic feet, of the front seat volume, the rear seat volume, if applicable, and the luggage capacity.

(3) For all station wagons and hatchbacks with more than one seat (e.g., with a second or third seat) equipped with seatbelts as required by DOT safety regulations, interior volume index is the sum, rounded to the nearest 0.1 cubic feet, of the front seat volume, the rear seat volume, and the cargo volume index.

(c) All interior and cargo dimensions are measured in inches to the nearest 0.1 inch. All dimensions and volumes shall be determined from the base vehicles of each body style in each car line, and do not include optional equipment. The dimensions H61, W3, W5, L34, H63, W4, W6, L51, H201, L205, L210, L211,

H198, and volume V1 are to be determined in accordance with the procedures outlined in Motor Vehicle Dimensions SAE J1100a (Report of Human Factors Engineering Committee, Society of Automotive Engineers, approved September 1973 and last revised September 1975) except as noted herein:

(1) *SAE J1100a(2.3). Cargo dimensions.* All dimensions measured with the front seat positioned the same as for the interior dimensions and the second seat, for the station wagons and hatchbacks, in the upright position. All head restraints shall be in the stowed position and considered part of the seat.

(2) *SAE J1100a(8)—Luggage capacity.* Total of columns of individual pieces of standard luggage set plus H boxes stowed in the luggage compartment in accordance with the procedure described in 8.2. For passenger automobiles with no rear seat or with two rear seats with no rear seatbelts, the luggage compartment shall include the area to the rear of the front seat, with the rear seat (if applicable) folded, to the height of a horizontal plane tangent to the top of the front seatback.

(3) *SAE J1100a(7)—Cargo dimensions.* (i) *L210—Cargo length at second seatback height-hatchback.* The minimum horizontal dimension from the ''X'' plane tangent to the rearmost surface of the second seatback to the inside limiting interference of the hatchback door on the zero ''Y'' plane.

(ii) *L211—Cargo length at floor-second-hatchback.* The minimum horizontal dimensions at floor level from the rear of the second seatback to the normal limiting interference of the hatchback door on the vehicle zero ''Y'' plane.

(iii) *H198—Second seatback to load floor height.* The dimension measured vertically from the horizontal tangent to the top of the second seatback to the undepressed floor covering.

(d) The front seat volume is calculated in cubic feet by dividing 1,728 into the product of three terms listed below and rounding the quotient to the nearest 0.001 cubic feet:

(1) *H61—Effective head room-front.* (In inches, obtained according to paragraph (c) of this section),

(2)(i) *(W3+W5+5)/2—Average of shoulder and hip room-front, if hip room is more than 5 inches less than shoulder room.* (In inches, W3 and W5 are obtained according to paragraph (c) of this section), or

(ii) *W3—Shoulder room-front, if hip room is not more than 5 inches less than shoulder room.* (In inches, W3 is obtained according to paragraph (c) of this section), and

(3) *L34—Maximum effective leg room-accelerator.* (In inches, obtained according to paragraph (c) of this section.) Round the quotient to the nearest 0.001 cubic feet.

(e) The rear seat volume is calculated in cubic feet, for vehicles within a rear seat equipped with rear seat belts (as required by DOT), by dividing 1,728 into the product of three terms listed below and rounding the quotient to the nearest 0.001 cubic feet:

(1) *H63—Effective head room-second.* (Inches obtained according to paragraph (c) of this section),

(2)(i) *(W4+W6+5)/2—Average of shoulder and hip room-second, if hip room is more than 5 inches less than shoulder room.* (In inches, W4 and W6 are obtained according to paragraph (c) of this section), or

(ii) *W4—Shoulder room-second, if hip room is not more than 5 inches less than shoulder room.* (In inches, W3 is obtained according to paragraph (c) of this section), and

(3) *L51—Minimum effective leg room-second.* (In inches obtained according to paragraph (c) of this section.)

(f) The luggage capacity is V1, the usable luggage capacity obtained according to paragraph (c) of this section. For passenger automobiles with no rear seat or with a rear seat but no rear seat belts, the area to the rear of the front seat shall be included in the determination of V1, usable luggage capacity, as outlined in paragraph (c) of this section.

(g) *Cargo volume index.* (1) For station wagons the cargo volume index V2 is calculated, in cubic feet, by dividing 1,728 into the product of three terms and rounding the quotient to the nearest 0.001 cubic feet:

(i) *W4—Shoulder room-second.* (In inches obtained according to paragraph (c) of this section.)

(ii) *H201—Cargo height.* (In inches obtained according to paragraph (c) of this section.)

(iii) *L205—Cargo length at belt-second.* (In inches obtained according to paragraph (c) of this section.)

(2) For hatchbacks, the cargo volume index V3 is calculated, in cubic feet, by dividing 1,728 into the product of three terms:

(i) Average cargo length, which is the arithmetic average of:

(A) *L210—Cargo length at second seatback height-hatchback.* (In inches obtained according to paragraph (c) of this section);

(B) *L211—Cargo length at floor-second-hatchback.* (In inches obtained according to paragraph (c) of this section);

(ii) *W4—Shoulder room-second.* (In inches obtained according to paragraph (c) of this section);

(iii) *H198—Second seatback to load floor height.* (In inches obtained according to paragraph (c) of this section.) Round the quotient to the nearest 0.001 cubic foot.

(h) The following data must be submitted to the Administrator no later than the time of a general label request. Data shall be included for each body style in the car line covered by that general label.

(1) For all passenger automobiles:

(i) Dimensions H61, W3, L34 determined in accordance with paragraph (c) of this section.

(ii) Front seat volume determined in accordance with paragraph (d) of this section.

(iii) Dimensions H63, W4, L51 (if applicable) determined in accordance with paragraph (c) of this section.

(iv) Rear seat volume (if applicable) determined in accordance with paragraph (e) of this section.

(v) The interior volume index determined in accordance with paragraph (b) of this section for:

(A) Each body style, and

(B) The car line.

(vi) The class of the car line as determined in paragraph (a) of this section.

(2) For all passenger automobiles except station wagons and hatchbacks with more than one seat (e.g., with a second or third seat) equipped with seat belts as required by DOT safety regulations:

(i) The quantity and letter designation of the pieces of the standard luggage set installed in the vehicle in the determination of usable luggage capacity V1, and

(ii) The usable luggage capacity V1, determined in accordance with paragraph (f) of this section.

(3) For station wagons with more than one seat (e.g., with a second or third seat) equipped with seat belts as required by DOT safety regulations:

(i) The dimensions H201 and L205 determined in accordance with paragraph (c) of this section, and

(ii) The cargo volume index V2 determined in accordance with paragraph (g)(1) of this section.

(4) For hatchbacks with more than one seat (e.g., with a second or third seat) equipped with seat belts as required by DOT safety regulations:

(i) The dimensions L210, L211, and H198 determined in accordance with paragraph (c) of this section.

(ii) The cargo volume index V3 determined in accordance with paragraph (g)(2) of this section.

(5) For pickup trucks:

(i) All GVWR's of less than or equal to 8,500 pounds available in the car line.

(ii) The arithmetic average GVWR for the car line.

[47 FR 49814, Nov. 2, 1982]

§ 600.316–78 Multistage manufacture.

Where more than one person is the manufacturer of a vehicle, the final stage vehicle manufacturer (as defined in 49 CFR 549.3) is treated as the manufacturer for purposes of compliance with this subpart.

[42 FR 45672, Sept. 12, 1977]

Subpart E—Fuel Economy Regulations for 1977 and Later Model Year Automobiles—Dealer Availability of Fuel Economy Information

SOURCE: 41 FR 49764, Nov. 10, 1976, unless otherwise noted.

§ 600.401–77 General applicability.

The provisions of this subpart are applicable to 1977 and later model year automobiles.

§ 600.402–77 Definitions.

The definitions in § 600.002 apply to this subpart.

§ 600.403–77 Abbreviations.

The abbreviations in § 600.003 apply to this subpart.

§ 600.404–77 Section numbering, construction.

The section numbering procedure specified in § 600.004 applies to this subpart.

§ 600.405–77 Dealer requirements.

(a) Each dealer shall prominently display at each location where new automobiles are offered for sale booklets containing the information specified in § 600.407. The dealer shall provide these booklets without charge and in sufficient quantity to be available for retention by each prospective purchaser upon his request. The dealer will be expected to make these booklets available as soon as they are received by the dealer, but in no case later than 15 working days after notification is given of booklet availability.

(b) The dealer shall display these booklets in the same manner and in each location used to display brochures describing the automobiles offered for sale by the dealer. The display shall include information that similar booklets containing the EPA fuel economy information are also available through the mail by writing to Fuel Economy, Pueblo, Colorado 81009.

(c) The dealer shall display the booklet applicable to each model year automobile offered for sale at the location. If, as described in § 600.406, a regional edition of the booklet is prepared for California automobiles:

(1) Each dealer who offers automobiles for sale at a location within the State of California shall display the California regional edition of the booklet.

(2) Each dealer who offers automobiles for sale at locations outside the State of California, and expects that at least 50 percent of the automobiles eventually sold at the location during the model year will be California configurations, shall display the California regional edition of the booklet. These dealers may also display the national edition of the booklet provided both editions are displayed with equal prominence.

§ 600.406–77 [Reserved]

§ 600.407–77 Booklets displayed by dealers.

(a) Booklets displayed by dealers in order to fulfill the obligations of § 600.405 may be either the Gas Mileage Guide published by the FEA Administrator or a booklet approved by the Administrator of EPA containing the same information, format, and order as the booklet published by the FEA Administrator.

(b) The booklet may highlight the dealer's product line by contrasting color of ink or boldface type and may include other supplemental information regarding the dealer's product line subject to approval by the Administrator.

(c) A manufacturer's name and logo or a dealer's name and address or both may appear on the back cover of the booklet.

Subpart F—Fuel Economy Regulations for Model Year 1978 Passenger Automobiles and for 1979 and Later Model Year Automobiles (Light Trucks and Passenger Automobiles)—Procedures for Determining Manufacturer's Average Fuel Economy

AUTHORITY: Sec. 301, Pub. L. 94–163, 89 Stat. 901 (15 U.S.C. 2001, 2003, 2005, 2006).

SOURCE: 42 FR 45662, Sept. 12, 1977, unless otherwise noted.

§ 600.501–85 General applicability.

(a) Except as provided in paragraph (c) of this section, the provisions of this subpart are applicable to 1985 and later model year gasoline-fueled and diesel automobiles.

(b)(1) Manufacturers that produce only electric vehicles are exempt from the requirement of this subpart, except with regard to the requirements in those sections pertaining specifically to electric vehicles.

(2) Manufacturers with worldwide production (excluding electric vehicle production) of less than 10,000 gasoline-fueled and/or diesel powered passenger automobiles and light trucks may optionally comply with the electric vehicle requirements in this subpart.

(c) Subject to prior approval by the Administrator, manufacturers may optionally implement, for 1985 model year vehicles, provisions of this subpart that are applicable to 1986 and later model year vehicles.

[49 FR 13847, Apr. 6, 1984]

§600.501–86 General applicability.

(a) The provisions of this subpart are applicable to 1986 and later model year gasoline-fueled and diesel automobiles.

(b)(1) Manufacturers that produce only electric vehicles are exempt from the requirement of this subpart, except with regard to the requirements in those sections pertaining specifically to electric vehicles.

(2) Manufacturers with worldwide production (excluding electric vehicle production) of less than 10,000 gasoline-fueled and/or diesel powered passenger automobiles and light trucks may optionally comply with the electric vehicle requirements in this subpart.

[49 FR 13853, Apr. 6, 1984]

§600.501–93 General applicability.

(a) The provisions of this subpart are applicable to 1993 and later model year gasoline-fueled, diesel-fueled, alcohol-fueled, natural gas-fueled, alcohol dual fuel and natural gas dual fuel automobiles.

(b)(1) Manufacturers that produce only electric vehicles are exempt from the requirement of this subpart, except with regard to the requirements in those sections pertaining specifically to electric vehicles.

(2) Manufacturers with worldwide production (excluding electric vehicle production) of less than 10,000 gasoline-fueled and/or diesel powered passenger automobiles and light trucks may optionally comply with the electric vehicle requirements in this subpart.

[59 FR 39659, Aug. 3, 1994]

§600.502–81 Definitions.

(a) The following definitions apply beginning with the 1979 model year. The definitions in §600.502–78 remain effective except that provision (a)(2)(ii) is hereby superseded. The definitions in §600.002 also apply to this subpart.

(1) ''Declared value'' of imported components shall be:

(i) The value at which components are declared by the importer to the U.S. Customs Service at the date of entry into the customs territory of the United States, or

(ii) With respect to imports into Canada, the declared value of such components as if they were declared as imports into the United States at the date of entry into Canada, or

(iii) With respect to imports into Mexico (when §600.511–80(b)(3) applies), the declared value of such components as if they were declared as imports into the United States at the date of entry into Mexico.

(2) *Cost of production* of a car line shall mean the aggregate of the products of:

(i) The average U.S. dealer wholesale price for such car line as computed from each official dealer price list effective during the course of a model year, and

(ii) The number of automobiles within the car line produced during the part of the model year that the price list was in effect.

(3) *Equivalent petroleum-based fuel economy value* means a number which represents the average number of miles traveled by an electric vehicle per gallon of gasoline.

[45 FR 49262, July 24, 1980, as amended at 59 FR 678, Jan. 6, 1994; 59 FR 33914, July 1, 1994]

§600.503–78 Abbreviations.

The abbreviations in §600.003 apply to this subpart.

§600.504–78 Section numbering, construction.

The section numbering procedure set forth in §600.004 applies to this subpart.

§600.505–78 Recordkeeping.

The recordkeeping procedure set forth in §600.005 applies to this subpart.

§ 600.507–86 Running change data requirements.

(a) Except as specified in paragraph (d) of this section, the manufacturer shall submit additional running change fuel economy data as specified in paragraph (b) of this section for any running change approved or implemented under § 86.079–32, § 86.079–33, or § 86.082–34 which:

(1) Creates a new base level or,

(2) Affects an existing base level by:

(i) Adding an axle ratio which is at least 10 percent larger (or, optionally, 10 percent smaller) than the largest axle ratio tested.

(ii) Increasing (or, optionally, decreasing) the road-load horsepower for a subconfiguration by 10 percent or more for the individual running change or, when considered cumulatively, since original certification (for each cumulative 10 percent increase using the originally certified road-load horsepower as a base).

(iii) Adding a new subconfiguration by increasing (or, optionally, decreasing) the equivalent test weight for any previously tested subconfiguration in the base level.

(b)(1) The additional running change fuel economy data requirement in paragraph (a) of this section will be determined based on the sales of the vehicle configurations in the created or affected base level(s) as updated at the time of running change approval.

(2) Within each newly created base level as specified in paragraph (a)(1) of this section, the manufacturer shall submit data from the highest projected total model year sales subconfiguration within the highest projected total model year sales configuration in the base level.

(3) Within each base level affected by a running change as specified in paragraph (a)(2) of this section, fuel economy data shall be submitted for the vehicle configuration created or affected by the running change which has the highest total model year sales. The test vehicle shall be of the subconfiguration created by the running change which has the highest projected total model year sales within the applicable vehicle configuration.

(c) The manufacturer shall submit the fuel economy data required by this section to the Administrator in accordance with § 600.314(b).

(d) For those model types created under § 600.207(a)(2), the manufacturer shall submit data for each subconfiguration added by a running change.

[49 FR 13854, Apr. 6, 1984, as amended at 49 FR 48150, Dec. 10, 1984]

§ 600.509–86 Voluntary submission of additional data.

(a) The manufacturer may, at his option, submit data in addition to the data required by the Administrator.

(b) Additional fuel economy data may be submitted by the manufacturer for any vehicle configuration which is to be tested as required in § 600.507 or for which fuel economy data were previously submitted under paragraph (c) of this section.

(c) Within a base level, additional fuel economy data may be submitted by manufacturing for any vehicle configuration which is not required to be tested by § 600.507.

[49 FR 13854, Apr. 6, 1984]

§ 600.510–86 Calculation of average fuel economy.

(a) Average fuel economy will be calculated to the nearest 0.1 mpg for the classes of automobiles identified herein, and the results of such calculations will be reported to the Secretary of Transportation for use in determining compliance with the applicable fuel economy standards.

(1) An average fuel economy calculation will be made for the category of passenger automobiles that is domestically manufactured as defined in § 600.511(d)(1).

(2) An average fuel economy calculation will be made for the category of passenger automobiles that is not domestically manufactured as defined in § 600.511(d)(2).

(3) An average fuel economy calculation will be made for the category of light trucks which is defined in § 600.511(e)(1) and has two-wheel drive.

(4) An average fuel economy calculation will be made for the category of light trucks which is defined in § 600.511(e)(1) and has four-wheel drive.

(5) An average fuel economy calculation will be made for the category of

light trucks which is defined in § 600.511(e)(2) and has two-wheel drive.

(6) An average fuel economy calculation will be made for the category of light trucks which is defined in § 600.511(e)(2) and has four-wheel drive.

(b) For the purpose of calculating average fuel economy under paragraph (c), of this section:

(1) All fuel economy data submitted in accordance with § 600.006(e) or § 600.512(c) shall be used.

(2) The combined city/highway fuel economy will be calculated for each model type in accordance with § 600.207 of this section except that:

(i) Separate fuel economy values will be calculated for model types and base levels associated with car lines that are:

(A) Domestically produced, and

(B) Nondomestically produced and imported;

(ii) Total model year production data, as required by this subpart, will be used instead of sales projections;

(iii) The fuel economy value of diesel-powered model types will be multiplied by the factor 1.0 to correct gallons of diesel fuel to equivalent gallons of gasoline;

(iv) The fuel economy value will be rounded to the nearest 0.1 mpg;

(v) At the manufacturer's option, those vehicle configurations that are selfcompensating to altitude changes may be separated by sales into high-altitude sales categories and low-altitude sales categories. These separate sales categories may then be treated (only for the purpose of this section) as separate configurations in accordance with the procedure of paragraph § 600.207(a)(4)(ii), and

(3) The fuel economy value for each vehicle configuration is the combined fuel economy calculated according to § 600.206 except that:

(i) Separate fuel economy values will be calculated for vehicle configurations associated with car lines that are:

(A) Domestically produced, and

(B) Nondomestically produced and imported:

(ii) Total model year production data, as required by this subpart will be used instead of sales projections; and

(iii) The fuel economy value of diesel-powered model types will be multiplied by the factor 1.0 to convert gallons of diesel fuel to equivalent gallons of gasoline.

(c) Except as permitted in paragraph (d) of this section, the average fuel economy will be calculated individually for each category identified in § 600.510(a) as follows:

(1) Divide the total production volume of that category of automobiles by

(2) A sum of terms, each of which corresponds to a model type within that category of automobiles and is a fraction determined by dividing

(i) The number of automobiles of that model type produced by the manufacturer in the model year by

(ii) The fuel economy calculated for that model type in accordance with paragraph (b)(2) of this section.

(d) The Administrator may approve alternative calculation methods if they are part of an approved credit plan under the provisions of section 503(b) of U.S.C. 2003(b).

(e) For passenger categories identified in paragraphs (a) (1) and (2) of this section, the average fuel economy calculated in accordance with paragraph (c) of this section shall be adjusted using the following equation:

$$AFE_{adj} = AFE[((0.55 \times a \times c) + (0.45 \times c) + (0.5556 \times a) + 0.4487)/((0.55 \times a) + 0.45)] + IW$$

Where:

AFE_{ajd}=Adjusted average combined fuel economy, rounded to the nearest 0.1 mpg.

AFE=Average combined fuel economy as calculated in paragraph (c) of this section, rounded to the nearest 0.0001 mpg.

a=Sales-weighted average (rounded to the nearest 0.0001 mpg) of all model type highway fuel economy values (rounded to the nearest 0.1 mpg) divided by the sales-weighted average (rounded to the nearest 0.0001 mpg) of all model type city fuel economy values (rounded to the nearest 0.1 mpg). The quotient shall be rounded to 4 decimal places. These average fuel economies shall be determined using the methodology of paragraph (c) of this section.

c=0.0022 for the 1986 model year.

c=A constant value, fixed by model year. For 1987, the Administrator will specify the c value after the necessary laboratory humidity and test fuel data become available. For 1988 and later model years, the Administrator will specify the c value after the necessary laboratory humidity and test fuel data become available.

$$IW=(9.2917\times10^{-3}\times SF_{3IWC}\times FE_{3IWC})-(3.5123>10^{-3}\times SF_{4ETW}\times FE_{4IWC})$$

NOTE: Any calculated value of IW less than zero shall be set equal to zero.

SF_{3IWC}=The 3000 lb. inertia weight class sales divided by total sales. The quotient shall be rounded to 4 decimal places.

SF_{4ETW}=The 4000 lb. equivalent test weight category sales divided by total sales. The quotient shall be rounded to 4 decimal places.

FE_{4IWC}=The sales-weighted average combined fuel economy of all 3000 lb. inertia weight class base leves in the compliance category. Round the result to the nearest 0.0001 mpg.

FE_{4IWC}=The sales-weighted average combined fuel economy of all 4000 lb. inertia weight class base levels in the compliance category. Round the result to the nearest 0.0001 mpg.

(f) The Administration shall calculate and apply additional average fuel ecomony adjustments if, after notice and opportunity for comment, the Administrator determines that, as a result of test procedure changes not previously considered, such correction is necessary to yield fuel economy test results that are comparable to those obtained under the 1975 test procedures. In making such determinations, the Administrator must find that:

(1) A directional change in measured fuel economy of an average vehicle can be predicted from a revision to the test procedures;

(2) The magnitude of the change in measured fuel economy for any vehicle or fleet of vehicles caused by a revision to the test procedures is quantifiable from theoretical calculations or best available test data;

(3) The impact of a change on average fuel economy is not due to eliminating the ability of manufacturers to take advantage of flexibilities within the existing test procedures to gain measured improvements in fuel economy which are not the result of actual improvements in the fuel economy of production vehicles.

(4) The impact of a change on average fuel economy is not solely due to a greater ability of manufacturers to reflect in average fuel economy those design changes expected to have comparable effect on in-use fuel economy.

(5) The test procedure change is required by EPA or is a change initiated by EPA in its laboratory and is not a change implemented solely by a manufacturer in its own laboratory.

[49 FR 13854, Apr. 6, 1984, as amended at 50 FR 27186, July 1, 1985; 51 FR 37851, Oct. 24, 1986]

§ 600.510–93 Calculation of average fuel economy.

(a) Average fuel economy will be calculated to the nearest 0.1 mpg for the classes of automobiles identified in this section, and the results of such calculations will be reported to the Secretary of Transportation for use in determining compliance with the applicable fuel economy standards.

(1) An average fuel economy calculation will be made for the category of passenger automobiles that is domestically manufactured as defined in § 600.511(d)(1).

(2) An average fuel economy calculation will be made for the category of passenger automobiles that is not domestically manufactured as defined in § 600.511(d)(2).

(3) An average fuel economy calculation will be made for the category of light trucks that is domestically manufactured as defined in § 600.511(e)(1).

(4) An average fuel economy calculation will be made for the category of light trucks that is not domestically manufactured as defined in § 600.511(e)(2).

(b) For the purpose of calculating average fuel economy under paragraph (c), of this section:

(1) All fuel economy data submitted in accordance with § 600.006(e) or § 600.502(c) shall be used.

(2) The combined city/highway fuel economy will be calculated for each model type in accordance with § 600.207 of this section except that:

(i) Separate fuel economy values will be calculated for model types and base levels associated with car lines that are:

(A) Domestically produced; and

(B) Nondomestically produced and imported;

(ii) Total model year production data, as required by this subpart, will be used instead of sales projections;

(iii) The fuel economy value of diesel-powered model types will be multiplied by the factor 1.0 to correct gallons of

diesel fuel to equivalent gallons of gasoline;

(iv) The fuel economy value will be rounded to the nearest 0.1 mpg; and

(v) At the manufacturer's option, those vehicle configurations that are selfcompensating to altitude changes may be separated by sales into high-altitude sales categories and low-altitude sales categories. These separate sales categories may then be treated (only for the purpose of this section) as separate configurations in accordance with the procedure of paragraph § 600.207(a)(4)(ii).

(3) The fuel economy value for each vehicle configuration is the combined fuel economy calculated according to § 600.206 except that:

(i) Separate fuel economy values will be calculated for vehicle configurations associated with car lines that are:

(A) Domestically produced; and

(B) Nondomestically produced and imported;

(ii) Total model year production data, as required by this subpart will be used instead of sales projections; and

(iii) The fuel economy value of diesel-powered model types will be multiplied by the factor 1.0 to convert gallons of diesel fuel to equivalent gallons of gasoline.

(c) Except as permitted in paragraph (d) of this section, the average fuel economy will be calculated individually for each category identified in paragraph (a) of this section as follows:

(1) Divide the total production volume of that category of automobiles; by

(2) A sum of terms, each of which corresponds to a model type within that category of automobiles and is a fraction determined by dividing:

(i) The number of automobiles of that model type produced by the manufacturer in the model year; by

(ii) For gasoline-fueled and diesel-fueled model types, the fuel economy calculated for that model type in accordance with paragraph (b)(2) of this section; or

(iii) For alcohol-fueled model types, the fuel economy value calculated for that model type in accordance with (b)(2) of this section divided by 0.15 and rounded to the nearest 0.1 mpg; or

(iv) For natural gas-fueled model types, the fuel economy value calculated for that model type in accordance with (b)(2) of this section divided by 0.15 and rounded to the nearest 0.1 mpg; or

(v) For alcohol dual fuel model types, for model years 1993 through 2004, the harmonic average of the following two terms; the result rounded to the nearest 0.1 mpg:

(A) The combined model type fuel economy value for operation on gasoline or diesel fuel as determined in § 600.207(b)(5)(i); and

(B) The combined model type fuel economy value for operation on alcohol fuel as determined in § 600.207(b)(5)(ii) divided by 0.15 provided the requirements of § 600.510 (g) are met; or

(vi) For natural gas dual fuel model types, for model years 1993 through 2004, the harmonic average of the following two terms; the result rounded to the nearest 0.1 mpg:

(A) The combined model type fuel economy value for operation on gasoline or diesel as determined in § 600.207(b)(5)(i); and

(B) The combined model type fuel economy value for operation on natural gas as determined in § 600.207(b)(5)(ii) divided by 0.15 provided the requirements of paragraph (g) of this section are met.

(d) The Administrator may approve alternative calculation methods if they are part of an approved credit plan under the provisions of 15 U.S.C. 2003.

(e) For passenger categories identified in paragraphs (a) (1) and (2) of this section, the average fuel economy calculated in accordance with paragraph (c) of this section shall be adjusted using the following equation:

$$AFE_{adj} = AFE[((0.55 \times a \times c) + (0.45 \times c) + (0.5556 \times a) + 0.4487) / ((0.55 \times a) + 0.45)] + IW$$

Where:

AFE_{adj} = Adjusted average combined fuel economy, rounded to the nearest 0.1 mpg.

AFE = Average combined fuel economy as calculated in paragraph (c) of this section, rounded to the nearest 0.0001 mpg.

a = Sales-weight average (rounded to the nearest 0.0001 mpg) of all model type highway fuel economy values

(rounded to the nearest 0.1 mpg) divided by the sales-weighted average (rounded to the nearest 0.0001 mpg) of all model type city fuel economy values (rounded to the nearest 0.1 mpg). The quotient shall be rounded to 4 decimal places. These average fuel economies shall be determined using the methodology of paragraph (c) of this section.

c = 0.0022 for the 1986 model year.

c = A constant value, fixed by model year. For 1987, the Administrator will specify the c value after the necessary laboratory humidity and test fuel data become available. For 1988 and later model years, the Administrator will specify the c value after the necessary laboratory humidity and test fuel data become available.

$IW = (9.2917 \times 10^{-3} \times SF_{3IWC} \times FE_{3IWC}) - (3.5123 \times 10^{-3} \times SF_{4ETW} \times FE_{4IWC})$

NOTE: Any calculated value of IW less than zero shall be set equal to zero.

SF_{3IWC} = The 3000 lb. inertia weight class sales divided by total sales. The quotient shall be rounded to 4 decimal places.

SF_{4ETW} = The 4000 lb. equivalent test weight category sales divided by total sales. The quotient shall be rounded to 4 decimal places.

FE_{4IWC} = The sales-weighted average combined fuel economy of all 3000 lb. inertia weight class base levels in the compliance category. Round the result to the nearest 0.0001 mpg.

FE_{4IWC} = The sales-weighted average combined fuel economy of all 4000 lb. inertia weight class base levels in the compliance category. Round the result to the nearest 0.0001 mpg.

(f) The Administrator shall calculate and apply additional average fuel economy adjustments if, after notice and opportunity for comment, the Administrator determines that, as a result of test procedure changes not previously considered, such correction is necessary to yield fuel economy test results that are comparable to those obtained under the 1975 test procedures. In making such determinations, the Administrator must find that:

(1) A directional change in measured fuel economy of an average vehicle can be predicted from a revision to the test procedures;

(2) The magnitude of the change in measured fuel economy for any vehicle or fleet of vehicles caused by a revision to the test procedures is quantifiable from theoretical calculations or best available test data;

(3) The impact of a change on average fuel economy is not due to eliminating the ability of manufacturers to take advantage of flexibility within the existing test procedures to gain measured improvements in fuel economy which are not the result of actual improvements in the fuel economy of production vehicles;

(4) The impact of a change on average fuel economy is not solely due to a greater ability of manufacturers to reflect in average fuel economy those design changes expected to have comparable effects on in-use fuel economy;

(5) The test procedure change is required by EPA or is a change initiated by EPA in its laboratory and is not a change implemented solely by a manufacturer in its own laboratory.

(g)(1) Alcohol dual fuel automobiles and natural gas dual fuel automobiles must provide equal or greater energy efficiency while operating on alcohol or natural gas as while operating on gasoline or diesel fuel to obtain the CAFE credit determined in paragraphs (c)(2)(v) and (vi) of this section. The following equation must hold true:

$E_{alt}/E_{pet} > \text{or} = 1$

Where:

$E_{alt} = [FE_{alt}/(NHV_{alt} x D_{alt})] x 10^6$ = energy efficiency while operating on alternative fuel rounded to the nearest 0.01 miles/million BTU.

$E_{pet} = [FE_{pet}/(NHV_{pet} x D_{pet})] x 10^6$ = energy efficiency while operating on gasoline or diesel (petroleum) fuel rounded to the nearest 0.01 miles/million BTU.

FE_{alt} is the fuel economy [miles/gallon for liquid fuels or miles/100 standard cubic feet for gaseous fuels] while operated on the alternative fuel as determined in § 600.113;

FE_{pet} is the fuel economy [miles/gallon] while operated on petroleum fuel (gasoline or diesel) as determined in § 600.113;

NHV_{alt} is the net (lower) heating value [BTU/lb] of the alternative fuel;

NHV_{pet} is the net (lower) heating value [BTU/lb] of the petroleum fuel;

D_{alt} is the density [lb/gallon for liquid fuels or lb/100 standard cubic feet for gaseous fuels] of the alternative fuel;

D_{pet} is the density [lb/gallon] of the petroleum fuel.

(i) The equation must hold true for both the city and highway fuel economy values for each test of each test vehicle.

(ii)(A) The net heating value for alcohol fuels shall be determined per ASTM D 240 (Incorporated by reference as specified in § 600.011–93).

(B) The density for alcohol fuels shall be determined per ASTM D 1298 (Incorporated by reference as specified in § 600.011–93).

(iii) The net heating value and density of gasoline are to be determined by the manufacturer in accordance with § 600.113(c).

(2) For model years 1993 through 1995, alcohol dual fuel automobiles designed to operate on mixtures of alcohol and gasoline must, in addition to paragraph (g)(1) of this section, to obtain the CAFE credit determined in paragraphs (c)(2)(v) and (vi) of this section, provide equal or superior energy efficiency while operating on a mixture of 50% alcohol, 50% gasoline by volume, as while operating on gasoline fuel. The following equation must hold true:

E_{50}/E_g>or=1

Where:

$E_{50}=[FE_{50}/(NHV_{50}\times D_{50})]\times 10^6$=energy efficiency while operating on 50% alcohol, 50% gasoline rounded to the nearest 0.01 miles/million BTU.

$E_g=[FE_g/(NHV_g\times D_g)]x10^6$=energy efficiency while operating on gasoline fuel rounded to the nearest 0.01 miles/million BTU.

FE_{50} is the fuel economy [miles/gallon] while operated on 50% alcohol, 50% gasoline as determined in § 600.113;

FE_g is the fuel economy [miles/gallon] while operated on gasoline as determined in § 600.113;

NHV_{50} is the net (lower) heating value [BTU/lb] of the 50/50 blend;

NHV_g is the net (lower) heating value [BTU/lb] of gasoline;

D_{50} is the density [lb/gallon] of the 50/50 blend;

D_g is the density [lb/gallon] of the gasoline.

(i) To demonstrate that the equation holds true for each engine family, the manufacturer will:

(A) Test one test vehicle in each engine family on both the city and highway cycles; or

(B) In lieu of testing, provide a written statement attesting that equal or superior energy efficiency is attained while using a 50% alcohol, 50% gasoline mixture compared to using 100% gasoline.

(ii)(A) The net heating value for the 50% alcohol, 50% gasoline mixture shall be determined by ASTM D 240 (Incorporated by reference as specified in § 600.011–93).

(B) The density for the 50% alcohol, 50% gasoline mixture shall be determined per ASTM D 1298 (Incorporated by reference as specified in § 600.011–93).

(iii) The net heating value and density of gasoline are to be determined by the manufacturer in accordance with § 600.113(c).

(3) Alcohol dual fuel passenger automobiles and natural gas dual fuel passenger automobiles manufactured during model years 1993 through 2004 must meet the minimum driving range requirements established by the Secretary of Transportation (49 CFR part 538) to obtain the CAFE credit determined in paragraphs (c)(2)(v) and (vi) of this section.

(h) For each of the model years 1993 through 2004, and for each category of automobile identified in paragraph (a) of this section, the maximum increase in average fuel economy determined in paragraph (c) of this section attributable to alcohol dual fuel automobiles and natural gas dual fuel automobiles shall be 1.2 miles per gallon or as provided for in paragraph (i) of this section.

(1) The Administrator shall calculate the increase in average fuel economy to determine if the maximum increase provided in paragraph (h) of this section has been reached. The Administrator shall calculate the average fuel economy for each category of automobiles specified in paragraph (a) of this section by subtracting the average fuel economy values calculated in accordance with this section by assuming

all alcohol dual fuel and natural gas dual fuel automobiles are operated exclusively on gasoline (or diesel) fuel from the average fuel economy values determined in paragraphs (b)(2)(vi), (b)(2)(vii), and (c) of this section. The difference is limited to the maximum increase specified in paragraph (h) of this section.

(2) [Reserved]

(i) In the event that the Secretary of Transportation lowers the corporate average fuel economy standard applicable to passenger automobiles below 27.5 miles per gallon for any model year during 1993 through 2004, the maximum increase of 1.2 mpg per year specified in paragraph (h) of this section shall be reduced by the amount the standard was lowered, but not reduced below 0.7 mpg per year.

[59 FR 39659, Aug. 3, 1994]

EFFECTIVE DATE NOTE: At 59 FR 39659, Aug. 3, 1994, § 600.510–93 was added. This section contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 600.511–80 Determination of domestic production.

(a) An automobile shall be considered domestically produced in any model year if it is included within a domestically produced car line (car line includes station wagons for purposes of this paragraph), unless the assembly of such automobile is completed in Canada or Mexico and such automobile is not imported into the United States prior to the expiration of 30 days following the end of the model year. For purposes of this paragraph a car line will be considered domestically produced if the following ratio is less than 0.25:

(1) The sum of the declared value, as defined in § 600.502, of all of the imported components installed or included on automobiles produced within such a car line within a given model year plus the cost of transportation and insuring such components to the United States port of entry, the Mexican port of entry (when paragraph (b)(3) of this section applies), or the Canadian port of entry but exclusive of any customs duty, divided by

(2) The cost of production, as defined in § 600.502, of automobiles within such car line.

(b) For the purposes of calculations under this subpart with respect to automobiles manufactured during any model year,

(1) An average exchange rate for the country of origin of each imported component shall be used that is calculated by taking the mean of the exchange rates in effect at the end of each quarter set by the Federal Reserve Bank of New York for twelve calendar quarters prior to and including the calendar quarter ending one year prior to the date that the manufacturer submits the calculation of the preliminary average for such model year. Such rate, once calculated, shall be in effect for the duration of the model year. Upon petition of a manufacturer, the Administrator may permit the use of a different exchange rate where appropriate and necessary.

(2) For automobiles for which paragraph (b)(3) of this section does not apply pursuant to the schedule in paragraph (b)(4), components shall be considered imported unless they are either:

(i) Wholly the growth, product, or manufacture of the United States and/or Canada, or

(ii) Substantially transformed in the United States or Canada into a new and different article of commerce.

(3) For automobiles for which this paragraph applies pursuant to the schedule in paragraph (b)(4) of this section, components shall be considered imported unless they are either:

(i) Wholly the growth, product, or manufacture of the United States and/or Canada and/or Mexico, or

(ii) Substantially transformed in the United States and/or Canada and/or Mexico into a new and different article of commerce.

(4) Paragraphs (b)(4) (i) through (v) of this section set forth the schedule according to which paragraph (b)(3) of this section applies for all automobiles manufactured by a manufacturer and sold in the United States, wherever assembled.

(i) With respect to a manufacturer that initiated the assembly of automobiles in Mexico before model year

1992, the manufacturer may elect, at any time between January 1, 1997, and January 1, 2004, to have paragraph (b)(3) of this section apply to all automobiles it manufactures, beginning with the model year commencing after the date of such election.

(ii) With respect to a manufacturer initiating the assembly of automobiles in Mexico after model year 1991, paragraph (b)(3) of this section shall apply to all automobiles it manufactures, beginning with the model year commencing after January 1, 1994, or the model year commencing after the date that the manufacturer initiates the assembly of automobiles in Mexico, whichever is later.

(iii) With respect to a manufacturer not described by paragraph (b)(4) (i) or (ii) of this section assembling automobiles in the United States or Canada but not in Mexico, the manufacturer may elect, at any time between January 1, 1997, and January 1, 2004, to have paragraph (b)(3) of this section apply to all automobiles it manufactures, beginning with the model year commencing after the date of such election, except that if such manufacturer initiates the assembly of automobiles in Mexico before making such election, this paragraph shall not apply, and the manufacturer shall be subject to paragraph (b)(4)(ii) of this section.

(iv) With respect to a manufacturer not assembling automobiles in the United States, Canada, or Mexico, paragraph (b)(3) of this section shall apply to all automobiles it manufactures, beginning with the model year commencing after January 1, 1994.

(v) With respect to a manufacturer authorized to make an election under paragraph (b)(4) (i) or (iii) of this section which has not made that election within the specified period, paragraph (b)(3) of this section shall apply to all automobiles it manufactures, beginning with the model year commencing after January 1, 2004.

(5) All elections under paragraph (b)(4) of this section shall be made in accordance with the procedures established by the Secretary of Transportation pursuant to 15 U.S.C. 2003(b)(2)(G)(iii).

(c) If it is determined by the Administrator at some date later than the date of entry that the declared value of such imported components did not represent fair market value at the date of entry, through U.S. Bureau of Customs appraisals, the Administrator may review the determination made pursuant to paragraph (a) of this section as to whether the pertinent car lines which utilize such components were correctly included within the manufaturer's domestically-produced or foreign-produced fleets. If such a determination was in error due to misrepresentation of the valuation of imported components at the date of entry, the Administrator may recalculate the manufacturer's average for the affected model year, according to §600.510, to reflect the correct valuation of such imported components in each affected car line.

(d) In calculating average fuel economy under §600.510(c), the Administrator will separate the total number of passenger automobiles produced by a manufacturer into the following two categories:

(1) Passenger automobiles which are domestically produced by the manufacturer,

(2) Passenger automobiles which are not domestically produced and which are imported by the manufacturer.

(e) In calculating average fuel economy under §600.510(c), the Administrator will separate the total number of light trucks produced by a manufacturer into the following two categories:

(1) Light trucks which are domestically produced by the manufacturer.

(2) Light trucks which are not domestically produced and which are imported by the manufacturer.

[42 FR 45662, Sept. 12, 1977, as amended at 43 FR 39376, Sept. 5, 1978; 59 FR 679, Jan. 6, 1994; 59 FR 33914, July 1, 1994]

§600.512–86 Model year report.

(a) For each model year, the manufacturer shall submit to the Administrator a report, known as the model year report, containing all information necessary for the calculation of the manufacturer's average fuel economy.

(b)(1) The model year report shall be in writing, signed by the authorized representative of the manufacturer and shall be submitted no later than 60 days after the report required in

§ 86.082–37 for the final production quarter.

(2) The Administrator may waive the requirement that the model year report be submitted within 60 days after the final quarterly production report. Based upon a request by the manufacturer, if the Administrator determines that 60 days is insufficient time for the manufacturer to provide all additional data required as determined in § 600.507, the Administrator shall establish a date by which the model year report must be submitted.

(3) Separate reports shall be submitted for passenger automobiles and light trucks (as identified in § 600.510).

(c) The model year report must include the following information:

(1) All fuel economy data used in the labeling calculations and subsequently required by the Administrator in accordance with § 600.507.

(2) All fuel economy data for certification vehicles and for vehicles tested for running changes approved under §§ 86.079–32, 86.079–33, and 86.082–34.

(3) Any additional fuel economy data submitted by the manufacturer under § 600.509.

(4) A fuel economy value for each model type of the manufacturer's product line calculated according to § 600.510(b)(2).

(5) The manufacturer's average fuel economy value calculated according to § 600.510(c).

(6) A listing of both domestically and nondomestically produced car lines as determined in § 600.511 and the cost information upon which the determination was made.

(7) The authenticity and accuracy of production data must be attested to by the corporation, and shall bear the signature of an officer (a corporate executive of at least the rank of vice-president) designated by the corporation. Such attestation shall constitute a representation by the manufacturer that the manufacturer has established reasonable, prudent procedures to ascertain and provide production data that are accurate and authentic in all material respects and that these procedures have been followed by employees of the manufacturer involved in the reporting process. The signature of the designated officer shall constitute a representation by the required attestation.

[49 FR 13855, Apr. 6, 1984]

§ 600.513–81 Gas Guzzler Tax.

(a)(1) The provisions of this section do not apply to passenger automobiles exempted from Gas Guzzler Tax assessments by the Energy Tax Act of 1978 and regulations promulgated thereunder by the Internal Revenue Service. *However,* the manufacturer of an exempted passenger automobile may, in his discretion, label such vehicles in accordance with the provisions of this section.

(2) Vehicles produced by a manufacturer that has been granted an alternate tax rate schedule by the Secretary of the Treasury shall be labeled with the applicable tax determined under any such alternate tax schedule.

(3) For 1980 and later model year passenger automobiles, the combined general label model type fuel economy value used for Gas Guzzler Tax assessments shall be calculated in accordance with the following equation, rounded to the nearest 0.1 mpg:

$$FE_{adj}=Fe\ [((0.55\times a_g\times c)+(0.45\times c)+(0.5556\times a_g)+0.4487)/((0.55\times a_g)+0.45)]+IW_g$$

Where:

FE_{adj}=Fuel economy value to be used for determination of gas guzzler tax assessment rounded to the nearest 0.1 mpg.

FE=Combined model type fuel economy calculated in accordance with § 600.207, rounded to the nearest 0.0001 mpg.

a_g=Model type highway fuel economy, calculated in accordance with § 600.207, rounded to the nearest 0.0001 mpg divided by the model type city fuel economy calculated in accordance with § 600.207, rounded to the nearest 0.0001 mpg. The quotient shall be rounded to 4 decimal places.

$c=2.501\times10^{-2}$ for the 1980 model year
$c=2.184\times10^{-2}$ for the 1981 model year
$c=9.260\times10^{-3}$ for the 1982 model year
$c=1.435\times10^{-2}$ for the 1983 model year
$c=1.420\times10^{-2}$ for the 1984 model year
$c=1.490\times10^{-2}$ for the 1985 model year
$c=1.300\times10^{-3}$ for the 1986 and later model years

$$IW_g=(9.2917\times10^{-3}\times SF_{3IWCG}\times FE_{3IWCG})-(3.5123\times10^{-3}\times SF_{4ETWG}\times FE_{4IWCG})$$

NOTE.—Any calculated value of IW less than zero shall be set equal to zero.

SF_{3IWCG}=The 3000 lb. inertia weight class sales in the model type divided by the total model type sales. The quotient shall be rounded to 4 decimal places.

SF_{4ETWG}=The 4000 lb. equivalent test weight sales in the model type divided by the total model type sales, the quotient shall be rounded to 4 decimal places.

FE_{3IWCG}=The 3000 lb. inertia weight class base level combined fuel economy used to calculate the model type fuel economy rounded to the nearest 0.0001 mpg.

FE_{4IWCG}=The 4000 lb. inertia weight class base level combined fuel economy used to calculate the model type fuel economy rounded to the nearest 0.0001 mpg.

(b) *This paragraph applies to 1981 model year vehicles.* (1) Passenger automobiles with a combined general label model type fuel economy value of less than 17.0 mpg, calculated in accordance with paragraph (a)(3) of this section and rounded to the nearest 0.1 mpg, shall carry a Gas Guzzler Tax statement pursuant to section 403 of the National Energy Conservation Policy Act.

(2) For passenger automobiles with a combined general label model type fuel economy value of:

(i) At least 17.0 mpg, no Gas Guzzler Tax statement is required.

(ii) At least 16.0 mpg, but less than 17.0 mpg, the Gas Guzzler Tax statement shall show a tax of $200.

(iii) At least 15.0 mpg, but less than 16.0 mpg, the Gas Guzzler Tax statement shall show a tax of $350.

(iv) At least 14.0 mpg, but less than 15.0 mpg, the Gas Guzzler Tax statement shall show a tax of $450.

(v) At least 13.0 mpg, but less than 14.0 mpg, the Gas Guzzler Tax statement shall show a tax of $550.

(vi) Less than 13.0 mpg, the Gas Guzzler Tax statement shall show a tax of $650.

(c) *This paragraph applies to 1982 model year vehicles.* (1) Passenger automobiles with a combined general label model type fuel economy value of less than 18.5 mpg, calculated in accordance with paragraph (a)(3) of this section and rounded to the nearest 0.1 mpg, shall carry a Gas Guzzler Tax statement pursuant to section 403 of the National Energy Conservation Policy Act.

(2) For passenger automobiles with a combined general label model type fuel economy value of:

(i) At least 18.5 mpg, no Gas Guzzler Tax statement is required.

(ii) At least 17.5 mpg, but less than 18.5 mpg, the Gas Guzzler Tax statement shall show a tax of $200.

(iii) At least 16.5 mpg, but less than 17.5 mpg, the Gas Guzzler Tax statement shall show a tax of $350.

(iv) At least 15.5 mpg, but less than 16.5 mpg, the Gas Guzzler Tax statement shall show a tax of $450.

(v) At least 14.5 mpg, but less than 15.5 mpg, the Gas Guzzler Tax statement shall show a tax of $600.

(vi) At least 13.5 mpg, but less than 14.5 mpg, the Gas Guzzler Tax statement shall show a tax of $750.

(vii) At least 12.5 mpg, but less than 13.5 mpg, the Gas Guzzler Tax statement shall show a tax of $950.

(viii) Less than 12.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,200.

(d) *This paragraph applies to 1983 model year vehicles.* (1) Passenger automobiles with a combined general label model type fuel economy value of less than 19.0 mpg, calculated in accordance with paragraph (a)(3) of this section and rounded to the nearest 0.1 mpg, shall carry a Gas Guzzler Tax statement pursuant to section 403 of the National Energy Conservation Policy Act.

(2) For passenger automobiles with a combined general label model type fuel economy value of:

(i) At least 19.0 mpg, no Gas Guzzler Tax statement is required.

(ii) At least 18.0 mpg, but less than 19.0 mpg, the Gas Guzzler Tax statement shall show a tax of $350.

(iii) At least 17.0 mpg, but less than 18.0 mpg, the Gas Guzzler Tax statement shall show a tax of $500.

(iv) At least 16.0 mpg, but less than 17.0 mpg, the Gas Guzzler Tax statement shall show a tax of $650.

(v) At least 15.0 mpg, but less than 16.0 mpg, the Gas Guzzler Tax statement shall show a tax of $800.

(vi) At least 14.0 mpg, but less than 15.0 mpg, the Gas Guzzler Tax statement shall show a tax of $1,000.

(vii) At least 13.0 mpg, but less than 14.0 mpg, the Gas Guzzler Tax statement shall show a tax of $1,250.

(viii) Less than 13.0 mpg, the Gas Guzzler Tax statement shall show a tax of $1,550.

(e) *This paragraph applies to 1984 model year vehicles.* (1) Passengers automobiles with a combined general label model type fuel economy value of less than 19.5 mpg, calculated in accordance with paragraph (a)(3) of this section and rounded to the nearest 0.1 mpg, shall carry a Gas Guzzler Tax statement pursuant to section 403 of the National Energy Conservation Policy Act.

(2) For passenger automobiles with a combined general label model type fuel economy value of:

(i) At least 19.5 mpg, no Gas Guzzler Tax statement is required.

(ii) At least 18.5 mpg, but less than 19.5 mpg, the Gas Guzzler Tax statement shall show a tax of $450.

(iii) At least 17.5 mpg, but less than 18.5 mpg, the Gas Guzzler Tax statement shall show a tax of $600.

(iv) At least 16.5 mpg, but less than 17.5 mpg, the Gas Guzzler Tax statement shall show a tax of $750.

(v) At least 15.5 mpg, but less than 16.5 mpg, the Gas Guzzler Tax statement shall show a tax of $950.

(vi) At least 14.5 mpg, but less than 15.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,150.

(vii) At least 13.5 mpg, but less than 14.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,450.

(viii) At least 12.5 mpg, but less than 13.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,750.

(ix) Less than 12.5 mpg, the Gas Guzzler Tax statement shall show a tax of $2,150.

(f) *This paragraph applies to 1985 model year vehicles.* (1) Passengers automobiles with a combined general label model type fuel economy value of less than 21.0 mpg, calculated in accordance with paragraph (a)(3) of this section and rounded to the nearest 0.1 mpg, shall carry a Gas Guzzler Tax statement pursuant to section 403 of the National Energy Conservation Policy Act.

(2) For passenger automobiles with a combined general label model type fuel economy value of:

(i) At least 21.0 mpg, no Gas Guzzler Tax statement is required.

(ii) At least 20.0 mpg, but less than 21.0 mpg, the Gas Guzzler Tax statement shall show a tax of $500.

(iii) At least 19.0 mpg, but less than 20.0 mpg, the Gas Guzzler Tax statement shall show a tax of $600.

(iv) At least 18.0 mpg, but less than 19.0 mpg, the Gas Guzzler Tax statement shall show a tax of $800.

(v) At least 17.0 mpg, but less than 18.0 mpg, the Gas Guzzler Tax statement shall show a tax of $1,000.

(vi) At least 16.0 mpg, but less than 17.0 mpg, the Gas Guzzler Tax statement shall show a tax of $1,200.

(vii) At least 15.0 mpg, but less than 16.0 mpg, the Gas Guzzler Tax statement shall show a tax of $1,500.

(viii) At least 14.0 mpg, but less than 15.0 mpg, the Gas Guzzler Tax statement shall show a tax of $1,800.

(ix) At least 13.0 mpg, but less than 14.0 mpg, the Gas Guzzler Tax statement shall show a tax of $2,200.

(x) Less than 13.0 mpg, the Gas Guzzler Tax statement shall show a tax of $2,650.

(g) *This paragraph applies to 1986 and later model year vehicles.* (1) Passenger automobiles with a combined general label model type fuel economy value of less than 22.5 mpg, calculated in accordance with paragraph (a)(3) of this section and rounded to the nearest 0.1 mpg, shall carry a Gas Guzzler Tax statement pursuant to section 403 of the National Energy Conservation Policy Act.

(2) For passenger automobiles with a combined general label model type fuel economy value of:

(i) At least 22.5 mpg, no Gas Guzzler Tax statement is required.

(ii) At least 21.5 mpg, but less than 22.5 mpg, the Gas Guzzler Tax statement shall show a tax of $500.

(iii) At least 20.5 mpg, but less than 21.5 mpg, the Gas Guzzler Tax statement shall show a tax of $650.

(iv) At least 19.5 mpg, but less than 20.5 mpg, the Gas Guzzler Tax statement shall show a tax of $850.

(v) At least 18.5 mpg, but less than 19.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,050.

(vi) At least 17.5 mpg, but less than 18.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,300.

(vii) At least 16.5 mpg, but less than 17.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,500.

(viii) At least 15.5 mpg, but less than 16.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,850.

(ix) At least 14.5 mpg, but less than 15.5 mpg, the Gas Guzzler Tax statement shall show a tax of $2,250.

(x) At least 13.5 mpg, but less than 14.5 mpg, the Gas Guzzler Tax statement shall show a tax of $2,700.

(xi) At least 12.5 mpg, but less than 13.5 mpg, the Gas Guzzler Tax statement shall show a tax of $3,200.

(xii) Less than 12.5 mpg, the Gas Guzzler Tax statement shall show a tax of $3,850.

(Title V of the Motor Vehicle Information and Cost Savings Act, 15 U.S.C. 2001 *et. seq.*, as amended by sec. 403 of the National Energy Conservation Policy Act, Pub. L. 95–619, 92 Stat. 3256)

[45 FR 51165, July 31, 1980, as amended at 50 FR 27187, July 1, 1985]

§ 600.513–91 Gas Guzzler Tax.

(a) This section applies only to passenger automobiles sold after December 27, 1991, regardless of the model year of those vehicles. For alcohol dual fuel and natural gas dual fuel automobiles, the fuel economy while such automobiles are operated on gasoline will be used for Gas Guzzler Tax assessments.

(1) The provisions of this section do not apply to passenger automobiles exempted for Gas Guzzler Tax assessments by applicable federal law and regulations. However, the manufacturer of an exempted passenger automobile may, in its discretion, label such vehicles in accordance with the provisions of this section.

(2) For 1991 and later model year passenger automobiles, the combined general label model type fuel economy value used for Gas Guzzler Tax assessments shall be calculated in accordance with the following equation, rounded to the nearest 0.1 mpg:

$$FE_{adj}=FE\ [((0.55\times a_g\times c) + (0.45\times c) + (0.5556\times a_g) + 0.4487)/((0.55\times a_g) + 0.45)] + IW_g$$

Where:

FE_{adj}=Fuel economy value to be used for determination of gas guzzler tax assessment rounded to the nearest 0.1 mpg.

FE=Combined model type fuel economy calculated in accordance with § 600.207, rounded to the nearest 0.0001 mpg.

a_g=Model type highway fuel economy, calculated in accordance with § 600.207, rounded to the nearest 0.0001 mpg divided by the model type city fuel economy calculated in accordance with § 600.207, rounded to the nearest 0.0001 mpg. The quotient shall be rounded to 4 decimal places.

c=gas guzzler adjustment factor=1.300×10^{-3} for the 1986 and later model years.

$$IW_g=(9.2917\times10^{-3}\times SF_{3IWCG}\ FE_{3IWCG}) - (3.5123\times10^{-3}\times SF_{4ETWG}\times FE_{4IWCG})$$

NOTE: Any calculated value of IW less than zero shall be set equal to zero.

SF_{3IWCG}=The 3000 lb. inertia weight class sales in the model type divided by the total model type sales; the quotient shall be rounded to 4 decimal places.

SF_{4ETWG}=The 4000 lb. equivalent test weight sales in the model type divided by the total model type sales, the quotient shall be rounded to 4 decimal places.

FE_{3IWCG}=The 3000 lb. inertial weight class base level combined fuel economy used to calculate the model type fuel economy rounded to the nearest 0.0001 mpg.

FE_{4IWCG}=The 4000 lb. inertial weight class base level combined fuel economy used to calculate the model type fuel economy f/rounded to the nearest 0.001 mpg.

(b)(1) For passenger automobiles sold after December 31, 1990, with a combined general label model type fuel economy value of less than 22.5 mpg, calculated in accordance with paragraph (a)(2) of this section and rounded to the nearest 0.1 mpg, each vehicle fuel economy label shall include a Gas Guzzler Tax statement pursuant to section 403 of the National Energy Conservation Policy Act. The tax amount stated shall be as specified in paragraph (b)(2) of this section.

(2) For passenger automobiles with a combined general label model type fuel economy value of:

(i) At least 22.5 mpg, no Gas Guzzler Tax statement is required.

(ii) At least 21.5 mpg, but less than 22.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,000.

(iii) At least 20.5 mpg, but less than 21.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,300.

(iv) At least 19.5 mpg, but less than 20.5 mpg, the Gas Guzzler Tax statement shall show a tax of $1,700.

(v) At least 18.5 mpg; but less than 19.5 mpg, the Gas Guzzler Tax statement shall show a tax of $2,100.

(vi) At least 17.5 mpg, but less than 18.5 mpg, the Gas Guzzler Tax statement shall show a tax of $2,600.

(vii) At least 16.5 mpg, but less than 17.5 mpg, the Gas Guzzler Tax statement shall show a tax of $3,000.

(viii) At least 15.5 mpg, but less than 16.5 mpg, the Gas Guzzler Tax statement shall show a tax of $3,700.

(ix) At least 14.5 mpg, but less than 15.5 mpg, the Gas Guzzler Tax statement shall show a tax of $4,500.

(x) At least 13.5 mpg, but less than 14.5 mpg, the Gas Guzzler Tax statement shall show a tax of $5,400.

(xi) At least 12.5 mpg, but less than 13.5 mpg, the Gas Guzzler Tax statement shall show a tax of $6,400.

(xii) Less than 12.5 mpg, the Gas Guzzler Tax statement shall show a tax of $7,700.

[56 FR 55465, Oct. 28, 1991, as amended at 59 FR 39661, Aug. 3, 1994]

APPENDIX I TO PART 600—HIGHWAY FUEL ECONOMY DRIVING SCHEDULE (APPLICABLE TO 1978 AND LATER MODEL YEAR AUTOMOBILES)

[SPEED (MPH) VS TIME (SEC)]

SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH
0	Sample On	50	38.6	100	48.5	150	44.1	200	43.4	250	48.0	300	33.4	350	59.0
1	0.0	51	39.3	101	48.8	151	44.3	201	43.2	251	48.0	301	35.6	351	58.9
2	0.0	52	40.0	102	49.1	152	44.4	202	43.2	252	48.0	302	37.5	352	58.8
3	2.0	53	40.7	103	49.2	153	44.6	203	43.1	253	48.1	303	39.1	353	58.6
4	4.9	54	41.4	104	49.1	154	44.7	204	43.0	254	48.2	304	40.2	354	58.4
5	8.1	55	42.2	105	49.1	155	44.9	205	43.0	255	48.2	305	41.1	355	58.2
6	11.3	56	42.9	106	49.0	156	45.2	206	43.1	256	48.1	306	41.8	356	58.1
7	14.5	57	43.5	107	49.0	157	45.7	207	43.4	257	48.6	307	42.4	357	58.0
8	17.3	58	44.0	108	49.1	158	45.9	208	43.9	258	48.9	308	42.8	358	57.9
9	19.6	59	44.3	109	49.2	159	46.3	209	44.0	259	49.1	309	43.3	359	57.6
10	21.8	60	44.5	110	49.3	160	46.8	210	43.5	260	49.1	310	43.8	360	57.4
11	24.0	61	44.8	111	49.4	161	46.9	211	42.6	261	49.1	311	44.3	361	57.2
12	25.8	62	44.9	112	49.5	162	47.0	212	41.5	262	49.1	312	44.7	362	57.1
13	27.1	63	45.0	113	49.5	163	47.1	213	40.7	263	49.1	313	45.0	363	57.0
14	28.0	64	45.1	114	49.5	164	47.6	214	40.0	264	49.0	314	45.2	364	57.0
15	29.0	65	45.4	115	49.4	165	47.9	215	40.0	265	48.9	315	45.4	365	56.9
16	30.0	66	45.7	116	49.1	166	48.0	216	40.3	266	48.2	316	45.5	366	56.9
17	30.7	67	46.0	117	48.9	167	48.0	217	41.0	267	47.7	317	45.8	367	56.9
18	31.5	68	46.3	118	48.6	168	47.9	218	42.0	268	47.5	318	46.0	368	57.0
19	32.2	69	46.5	119	48.4	169	47.8	219	42.7	269	47.2	319	46.1	369	57.0
20	32.9	70	46.8	120	48.1	170	47.3	220	43.1	270	46.7	320	46.5	370	57.0
21	33.5	71	46.9	121	47.7	171	46.7	221	43.2	271	46.2	321	46.8	371	57.0
22	34.1	72	47.0	122	47.4	172	46.2	222	43.4	272	46.0	322	47.1	372	57.0
23	34.6	73	47.1	123	47.3	173	45.9	223	43.9	273	45.8	323	47.7	373	57.0
24	34.9	74	47.2	124	47.5	174	45.7	224	44.3	274	45.6	324	48.3	374	57.0
25	35.1	75	47.3	125	47.8	175	45.5	225	44.7	275	45.4	325	49.0	375	57.0
26	35.7	76	47.2	126	47.9	176	45.4	226	45.1	276	45.2	326	49.7	376	57.0
27	35.9	77	47.1	127	48.0	177	45.3	227	45.4	277	45.0	327	50.3	377	56.9
28	35.8	78	47.0	128	47.9	178	45.0	228	45.8	278	44.7	328	51.0	378	56.8
29	35.3	79	46.9	129	47.9	179	44.0	229	46.5	279	44.5	329	51.7	379	56.5
30	34.9	80	46.9	130	47.9	180	43.1	230	46.9	280	44.2	330	52.4	380	56.2
31	34.5	81	46.9	131	48.0	181	42.2	231	47.2	281	43.5	331	53.1	381	56.0
32	34.6	82	47.0	132	48.0	182	41.5	232	47.4	282	42.8	332	53.8	382	56.0
33	34.8	83	47.1	133	48.0	183	41.5	233	47.3	283	42.0	333	54.5	383	56.0
34	35.1	84	47.1	134	47.9	184	42.1	234	47.3	284	40.1	334	55.2	384	56.1
35	35.7	85	47.2	135	47.3	185	42.9	235	47.2	285	38.6	335	55.8	385	56.4
36	36.1	86	47.1	136	46.0	186	43.5	236	47.2	286	37.5	336	56.4	386	56.7
37	36.2	87	47.0	137	43.3	187	43.9	237	47.2	287	35.8	337	56.9	387	56.9
38	36.5	88	46.9	138	41.2	188	43.6	238	47.1	288	34.7	338	57.0	388	57.1
39	36.7	89	46.5	139	39.5	189	43.3	239	47.0	289	34.0	339	57.1	389	57.3
40	36.9	90	46.3	140	39.2	190	43.0	240	47.0	290	33.3	340	57.3	390	57.4
41	37.0	91	46.2	141	39.0	191	43.1	241	46.9	291	32.5	341	57.6	391	57.4
42	37.0	92	46.3	142	39.0	192	43.4	242	46.8	292	31.7	342	57.8	392	57.2
43	37.0	93	46.5	143	39.1	193	43.9	243	46.9	293	30.6	343	58.0	393	57.0
44	37.0	94	46.9	144	39.5	194	44.3	244	47.0	294	29.6	344	58.1	394	56.9
45	37.0	95	47.1	145	40.1	195	44.6	245	47.2	295	28.8	345	58.4	395	56.6

APPENDIX I TO PART 600—HIGHWAY FUEL ECONOMY DRIVING SCHEDULE (APPLICABLE TO 1978 AND LATER MODEL YEAR AUTOMOBILES)—Continued

[SPEED (MPH) VS TIME (SEC)]

SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH
46	37.0	96	47.4	146	41.0	196	44.9	246	47.5	296	28.4	346	58.7	396	56.3
47	37.1	97	47.7	147	42.0	197	44.8	247	47.9	297	28.6	347	58.8	397	56.1
48	37.3	98	48.0	148	43.1	198	44.4	248	48.0	298	29.5	348	58.9	398	56.4
49	37.8	99	48.2	149	43.7	199	43.9	249	48.0	299	31.4	349	59.0	399	56.7

SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH	SEC	MPH
400	57.1	450	58.2	500	54.7	550	55.8	600	48.3	650	50.2	700	54.2	750	26.8
401	57.5	451	58.1	501	54.6	551	55.6	601	48.0	651	50.7	701	54.5	751	24.5
402	57.8	452	58.0	502	54.4	552	55.4	602	47.9	652	51.1	702	54.8	752	21.5
403	58.0	453	58.0	503	54.3	553	55.2	603	47.8	653	51.7	703	55.0	753	19.5
404	58.0	454	58.0	504	54.3	554	55.1	604	47.7	654	52.2	704	55.5	754	17.4
405	58.0	455	58.0	505	54.2	555	55.0	605	47.9	655	52.5	705	55.9	755	15.1
406	58.0	456	58.0	506	54.1	556	54.9	606	48.3	656	52.1	706	56.1	756	12.4
407	58.0	457	58.0	507	54.1	557	54.6	607	49.0	657	51.6	707	56.3	757	9.7
408	58.0	458	57.9	508	54.1	558	54.4	608	49.1	658	51.1	708	56.4	758	7.0
409	57.9	459	57.9	509	54.0	559	54.2	609	49.0	659	51.0	709	56.5	759	5.0
410	57.8	460	58.0	510	54.0	560	54.1	610	48.9	660	51.0	710	56.7	760	3.3
411	57.7	461	58.1	511	54.0	561	53.8	611	48.0	661	51.1	711	56.9	761	2.0
412	57.7	462	58.1	512	54.0	562	53.4	612	47.1	662	51.4	712	57.0	762	0.7
413	57.8	463	58.2	513	54.0	563	53.3	613	46.2	663	51.7	713	57.3	763	0.0
414	57.9	464	58.3	514	54.0	564	53.1	614	46.1	664	52.0	714	57.7	764	0.0
415	58.0	465	58.3	515	54.0	565	52.9	615	46.1	665	52.2	715	58.2	765	Sample Off
416	58.1	446	58.3	516	54.0	566	52.6	616	46.2	666	52.5	716	58.8		
417	58.4	467	58.2	517	54.1	567	52.4	617	46.9	667	52.8	717	59.1		
418	58.9	468	58.1	518	54.2	568	52.2	618	47.8	668	52.7	718	59.2		
419	59.1	469	58.0	519	54.5	569	52.1	619	49.0	669	52.6	719	59.1		
420	59.4	470	57.8	520	54.8	570	52.0	620	49.7	670	52.3	720	58.8		
421	59.8	471	57.5	521	54.9	571	52.0	621	50.6	671	52.3	721	58.5		
422	59.9	472	57.1	522	55.0	572	52.0	622	51.5	672	52.4	722	58.1		
423	59.9	473	57.0	523	55.1	573	52.0	623	52.2	673	52.5	723	57.7		
424	59.8	474	56.6	524	55.2	574	52.1	624	52.7	674	52.7	724	57.3		
425	59.6	475	56.1	525	55.2	575	52.0	625	53.0	675	52.7	725	57.1		
426	59.4	476	56.0	526	55.3	576	52.0	626	53.6	676	52.4	726	56.8		
427	59.2	477	55.8	527	55.4	577	51.9	627	54.0	677	52.1	727	56.5		
428	59.1	478	55.5	528	55.5	578	51.6	628	54.1	678	51.7	728	56.2		
429	59.0	479	55.2	529	55.6	579	51.4	629	54.4	679	51.1	729	55.5		
430	58.9	480	55.1	530	55.7	580	51.1	630	54.7	680	50.5	730	54.6		
431	58.7	481	55.0	531	55.8	581	50.7	631	55.1	681	50.1	731	54.1		
432	58.6	482	54.9	532	55.9	582	50.3	632	55.4	682	49.8	732	53.7		
433	58.5	483	54.9	533	56.0	583	49.8	633	55.4	683	49.7	733	53.2		
434	58.4	484	54.9	534	56.0	584	49.3	634	55.0	684	49.6	734	52.9		
435	58.4	485	54.9	535	56.0	585	48.7	635	54.5	685	49.5	735	52.5		
436	58.3	486	54.9	536	56.0	586	48.2	6.36	53.6	686	49.5	736	52.0		
437	58.2	487	54.9	537	56.0	587	48.1	637	52.5	687	49.7	737	51.3		
438	58.1	488	55.0	538	56.0	588	48.0	638	50.2	688	50.0	738	50.5		
439	58.0	489	55.0	539	56.0	589	48.0	6.39	48.2	689	50.2	739	49.5		
440	57.9	490	55.0	540	56.0	590	48.1	640	46.5	690	50.6	740	48.5		
441	57.9	491	55.0	541	56.0	591	48.4	641	46.2	691	51.1	741	47.6		
442	57.9	492	55.0	542	56.0	592	48.9	642	46.0	692	51.6	742	46.8		
443	57.9	493	55.0	543	56.0	593	49.0	643	46.0	693	51.9	743	45.6		
444	57.9	494	55.1	544	56.0	594	49.1	644	46.3	694	52.0	744	44.2		
445	58.0	495	55.1	545	56.0	595	49.1	645	46.8	695	52.1	745	42.5		
446	58.1	496	55.0	546	56.0	596	49.0	646	47.5	696	52.4	746	39.2		
447	58.1	497	54.9	547	55.9	597	49.0	647	48.2	697	52.9	747	35.9		
448	58.2	498	54.9	548	55.9	598	48.9	648	48.8	698	53.3	748	32.6		
449	58.2	499	54.8	549	55.9	599	48.6	649	49.5	699	53.7	749	29.3		

[42 FR 45667, Sept. 12, 1977]

APPENDIX II TO PART 600—SAMPLE FUEL ECONOMY CALCULATIONS

(a) This sample fuel economy calculation is applicable to 1978 through 1987 model year automobiles.

(1) Assume that a gasoline-fueled vehicle was tested by the Federal Emission Test Procedure and the following results were calculated:

HC=.139 grams/mile
CO=1.59 grams/mile
CO_2=317 grams/mile

According to the procedure in §600.113–78, the city fuel economy or MPG_c, for the vehicle may be calculated by substituting the HC, CO, and CO_2 grams/mile values into the following equation.

$$MPG_c = \frac{2421}{(0.866 \times HC) + (0.429 \times CO) + (0.273 \times CO_2)}$$

$$MPG_c = \frac{2421}{(0.866 \times 1.39) + (0.429 \times 1.59) + (0.273 \times 317)}$$

MPG_c=27.7

(2) Assume that the same vehicle was tested by the Federal Highway Fuel Economy Test Procedure and calculation similar to that shown in paragraph (a) by this appendix resulted in a highway fuel economy or MPG_h of 36.9. According to the procedure in §600.113, the combined fuel economy (called $MPG_{c/h}$) for the vehicle may be calculated by substituting the city and highway fuel economy values into the following equation:

$$MPG_{c/h} = \frac{1}{\frac{0.55}{MPG_c} + \frac{0.45}{MPG_h}}$$

$$MPG_{c/h} = \frac{1}{\frac{0.55}{27.7} + \frac{0.45}{36.9}}$$

$$MPG_{c/h} = 31.2$$

(b) This sample fuel economy calculation is applicable to 1988 and later model year automobiles.

(1) Assume that a gasoline-fueled vehicle was tested by the Federal Emission Test Procedure and the following results were calculated:

HC=.139 grams/mile
CO=1.59 grams/mile
CO_2=317 grams/mile

(2) Assume that the test fuel used for this test had the following properties:

SG=0.745
CWF=0.868
NHV=18,478 Btu/lb.

(3) According to the procedure in §600.113–88, the city fuel economy or MPG_c, for the vehicle may be calculated by substituting the HC, CO, and CO_2 gram/mile values and the SG, CWF, and NHV values into the following equation:

$MPG_c = (5174 \times 10^4 \times CWF \times SG) / [((CWF \times HC) + (0.429 \times CO + (0.273 \times CO_2)) ((0.6 \times SG \times NHV) + 5471)]$

$MPG_c = (5174 \times 10^4 \times 0.868 \times 0.745) / [(0.868 \times .139 + 0.429 \times 1.59 + 0.273 \times 317)(0.6 \times 0.745 \times 18478 + 5471)]$

MPG_c=27.9

(4) Assume that the same vehicle was tested by the Federal Highway Fuel Economy Test Procedure and a calculation similar to that shown in (b)(3) resulted in a highway fuel economy of MPG_h of 36.9. According to the procedure in §600.113, the combined fuel economy (called $MPG_{c/h}$) for the vehicle may be calculated by substituting the city and

highway fuel economy values into the following equation:

$$MPG_{c/h} = \frac{1}{\frac{0.55}{MPG_c} + \frac{0.45}{MPG_h}}$$

$$MPG_{c/h} = \frac{1}{\frac{0.55}{27.9} + \frac{0.45}{36.9}}$$

$$MPG_{c/h} = 31.3$$

[51 FR 37852, Oct. 24, 1986]

APPENDIX III TO PART 600—SAMPLE FUEL ECONOMY LABEL CALCULATION (1977 MODEL YEAR)

Suppose that a manufacturer called Mizer Motors has a product line composed of eight car lines. Of these eight, four are available with the 300 CID, 2 barrel, non-catalyst, 49-state engine. These four car lines are:

Ajax
Boredom III
Dodo
Castor (Station Wagon)

A car line is defined in subpart A as a group of vehicles within a make or division which has a degree of commonality in construction. Car line does not consider any level of decor or opulence and is not generally distinguished by such characteristics as roofline, number of doors, seats, or windows. Station wagons and light duty trucks are, however, identified separately from the remainder of each car line. In other words, a Castor station wagon would be considered a different car line than the normal Castor car line made up of sedans, coupes, etc.

The engine considered here is defined as a basic engine in subpart A of this part. A basic engine is a unique combination of fuel system, number of cylinders, catalyst usage, and engine displacement.

A model type is a unique combination of car line, basic engine, and transmission class. Thus Ajax is a car line but Ajax 300–2V noncatalyst, 49-state, manual transmission is a model type whereas Ajax 300–2V non-catalyst, 49-state, automatic transmission is a different model type.

The following calculations provide an example of the procedures described in subpart C of this part for the calculation of vehicle configuration and model type fuel economy values. In order to simplify the presentation, only city fuel economy values are included. The procedure is identical for highway and combined fuel economy values.

Step I. *Input data as supplied by the manufacturer or as determined from testing conducted by the Administrator.*

Manufacturer—Mizer Motors.

Basic Engine: (300–2 barrel, 8–cylinder, non-catalyst, 49 state).

Test vehicle carline	Engine code	Transmission	Inertia weight	Axle ratio	Average miles per gallon	Label miles per gallon [1]	Vehicle configuration sales
Ajax	1	M–3	3,500	2.73	16.1001	16	15,000
Do	2	A–3	3,500	2.56	15.9020	16	35,000
Boredom III	4	M–3	4,000	3.08	14.2343	14	10,000
Ajax	3	M–4	4,000	3.36	15.0000	15	15,000
Boredom III	8	A–3	4,000	2.56	13.8138	14	25,000
Do	5	A–3	4,500	3.08	13.2203	13	20,000
Castor	5	A–3	5,000	3.08	10.6006	11	40,000

[1] The vehicle configuration fuel economy values, rounded to the nearest mile per gallon, are the fuel economy values that would be used on specific labels for that vehicle configuration.

Step II. *Group vehicle fuel economy and sales data according to base level combinations within this basic engine.*

	Transmission	Inertia weight	Miles per gallon	Projected vehicle configuration sales
Base level:				
A	Manual–3	3,500	16.1001	15,000
B	Automatic	3,500	15.9020	35,000
C	Manual–3	4,000	14.2343	10,000
C	Manual–4	4,000	15.0000	15,000
D	Automatic	4,000	13.8138	25,000
E	.....do	4,500	13.2203	20,000
F	.....do	5,000	10.6006	40,000

Step III. *Determine base level fuel economy values.*

A. For all the base levels except the base level which includes 4,000 pound, manual transmission data, the base level fuel economy is as noted in Step II since only one vehicle configuration was tested within each of these base levels.

	Miles per gallon
3,500 lb/manual transmission	16.1001
3,500 lb/automatic transmission	15.9020
4,000 lb/automatic transmission	13.8138
4,500 lb/automatic transmission	13.2203
5,000 lb/automatic transmission	10.6006

B. Since data from more than one vehicle configuration are included in the 4,000-pound, manual transmission base level, this fuel economy is harmonically averaged in proportion to the percentage of total sales of all vehicle configurations tested within that base level represented by each vehicle configuration tested within that base level.

$$\text{Base level fuel econ.} = \frac{1}{\left[\begin{array}{c}\text{Fraction of total}\\ \text{sales of configu-}\\ \text{rations tested}\\ \text{represented by}\\ \text{configuration}\\ \text{No. 1 sales}\end{array}\right]\left[\frac{1}{\begin{array}{c}\text{Configuration}\\ \text{No. 1 fuel}\\ \text{economy}\end{array}}\right]+\left[\begin{array}{c}\text{Fraction of total}\\ \text{sales of configu-}\\ \text{rations tested}\\ \text{represented by}\\ \text{configuration}\\ \text{No. 2 sales}\end{array}\right]\left[\frac{1}{\begin{array}{c}\text{Configuration}\\ \text{No. 2 fuel}\\ \text{economy}\end{array}}\right]+\cdots}$$

Base Level: Manual, 4,000 pounds.

$$\frac{1}{\left[\frac{10000}{25000}\right]\frac{1}{14.2343}+\left[\frac{15.000}{250000}\right]\frac{1}{15.0000}} = 14.6840 \text{ mi/gal}$$

Therefore, the 4,000 pound/manual transmission fuel economy is 14.6840 mi/gal.

4,000 pound/manual transmission = 14.6840 mi/gal

Note that the car line of the test vehicle using a given engine makes no difference—only the weight and transmission do.

Step IV. *For each model type offered by the manufacturer with that basic engine, determine the sales fraction represented by each inertia weight/transmission class combination and the corresponding fuel economy.*

Ajax:		
Manual	1.0000 at 3,500 lb	16.1001
Automatic	0.3000 at 3,500 lb	15.9020
	0.7000 at 4,000 lb	13.8138
Dodo:		
Manual	0.4000 at 3,500 lb	16.1001
	0.6000 at 4,000 lb	14.6840
Automatic	0.3000 at 3,500 lb	15.9020
	0.7000 at 4,000 lb	13.8138
Boredom III:		
Manual	1.0000 at 4,000 lb	14.6840
Automatic	0.2500 at 4,000 lb	13.8138
	0.7500 at 4,500 lb	13.2203
Castor:		
Automatic	0.2000 at 4,500 lb	13.2203
	0.8000 at 5,000 lb	10.6006

Step V. *Determine fuel economy for each model type (that is, car line/basic engine/transmission class combination).*

Ajax, 300–2 barrel, automatic, MPG=

$$\text{Ajax, 300-2 barrel, automatic, MPG} = \frac{1}{\dfrac{\text{The fraction of Ajax vehicles using the 300-2 bbl, engine which fall in the 3,500 lb inertia weight class with an automatic transmission.}}{\text{Fuel economy for 300-2 bbl, 3,500 lb automatic transmission base level.}} + \dfrac{\text{The fraction of Ajax vehicles using the 300-2 bbl, engine which fall in the 4,000 lb inertia weight class with an automatic transmission.}}{\text{Fuel economy for 300-2 bbl, 4,000 lb automatic transmission base level.}}} = \frac{1}{\dfrac{0.3000}{15.9020} + \dfrac{0.7000}{13.8138}} = 14.3803$$

Similarly,

Ajax, 300-2 barrel, manual MPG = 16.1 16 MPG [1]

$$\text{Dodo, 300-2 barrel, manual MPG} = \frac{1}{\dfrac{0.4000}{16.1001} + \dfrac{0.6000}{14.6840}} = 15.2185,\ 15\ \text{mi/gal}^{1}$$

$$\text{Dodo, 300-2 barrel, automatic MPG} = \frac{1}{\dfrac{0.3000}{15.9020} + \dfrac{0.7000}{13.8138}} = 14.3803,\ 14\ \text{mi/gal}^{1}$$

Boredom III, 300-2 barrel, manual MPG = 14.6840, 15 mi/gal[1]

$$\text{Boredom III, 300-2 barrel, automatic MPG} = \frac{1}{\dfrac{0.2500}{13.8138} + \dfrac{0.7500}{13.2203}} = 13.3638,\ 13\ \text{mi/gal}^{1}$$

$$\text{Castor, 300-2 barrel, automatic MPG} = \frac{1}{\dfrac{0.2000}{13.2203} + \dfrac{0.8000}{10.6006}} = 11.0381,\ 11\ \text{mi/gal}^{1}$$

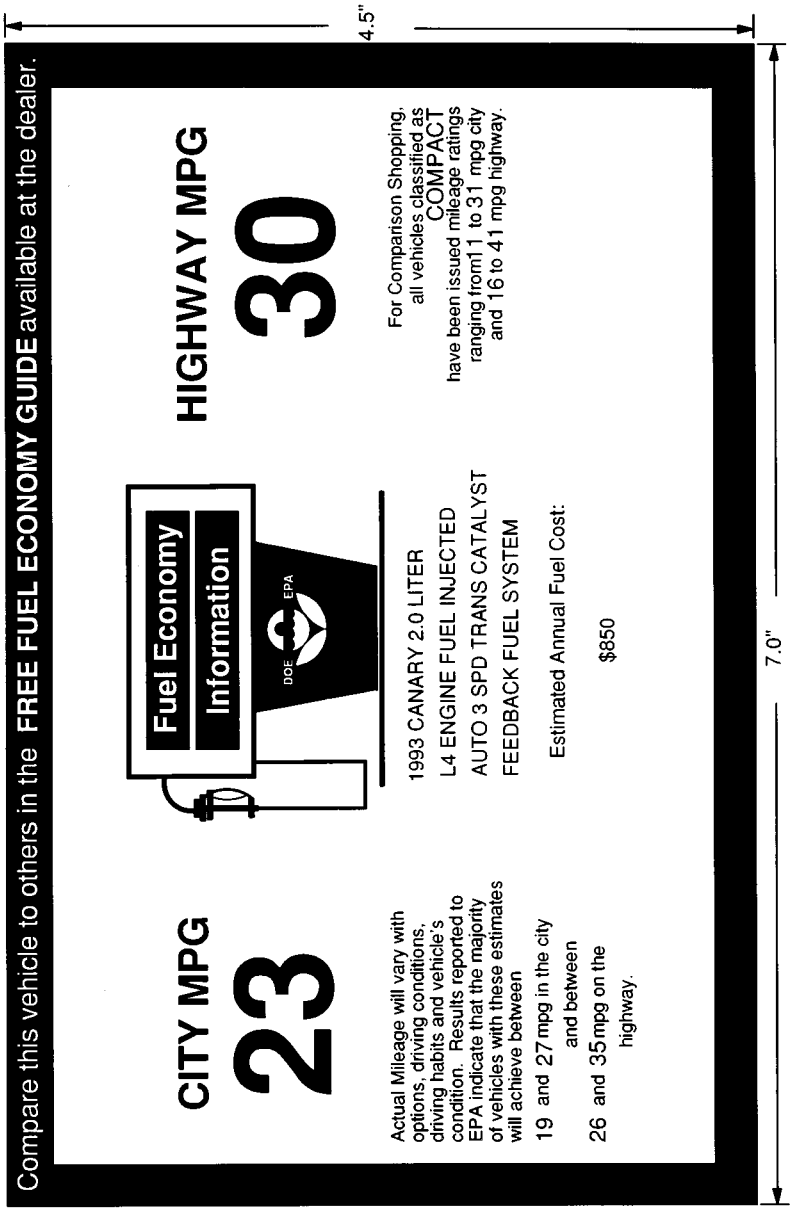
Note that even though no Dodo was actually tested, this approach permits its fuel economy figure to be estimated, based on the inertia weight distribution of projected Dodo sales within a specific engine and transmission grouping.

[1] The model type fuel economy values, rounded to the nearest mile per gallon, are the fuel economy values as used on general labels for that model year.

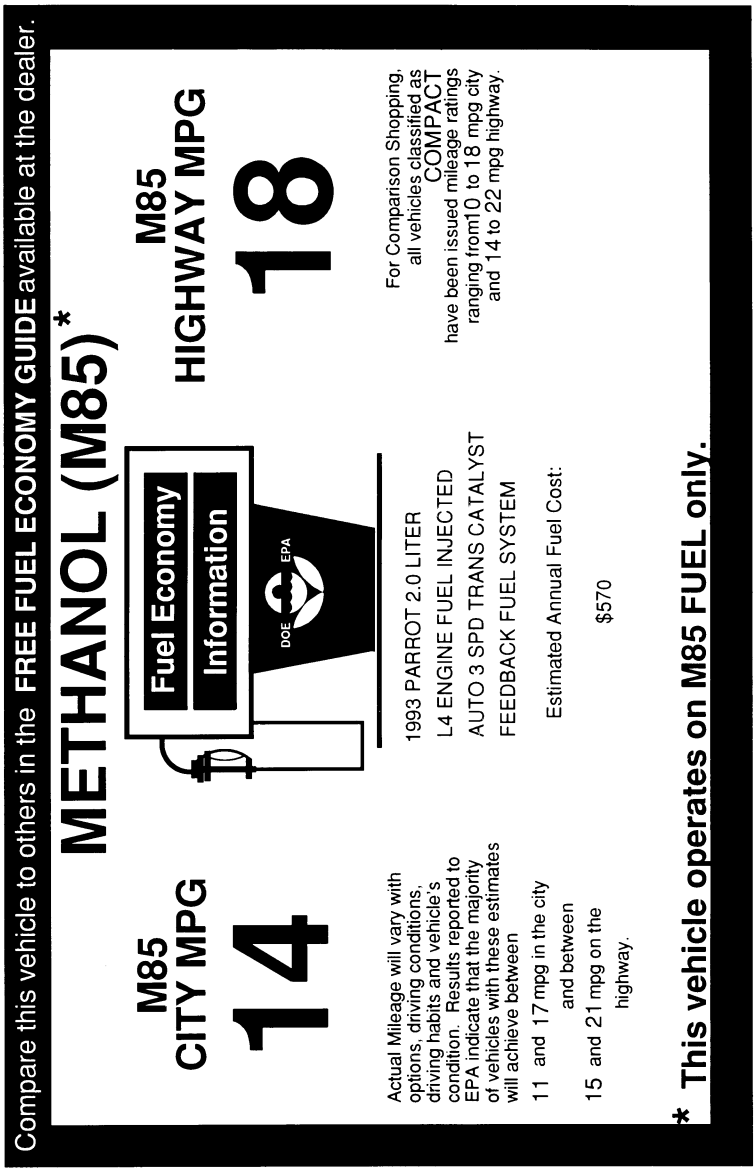
[41 FR 49766, Nov. 10, 1976]

APPENDICES IV—VII [RESERVED]

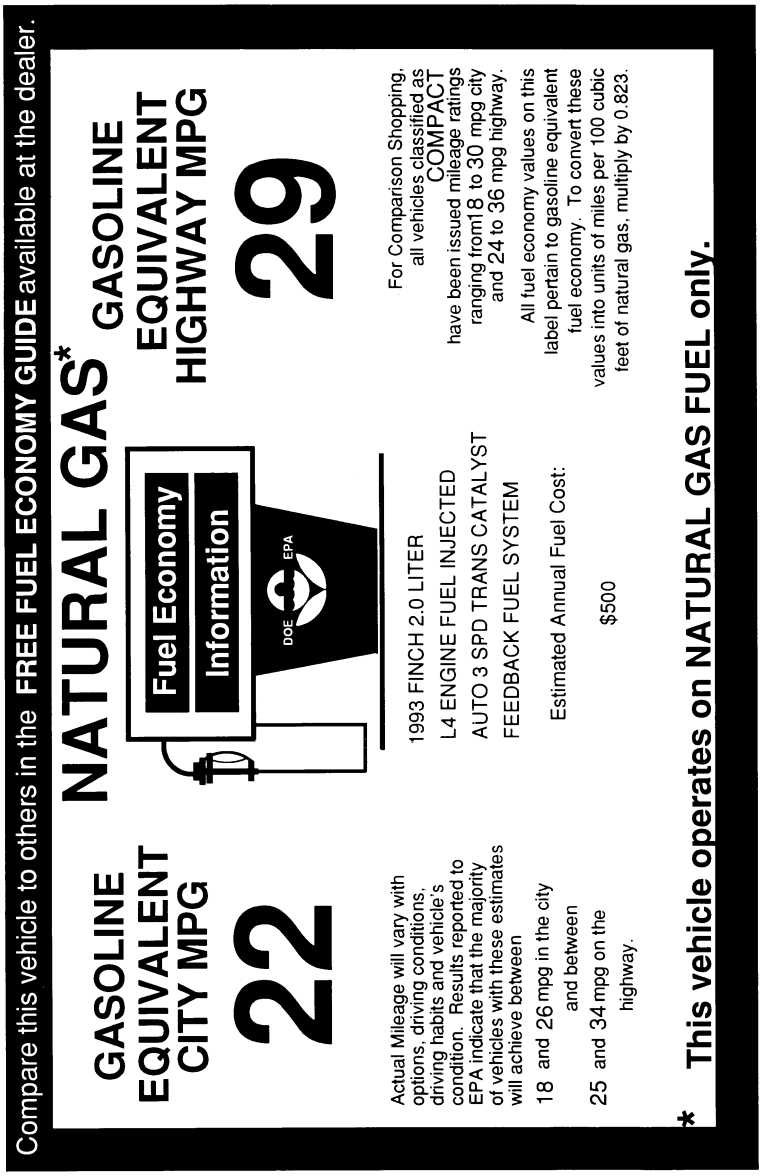
APPENDIX VIII TO PART 600—FUEL ECONOMY LABEL FORMATS



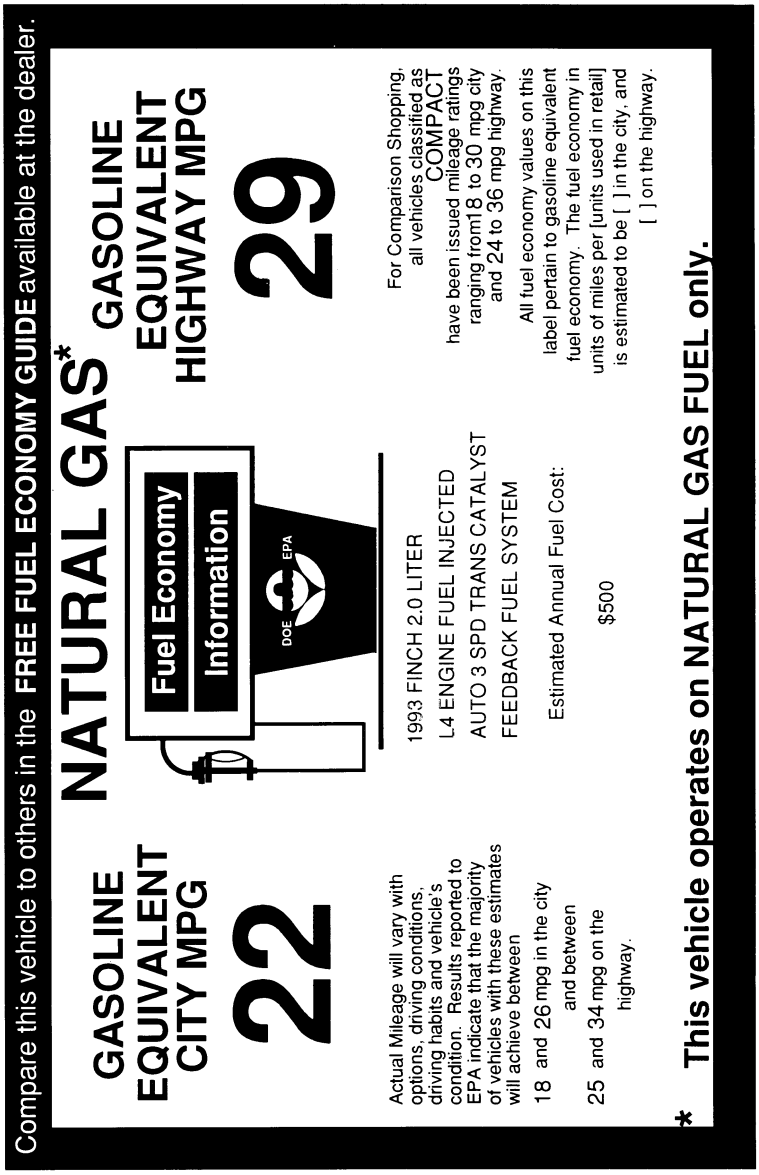
a. Gasoline-fueled vehicle label



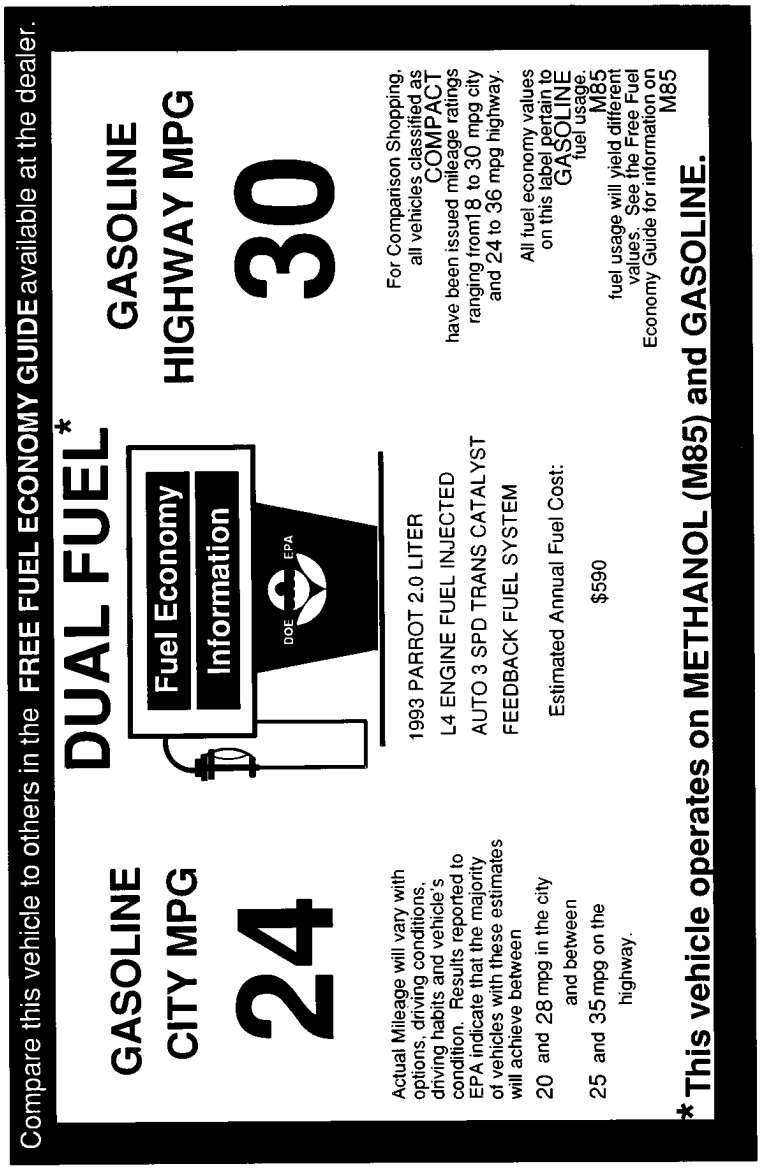
b. Dedicated M85-fueled vehicle label



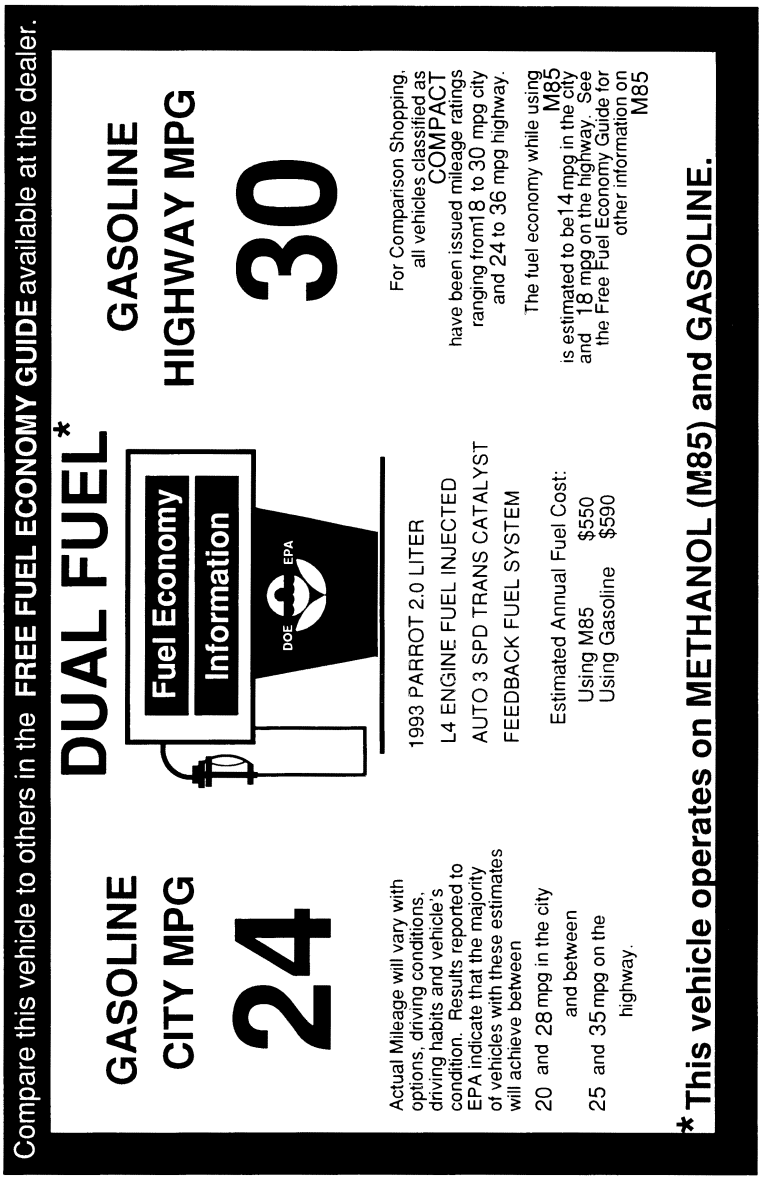
c. Dedicated natural gas-fueled vehicle label



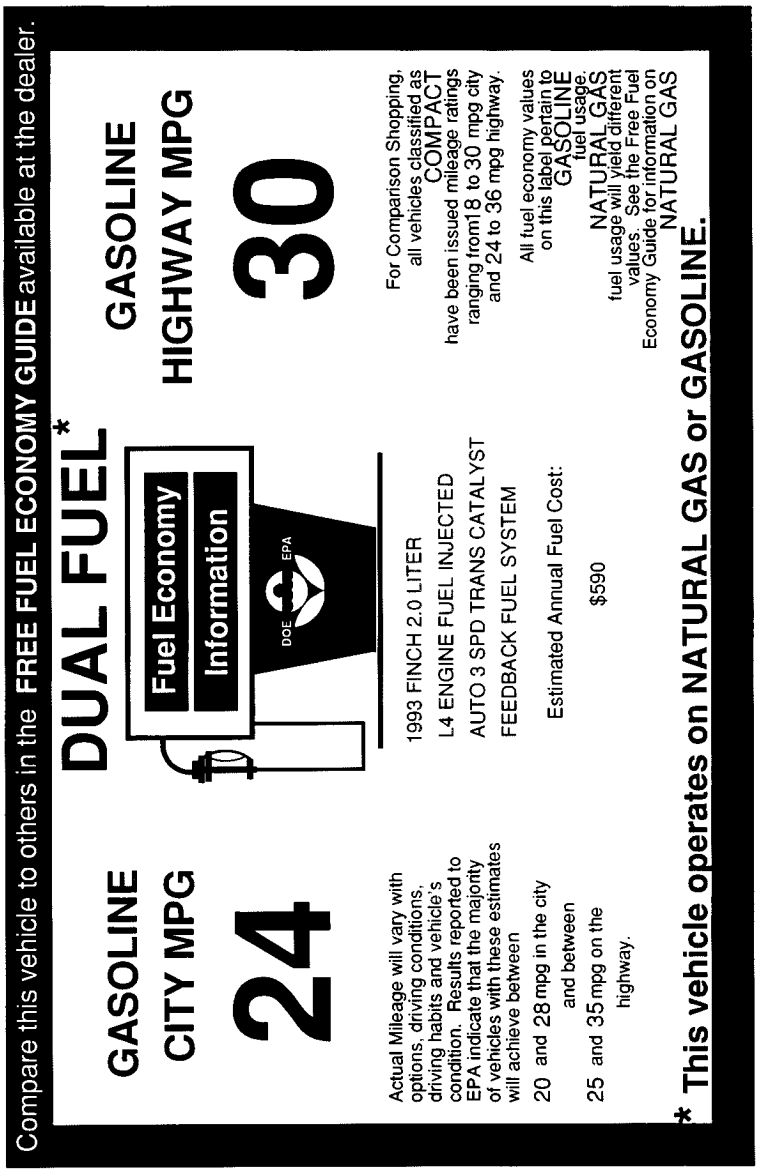
d. Dedicated natural gas-fueled vehicle label - optional



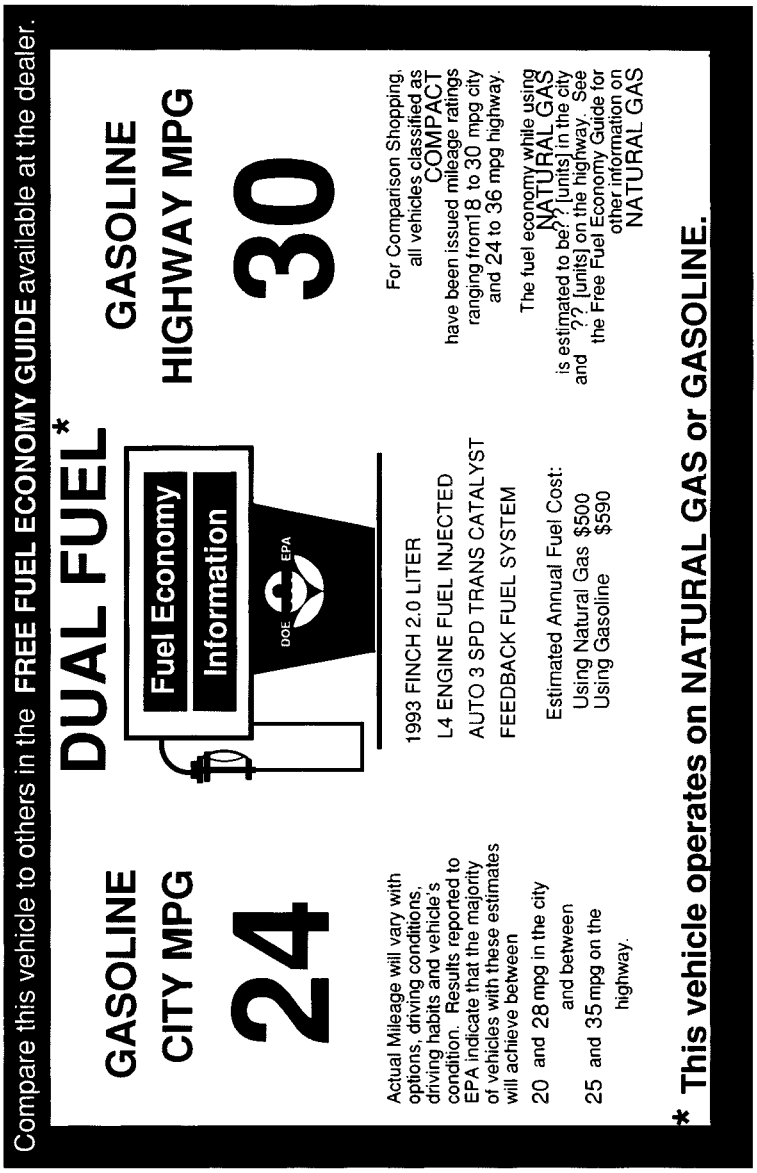
e. Methanol dual fuel vehicle label



f. Methanol dual fuel vehicle label - optional



g. Natural gas dual fuel vehicle label



h. Natural gas dual fuel vehicle label - optional

[59 FR 39661, Aug. 3, 1994]

PART 610—FUEL ECONOMY RETROFIT DEVICES

TEST PROCEDURES AND EVALUATION CRITERIA

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610.61 Engine dynamometer tests.
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610.64 Track test procedures.
610.65 Other test procedures.

AUTHORITY: Sec. 511, Motor Vehicle Information and Cost Savings Act, as amended (sec. 301, Pub. L. 94–163, 89 Stat. 915 (15 U.S.C. 2011)).

SOURCE: 44 FR 17946, Mar. 23, 1979, unless otherwise noted.

TEST PROCEDURES AND EVALUATION CRITERIA

Subpart A—General Provisions

§ 610.10 Program purpose.

(a) The purpose of an evaluation program initiated under these rules is to determine, in accordance with standardized procedures, the performance of various retrofit devices applicable to automobiles for which fuel economy improvement claims are made, and to compile and disseminate the results of the evaluation. It should be stressed that the role of this program will be the generation, analysis and dissemination of technical data, and not the approval or certification of retrofit devices.

(1) Through engineering or statistical analysis of data from vehicle tests, the evaluation program will determine the effects on fuel economy, exhaust emissions, durability and driveability of the applicable vehicles due to the installation or use of the devices. The evaluation program will also include additional procedures, whenever determined by the Administrator as necessary, to evaluate the durability of the devices themselves, their effects on vehicle durability or other effects only evident over the course of extended mileage accumulation.

(b) Data generated in an evaluation program by the Administrator of the Environmental Protection Agency (EPA) are public information and will be published in the FEDERAL REGISTER and elsewhere for use by the Federal Trade Commission and the public. The results of any evaluation conducted by the Administrator may be used in any subsequent investigation or enforcement action in the event that a device is marketed in violation of Federal or state law.

§ 610.11 Definitions.

(a) Except as specifically defined below, all terms used in this part which are defined in 40 CFR part 86 or 40 CFR part 600 shall have the meanings provided therein.

(1) ''Retrofit device'' or ''device'' means:

(i) Any component, equipment, or other device (except a flow measuring

instrument or other driving aid, or lubricant or lubricant additive) which is designed to be installed in or on an automobile as an addition to, as a replacement for, or through alteration or modification of, any original component, or other devices; or

(ii) Any fuel additive which is to be added to the fuel supply of an automobile by means other than fuel dispenser pumps; and

(iii) Which any manufacturer, dealer, or distributor of such device represents will provide higher fuel economy than would have resulted with the automobile as originally equipped, as determined under rules of the Administrator.

(2) ''Automobile'' means any four-wheeled vehicle propelled by fuel which is manufactured primarily for use on public streets, roads, and highways (except any vehicle operated exclusively on a rail or rails), and which is rated at 6,000 lbs. gross vehicle weight or less.

(3) ''Fuel economy'' means the average number of miles traveled by an automobile per gallon of gasoline (or equivalent amount of other fuel) consumed, as determined by the Administrator in accordance with procedures established under subpart D or F.

(4) ''Manufacturer'' means a person or company which is engaged in the business of producing or assembling, and which has primary control over the design specifications, of a retrofit device for which a fuel economy improvement claim is made.

(5) ''Retrofit'' means the addition of a new item, modification or removal of an existing item of equipment beyond that of regular maintenance, on an automobile after its initial manufacture.

(6) ''Federal Test Procedure'' or ''City Fuel Economy Test'' means the test procedures specified in 40 CFR part 86, except as those procedures are modified in these protocols.

(7) ''Highway Fuel Economy Test'' means the test procedure described in § 600.111(b).

(8) ''Operator'' means any person who installs, services or maintains a retrofit device in an automobile or who operates an automobile with a retrofit device installed.

(9) ''Device integrity'' means the durability of a device and effect of its malfunction on vehicle safety or other parts of the vehicle system.

(10) ''Test data'' means any information which is a quantitative measure of any aspect of the behavior of a retrofit device.

(11) ''Testing agent'' means any person who develops test data on a retrofit device.

(12) ''Preconditioning'' means the operation of an automobile through one (1) EPA Urban Dynamometer Driving Schedule, described in 40 CFR part 86.

(13) ''Configuration'' means the mechanical arrangement, calibration and condition of a test automobile, with particular respect to carburetion, ignition timing, and emission control systems.

(14) ''Baseline configuration'' means the unretrofitted test configuration, tuned in accordance with the automobile manufacturer's specifications.

(15) ''Adjusted configuration'' means the test configuration after adjustment of engine calibrations to the retrofit specifications, but excluding retrofit hardware installation.

(16) ''Retrofitted configuration'' means the test configuration after adjustment of engine calibrations to the retrofit specifications *and* after all retrofit hardware has been installed.

(17) ''Data fleet'' means a fleet of automobiles tested at ''zero device-miles'' in ''baseline configuration,'' the ''retrofitted configuration'' and in some cases the ''adjusted configuration,'' in order to determine the changes in fuel economy and exhaust emissions due to the ''retrofitted configuration,'' and where applicable the changes due to the ''adjusted configuration,'' as compared to the fuel economy and exhaust emissions of the ''baseline configuration.''

(18) ''Durability fleet'' means a fleet of automobiles operated for mileage accumulation used to assess deterioration effects associated with the retrofit device.

(19) ''Zero device-miles'' means the period of time between retrofit installation and the accumulation of 100 miles of automobile operation after installation.

(20) ''Independent laboratory'' means a test facility operated independently of any motor vehicle, motor vehicle engine, or retrofit device manufacturer capable of performing retrofit device evaluation tests. Additionally, the laboratory shall have no financial interests in the outcome of these tests other than a fee charged for each test performed.

(21) ''Evaluation program'' or ''program'' means the sequence of analyses and tests prescribed by the Administrator as described in §610.13 in order to evaluate the performance of a retrofit device.

(22) ''Preliminary analysis'' means the engineering analysis performed by EPA prior to testing prescribed by the Administrator based on data and information submitted by a manufacturer or available from other sources.

[44 FR 17946, Mar. 23, 1979, as amended at 49 FR 18489, May 1, 1984]

§ 610.12 Program initiative.

A retrofit device evaluation program will be initiated as follows:

(a) At the request of the Federal Trade Commission (FTC) when it has reason to believe that fuel economy representation made for a retrofit device being marketed may be inadequate,

(b) At the EPA Administrator's initiative, or

(c) Upon the application of any manufacturer of a retrofit device (or prototype thereof) for which a fuel economy improvement claim is made.

§ 610.13 Program structure.

(a) Each device evaluation program will consist of up to three phases:

(1) A preliminary analysis of available information and test data on the device to be performed by the EPA Administrator;

(2) Designing and conducting of a sequence of tests to determine device effectiveness if considered necessary by virtue of the Administrator's preliminary analysis; and

(3) Publication in the FEDERAL REGISTER, and submission to the Department of Transportation and to the Federal Trade Commission, of a summary of the results of any tests conducted under subparts C through F, or if none were conducted, then a summary of the results of the preliminary analysis conducted under subpart B; together with the Administrator's conclusions as to the effect of the tested retrofit device on fuel economy and exhaust emissions, and as to any other information that the Administrator determines is relevant in evaluating such device.

(b) Each of the above phases may, as appropriate, include the use of statistically valid sample sizes and statistical evaluation of measured results.

§ 610.14 Payment of program costs.

(a) All costs incurred in an evaluation program initiated at the request of the FTC or at the Administrator's initiative, including the cost of purchasing any necessary quantity of the device under evaluation, will be borne by the United States.

(b) For those evaluation programs initiated at the request of a manufacturer of a retrofit device, should the Administrator test the device, or cause the device to be tested, as part of the evaluation, then that manufacturer shall supply, at his own expense, one or more samples of the device to the Administrator and shall be liable for the costs of testing which are incurrred by the Administrator. The manufacturer shall also be liable for the cost of any preliminary testing at an independent testing laboratory performed as part of the evaluation program. Apart from the costs of testing a device, EPA shall be responsible for costs of formulating its engineering evaluation of a device.

[44 FR 17946, Mar. 23, 1979, as amended at 49 FR 18838, May 3, 1984]

§ 610.15 Eligibility for participation.

Participation in an evaluation program initiated under §610.12(c) will be available to any person or company who agrees to follow the procedures set forth in these protocols. Failure to conform to any aspect of these protocols, without the approval of the Adminstrator, may be interpreted as withdrawal from participation in the program.

§ 610.16 Applicant's responsibilities.

Each applicant for evaluation under §610.12(c) will be responsible for the following:

(a) Submission of an application, in the format specified by the Administrator, prior to initiation of the evaluation. A separate application shall be made for each different device. The application shall be made to the Administrator (or his delegate) by the manufacturer and shall be updated and corrected by amendment if deemed necessary by EPA.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the device covered by the application, including drawings, schematics and information on the theory of operation.

(2) Vehicles or engines to which the device is applicable and a description of the types of vehicles or engines to which it is not applicable, e.g., would not provide a benefit, a benefit less than claimed for the device in general, or would result in a safety hazard or damage to the engine. If the reason for inapplicability is safety or damage related, this must be explained as required by paragraph (b)(7) of this section.

(3) Installation or usage instructions, including degree of knowledge required by persons making the installation and the tools and equipment required.

(4) A statement of recommended maintenance, degree of knowledge required for that maintenance, and the tools and equipment required to perform the maintenance.

(5) All data regarding exhaust emissions regulated by EPA under §202 of the Clean Air Act and fuel economy test data on the device or product available to the applicant.

(6) All information available to the applicant concerning whether the device in its operation, function, or malfunction may cause an automobile using that device to emit into the ambient air any substance other than pollutants regulated by EPA under section 202 of the Clean Air Act (i.e., hydrocarbons, carbon monoxide, and oxides of nitrogen), or natural gaseous atmospheric constituents (such as carbon dioxide, or water vapor) in a quantity differing from that emitted in the operation of the automobile without the device.

(7) All information available to the applicant concerning whether and under what conditions the device in its operation, function or malfunction may result in damage to an automobile or endanger its occupants or persons or property in close proximity to the automobile.

(c) Shipment to the EPA's Motor Vehicle Emission Laboratory, or other test site designated by the Administrator, of the devices being evaluated in the quantity specified by the Administrator.

(d) Complete copies of the application and of any amendments thereto shall be submitted in such multiple copies as the Administrator may require.

§610.17 Application format.

(a) Device manufactures who apply for evaluation of a fuel economy retrofit device should use the standard application format, in order to allow the Administrator to compile relevant data on specific devices and to allow timely response to applications. Application formats are available from and submissions shall be made to:

Director, Emission Control Technology Division, Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, Michigan 48105. Attn: Fuel Economy Retrofit Device Evaluation.

(b) Four weeks should be allowed for analysis of the application and preparation of a response. As indicated in other sections of this part, this response will include the evaluation of the device according to the criteria discussed in subpart B of this part. The results of the Administrator's evaluation will be made public.

Subpart B—Evaluation Criteria for the Preliminary Analysis

§610.20 General.

The Administrator will employ the following criteria for evaluating the accuracy of fuel economy representations made with respect to retrofit devices:

(a) Device functional category;

(b) Device integrity;

(c) Operator interaction effects;

(d) Validity of test data;

(e) Evaluation of test data;

as these concepts are explained in §§ 610.21 through 610.25 respectively.

§ 610.21 Device functional category and vehicle system effects.

(a) The devices evaluated in this program are organized into categories for purposes of definition and establishment of evaluation criteria and test procedures, and to indicate which vehicle functional characteristics (other than fuel economy) may be adversely affected by installation or use of the device.

(b) A device's category will be based on:

(1) Engineering principles governing operation of the device;

(2) Interaction between the device and specific vehicle/engine operating characteristics; and

(3) Constraints with respect to vehicle applicability of the device.

(c) The device categories and the vehicle functional characteristics which may be adversely affected are noted for each device category in Table I. The notation for each characteristic is as follows:

Exhaust emissions.....1
Driveability.....2
Durability 3
Performance.....4

TABLE 1

Device categories	Characteristics adversely affected
Fuel-Air System	
Carburetors and fuel injection systems	All.
Air-fuel ratio modifiers (e.g., air bleeds)	All.
Atomization devices (acoustic and mechanical).	All.
Vapor Injectors	All.
Choke controls	1, 2, and 4.
Air filters	1, 2, and 4.
Fuel-air distribution systems (intake manifolds).	1, 2, and 4.
Fuel pressure regulators	All.
Ignition System	
Spark plugs	All.
Spark timing control systems	All.
Spark duration control systems	1, 4.
Spark energy sources	1, 4.
Emission Control Systems	
Exhaust gas recirculation (EGR) systems	All.
After-treatment devices	1, 2, and 4.
Drivetrain	
Tires	1.
Overdrive units	All.
Torque converter lockups	1, 2, and 4.

TABLE 1—Continued

Device categories	Characteristics adversely affected
Exhaust System	
Headers	1.
Tuned exhaust systems	1.
Accessories	
Cooling fan or cooling fan couplings	1.
Cold start aids (e.g., engine heaters)	1.
Lubrication	
Oil filters	3.
Vehicle Body	
Aerodynamic drag reduction devices	1.
Miscellaneous	
Modification to valve timing	All.
Retrofit prechambers	All.
Fuel additives	All.
Other miscellaneous	Potentially all.

(d) In the absence of sufficient information from the device manufacturer on this topic or if the Administrator's preliminary analysis indicates that testing is necessary to determine the nature or extent of possible adverse effects of device installation and use on vehicle operation and performance, the Administrator will require such tests to be conducted prior to the publication of a complete evaluation of the device.

[44 FR 17946, Mar. 23, 1979, as amended at 49 FR 18489, May 1, 1984]

§ 610.22 Device integrity.

The integrity of a device will be evaluated with respect to:

(a) The extent to which device manufacture is standardized by means of drawings, specifications, and other fabrication and quality assurance controls;

(b) The degree of sensitivity of device effectiveness to deterioration under exposure to normal operating conditions.

(c) The susceptibility of the device to deterioration of effectiveness under abnormal operating conditions;

(d) The effect upon its surroundings of device malfunction which may be reasonably anticipated to occur in actual use; and

(e) The extent to which test data support (b), (c) and (d).

§610.23 Operator interaction effects.

The device will also be evaluated with respect to:

(a) The degree of sensitivity of device effectiveness to variances in installation, operation and maintenance;

(b) The adequacy of manufacturer-furnished instructions for minimizing variances in installation, operation and maintenance;

(c) The extent to which device installation or use, or the effects of such installation or use, relate to Federal emission control regulations;

(d) Effects on the performance, safety, or occupant comfort of the retrofitted vehicle, and on that of other vehicles; and

(e) The relationship between total cost of ownership of the device (purchase price plus maintenance costs) and the cost savings realizable from its fuel economy effects.

§610.24 Validity of test data.

The Administrator will make a determination as to the validity of manufacturer-furnished test data on the basis of:

(a) The correlation between the test procedures used by the manufacturer or testing agent and the procedures prescribed in subpart D;

(b) The choice of test vehicle(s) as representative of the manufacturer's claim for operation and/or principles of operation;

(c) The degree of control exercised over ambient and operating conditions in the tests, including vehicle calibrations;

(d) Accuracy and precision of the measurement techniques and instrumentation used in the tests;

(e) Disclosure of all test data acquired on the device, whether representing positive, negative, or inconclusive results;

(f) Qualifications and independence of the testing agent; and

(g) The extent to which test data include evaluation of the durability of the device, or its effect on vehicle durability.

§610.25 Evaluation of test data.

Valid manufacturer-furnished test data will be evaluated with respect to:

(a) Vehicle applicability;

(b) Dependence of device effects upon vehicle type;

(c) Device effects on fuel economy, and on emissions, with statistical or other caveats as established by the data base;

(d) Definition of claims which can be made based on the available data; and

(e) Substantiation of specified claims made by the manufacturer.

Subpart C—Test Requirement Criteria

§610.30 General.

(a) If the Administrator determines, by the criteria given in subpart B, that the claims made for a device are not supported by existing test data or other information, the Administrator will request the manufacturer to furnish additional information, and may design a test program to investigate those areas where claims appear to be erroneous or unsupported or where adverse effects due to use of the device are suspected.

(b) In cases where the Administrator determines on the basis of the preliminary analysis that a device either can have no significant beneficial effect on fuel economy, or will have an adverse effect on emissions, he may elect not to design a test program or test the device and to publish only his preliminary analysis and conclusions.

(c) If the evaluation was initiated upon application of a manufacturer (as described in §610.12(c)) and the manufacturer elects not to have the device tested, the Administrator's preliminary analysis and conclusions will be published.

(d) For each device that the Agency intends to test, the Administrator will give the manufacturer prior notice by mail of the Agency's intent to test the device and provide the manufacturer the opportunity to attend the test sessions and to comment on the specific test design and results.

[44 FR 17946, Mar. 23, 1979, as amended at 49 FR 18489, May 1, 1984]

§610.31 Vehicle tests for fuel economy and exhaust emissions.

(a) The tests described in subpart D, E, or F may be conducted if existing

data or other information are insufficient to support claims for a device in any of these areas:

(1) Degree of improvement in fuel economy

(2) Effect on exhaust emissions

(3) Vehicle applicability

(b) The Administrator may determine that, in certain cases, tests using engine dynamometers are adequate for determining the effect of a device. Examples of such cases are given below.

(1) *Long-term effects.* In some cases, it may be necessary for the engine to operate for several thousand miles before the effectiveness can be adequately measured. In such cases an engine dynamometer will permit a less expensive and better controlled durability and economy test than one in which a vehicle must be driven on a durability route and then tested on a chassis dynamometer or test track.

(2) *Durability requirements.* Aspects of engine durability can be efficiently determined using specialized engine testing rather than through durability mileage accumulation in a vehicle. A number of standard engine tests are presently used which can be incorporated into this requirement.

(c) When in the judgment of the Administrator a device cannot satisfactorily be evaluated using either dynamometer or track versions of the City Fuel Economy Test and the Highway Fuel Economy Test, the Administrator will select or design other procedures.

§ 610.32 Test fleet selection.

(a) The composition and size of the test fleet will be determined by the Administrator. In a device evaluation program initiated at the request of the FTC, the composition and size of the test fleet will be determined by the Administrator in consultation with the FTC.

(b) The goal of the test fleet selection will be the provision of a data base adequate to give the Administrator reasonable confidence in the conclusions to be reached.

(c) Once the number of vehicles to be tested has been determined, the Administrator will specify the test fleet makeup by make, model, model year, engine displacement and carburetor, transmission type, and such other factors as he may deem relevant to the testing program.

§ 610.33 Durability tests.

The Administrator may determine that a device under evaluation will require durability testing in addition to the basic evaluation testing for device effectiveness. This requirement may be necessary for several reasons:

(a) A retrofit device manufacturer may claim that some mileage accumulation may be needed before the full effectiveness of the device can be obtained. If such claims are made, durability testing as described in subpart E may be performed. To determine whether the effectiveness change during the mileage accumulation is a function of the device or of the mileage accumulation alone, in some durability tests it may be necessary to run the mileage accumulation on vehicles with and without the device. Due to the high cost of durability testing and in particular of such duplicate testing, it will be used only where it is judged by the Administrator to be necessary.

(b) A device may have a limited life expectancy or be such that it requires replacement or adjustment at a prescribed mileage interval. Confirmatory durability tests may be run to assess whether such mileage intervals are proper and effective.

(c) A device may be suspected of having an adverse effect on the durability of the engine to which it is applied. After identification of a potential failure mode, durability tests may be conducted to investigate any changes in engine characteristics associated with that failure mode. Examples are valve problems, deterioration in spark plug life, increase in carburetor or combustion chamber deposits, or increased engine wear. If it is not possible to directly measure the change in the suspect characteristic, then a durability run may be made as described in subpart E, in which fuel economy and exhaust emissions are periodically checked during the accumulation of up to 15,000 miles.

(d) A critical item which can influence fuel economy is vehicle maintenance. Any durability test program used in evaluation of the effectiveness

of a fuel economy device will be designed to differentiate maintenance effects from the effect of the device. Any maintenance associated with the device operation will be rigidly controlled. If the maintenance appears to be a significant factor in the effectiveness of a device, then it may be necessary to run a control test on vehicles without the device installed where the same maintenance is performed to quantify any incremental effect of that maintenance.

§610.34 Special test conditions.

If the Administrator determines that a device may have potentially detrimental effects on the operation of a vehicle when operated in ambient conditions outside the range specified in 40 CFR part 86, or if the device manufacturer claims a fuel economy improvement in such conditions, additional tests may be performed. These tests will determine whether the device will significantly limit the operational usefulness of the vehicle and will assess the claimed fuel economy benefit.

(a) *Extreme temperatures.* As required by the Administrator, tests will be conducted at extreme ambient temperature conditions to determine the effect due to devices (e.g. engine heaters) for which fuel economy improvements at extreme temperatures are made. For other devices it may be necessary to determine whether the cold starting and driving capability of device-equipped vehicles is affected sufficiently to make them dangerous, or whether fuel economy characteristics at extreme temperatures are significantly worse than before the device was installed.

(b) *High altitude.* Devices for which specific claims of improved fuel economy at high altitude are made may be tested using the procedures in subpart D, at altitudes above 4000 feet. For other devices, testing at high altitude may be necessary for determining whether a device will make the vehicle less useful or efficient when operated at various altitudes. The Administrator will determine when such testing is required.

§610.35 Driveability and performance tests.

If the Administrator determines that driveability and performance of a vehicle may be adversely affected by the use of a device, a number of automobiles to be determined by the Administrator will be subjected to the driveability and performance tests discussed in §§610.62 and 610.63, respectively.

Subpart D—General Vehicle Test Procedures

§610.40 General.

Two chassis dynamometer test procedures, the Federal Test Procedure and the Highway Fuel Economy Test will generally be used to evaluate the effectiveness of the devices supplemented by steady state or engine dynamometer tests where warranted. Under unusual circumstances, other test procedures, durability test procedures or special test procedures such as track versions of the City and Highway fuel economy tests may be used. These procedures are described in subparts E and F.

§610.41 Test configurations.

(a) In order to measure the effectiveness of a retrofit device at least two, and in some cases, three vehicle configurations defined in §610.11 will be tested. Each vehicle will be tested at least twice in each configuration, as determined by the Administrator.

(b) The first test configuration is a baseline configuration. In this configuration the baseline or unretrofitted vehicle emissions will be measured.

(c) A second test configuration, an adjusted configuration, may be required at the discretion of the Administrator if a device requires both hardware and engine parameter modifications to achieve the fuel economy improvement. If, in the Administrator's judgment, based on a review of the available information, the combined effects of retrofit hardware installation and parametric adjustment could be substantially duplicated by parametric adjustment alone, then the Administrator may specify a second test, to evaluate such adjustment exclusive of the retrofit hardware.

(d) The third series of tests, in the retrofitted configuration, will evaluate the full retrofit system installed on the vehicle.

§ 610.42 Fuel economy measurement.

(a) Fuel consumption will be measured by:

(1) The carbon balance method, or

(2) Gravimetric or volumetric methods. In the gravimetric and volumetric methods, fuel consumption is determined by weighing the fuel source before and after a test, or by measuring the volume of fuel consumed during a test. Since the distance traveled during the tests is known, the fuel economy, in miles per gallon, can be calculated. Gravimetric and volumetric methods require the use of special test equipment in addition to the emissions measuring equipment.

(b) The carbon balance procedure for measuring fuel consumption relates the carbon products in the exhaust to the amount of fuel burned during the test. This method will be the one used to measure fuel economy unless track or road tests are employed.

(c) Three values of fuel economy will be reported: for city driving ('75 FTP), for highway driving (HFET), and the combined city/highway value calculated according to this equation:

$$MPG_{combined} = 1 \Bigg/ \left[\frac{0.55}{MPG_{city}} + \frac{0.45}{MPG_{hwy}} \right]$$

§ 610.43 Chassis dynamometer procedures.

(a)(1) *1975 Federal Test Procedure.* Vehicle exhaust emissions and fuel economy under urban driving conditions will be measured according to the Federal emission test procedure described in 40 CFR part 86, subpart B, which is known as the 1975 Federal Test Procedure ('75 FTP). However, the following modifications will be employed:

(i) No evaporative emission loss, as specified by 40 CFR part 86 need be measured (with the exception of devices modifying or disconnecting existing evaporative control devices in such a manner as would be expected to adversely affect their evaporative emission control performance).

(ii) Vehicle preconditioning shall consist of operation of the vehicle through one (1) EPA Urban Dynamometer Driving Schedule. This preconditioning must be done at least 12 hours, but no earlier than 36 hours before the emission test.

(iii) While the test fuel must meet the specifications outlined in 40 CFR part 86, fuel conditioning as specified for evaporative emission test procedures is not required.

(b) *Highway Fuel Economy Test.* The test vehicle is fully warmed up at the start of the highway Fuel Economy Test which is ordinarily run immediately following the Federal Emission Test Procedure. The test procedure to be followed for generation of highway fuel economy data is that specified in § 600.111.

(c) *Steady state tests.* Constant speed, road load tests may be conducted to help give insight into operational differences and exhaust emission and fuel economy changes due to a retrofit device. Speeds between 0 (engine idling) and 60 mpg will be investigated, with a time period at each speed long enough to ensure that engine operation has stabilized.

Subpart E—Durability Test Procedures

§ 610.50 Test configurations.

(a) In addition to the tuneup to manufacturer's specifications per § 610.41, all vehicles in the durability fleet will have installed the following new parts: Air, oil, and fuel filters, spark plugs, points, condenser, rotor, distributor cap, PCV valve, and emission control devices such as vacuum control valves and EGR valves.

(b) Vehicles included in the durability fleet will be subjected at zero device-miles to the same test sequence for fuel economy and exhaust emissions as specified in subpart D. Subsequently, they will be tested at 3,000 device-mile intervals, up to and including the final mileage point of 15,000 device-miles. Testing at these mileage points will be performed with the vehicle equipped with the full retrofit system.

(c) After the 15,000-mile test the vehicle will be tuned as necessary and the device adjusted to the manufacturer's specifications as required. The fully restored retrofitted configuration will then be tested. The device will then be removed from the vehicle and the vehicle set to vehicle manufacturer's specifications. A tuned baseline test will then be conducted.

§610.51 Mileage accumulation procedure.

(a) Except as otherwise provided in this part, the mileage accumulation procedure will be that provided in 40 CFR part 86. This mileage accumulation schedule, or a suitable alternate procedure approved by the Administrator, will be used.

(b) Fuel used in the accumulation of mileage will be commercial fuel available in the retail market and shall conform to the requirements of 40 CFR part 86 for mileage accumulation fuel.

(1) The requirements of this paragraph may be modified by the Administrator when it is a fuel or fuel additive that is being tested.

§610.52 Maintenance.

(a) Maintenance during the durability evaluation can best be considered in three separate categories:

(1) Normal scheduled vehicle maintenance,

(2) Unscheduled vehicle maintenance, and

(3) Retrofit maintenance.

(b) Normal scheduled vehicle maintenance is the periodic service specified in the original owner's manual supplied to the owner at the time of new vehicle purchase.

(1) Normal periodic engine oil changes, vehicle lubrication, and oil filter changes, as specified in the original owner's manual, will be performed during durability mileage accumulation.

(2) For purposes of this part, the following items of normally scheduled vehicle maintenance will not be performed during the durability mileage accumulation:

(i) Normal tune-up items:

(A) Spark plugs.

(B) Condenser.

(C) Rotor.

(D) Distributor cap.

(ii) Air Cleaner element.

(iii) PCV Inspection.

(iv) Dwell and timing check.

(v) Charging circuit check.

(3) Periodic maintenance items specified in the original owner's manual, other than those listed above, may be performed if found to be necessary by the Administrator.

(c) *Unscheduled maintenance.* Because the vehicles used for durability evaluation in this program will probably have considerable mileage accumulation and unknown maintenance prior to inclusion in the program, it can be anticipated that certain vehicle and engine failures may occur, which may be unrelated to the retrofit device. Unscheduled maintenance will be performed only in those cases where a significant and obvious driveability problem has been reported by the driver of the vehicle.

(1) Correction of the following problems will be made as soon as the problems occur:

(i) Tire replacement (same size and type).

(ii) Vehicle body repairs (remote from engine and retrofit).

(iii) Windshield wipers.

(iv) Fluid levels unrelated to retrofit.

(v) Brakes.

(vi) Hoses unrelated to retrofit.

(vii) Belts unrelated to retrofit.

(viii) Suspension failures.

(ix) Wheel alignment.

(x) Steering.

(xi) Wheel bearings.

(xii) Non-engine electrical system.

(xiii) Drivetrain components (U-joints, axles, transmission adjustments, etc.)

(2) Other unscheduled maintenance of the engine or drivetrain may be made as directed by the Administrator. Upon notification of a need for unscheduled maintenance, the Administrator may decide that before and after maintenance fuel economy tests are required.

(d) *Retrofit maintenance.* Maintenance of the retrofit device will normally not be performed during the accumulation of durability mileage of 15,000 miles. However, certain retrofit devices may require periodic maintenance that is directly related to device function. An example is the periodic addition of

fluid to the reservoir of a vapor injector. The Administrator will determine whether periodic maintenance will be allowed, based on his review of available information including the device manufacturer's maintenance instructions to the consumer.

(e) A log of all maintenance shall be kept for every vehicle. These logs will be summarized in the final report by the Administrator.

Subpart F—Special Test Procedures

§ 610.60 Non-standard ambient conditions.

(a) *Extreme temperatures.* For vehicles required to be tested at extreme temperatures, the test sequence described in § 610.41 will be performed using either test track or dynamometer, in ambient temperatures outside the 60° to 90° range specified in § 610.64 as determined by the Administrator. The driveability tests described in § 610.62 may also be performed at non-standard temperatures, as determined to be necessary by the Administrator.

(b) *High altitudes.* Vehicles required to be tested at high altitudes will undergo the tests described in § 610.43 if necessary, on either test track or dynamometer as determined by the Administrator. One test location, at an elevation of no less than 4000 feet, will be selected.

§ 610.61 Engine dynamometer tests.

The Administrator will choose a test procedure or procedures from various engine dynamometer durability test procedures used by research organizations in government, the oil industry, engine manufacturing companies, and independent laboratories.

§ 610.62 Driveability tests.

Driveability assessment (at normal ambient temperatures) of the baseline configuration, of the adjusted configuration (if required by the Administrator), and of the fully retrofitted configuration may be conducted at zero device-miles for all vehicles included in the durability fleet, and at approximately zero device-miles at low ambient temperatures (0°F–20°F). Driveability evaluation procedures will be provided by the Administrator when necessary.

§ 610.63 Performance tests.

The effect of a device on a vehicle's performance will be determined by performing wide-open-throttle 0 to 60 mph acceleration tests (at normal ambient temperatures) on the baseline vehicle configuration, on the adjusted configuration (if required), and on the fully retrofitted configuration. Tests will be conducted on a dry, level, smooth-surfaced test track, with appropriate speed-time measuring equipment, on as many vehicles as determined to be necessary.

§ 610.64 Track test procedures.

(a) Cases may arise where it will be necessary to evaluate the fuel economy effects of a retrofit device on a test track, because the effect of the device cannot be adequately tested using the chassis dynamometer procedures. (An obvious example is a device that changes the aerodynamic drag of the test vehicle.) In such cases, testing will be performed on a dry, level, smooth-surfaced test track for such dimensions that the speeds required by the city and highway fuel economy tests may be safely achieved.

(1) Because aerodynamic drag is not a linear function of velocity, it will be necessary to limit testing to times when the wind velocity is less than 5 mph, with gusts less than 10 mph.

(2) Testing will also be limited to ambient temperatures between 60° and 90° F, and to times when the ambient temperature remains reasonably constant during individual tests. Temperature differences between tests of baseline and retrofit configurations will also be minimized.

(3) Exhaust emissions will not be measured during track testing.

(4) Fuel economy of a vehicle running on a track will be measured using either a volumetric or gravimetric procedure approved by the Administrator.

(5) Vehicle speed and distance will be measured with a ''fifth wheel'' type of device. Suitable apparatus will be used to generate a permanent record (strip chart recorder, etc.) of the vehicle speed versus time.

(b) *City fuel economy test.* Although essentially the same procedures will be used for track testing as for dynamometer testing, some modifications will be necessary to insure safe operation of the test vehicle and to adjust to the requirements of track testing.

(1) An assistant to the driver will be necessary to steer the vehicle, so that the driver will not be distracted from following the speed-time schedules used in the Federal test procedure.

(2) The test vehicle will be preconditioned within the same time constraints given in §610.43(a)(1)(ii). Preconditioning may take place either on the track or on a dynamometer. The 12-hour soak after preconditioning will take place in an area where the ambient temperature will remain within the 60° to 90° F range, indoors, if necessary.

(3) The vehicle will be transported to the test track without being started. If the distance from soak area to track is no greater than one-quarter mile, then the vehicle may be pushed or towed to the track. Otherwise the vehicle must be transported by truck or trailer.

(4) Fuel economy will be determined by either a gravimetric or volumetric method.

(c) *Highway fuel economy test.* The highway test will follow the city fuel economy test in the same manner as in dynamometer tests (§610.43(b)). Fuel economy will be measured by gravimetric or volumetric methods.

(d) *Steady state tests.* Steady state tests on the track will be run in the same manner as on the dynamometer except that fuel economy will be measured by gravimetric or volumetric methods.

§610.65 Other test procedures.

The Administrator may, pursuant to §610.31(c), choose a test procedure or procedures from those used by research organizations in government, the oil industry, engine manufacturing companies, and independent laboratories. If none of these is deemed suitable, the Administrator may, in consultation with the party requesting the test, design a dynamometer, track or road test to measure the effects of the device.

FINDING AIDS

A list of CFR titles, subtitles, chapters, subchapters and parts and an alphabetical list of agencies publishing in the CFR are included in the CFR Index and Finding Aids volume to the Code of Federal Regulations which is published separately and revised annually.

Material Approved for Incorporation by Reference
Table of CFR Titles and Chapters
Alphabetical List of Agencies Appearing in the CFR
Table of OMB Control Numbers
List of CFR Sections Affected

Material Approved for Incorporation by Reference

(Revised as of July 1, 1997)

The Director of the Federal Register has approved under 5 U.S.C. 552(a) and 1 CFR Part 51 the incorporation by reference of the following publications. This list contains only those incorporations by reference effective as of the revision date of this volume. Incorporations by reference found within a regulation are effective upon the effective date of that regulation. For more information on incorporation by reference, see the preliminary pages of this volume.

40 CFR CHAPTER I (PARTS 425–699): SUBCHAPTER N—EFFLUENT GUIDELINES AND STANDARDS

ENVIRONMENTAL PROTECTION AGENCY

	40 CFR
American Public Health Association	
1015 15th St., NW., Washington, DC 20005	
Standard Methods for the Examination of Water and Wastewater, Parts 9212 E, 9222 D, 2710 B, 2540 G, and 9260 D, 18th Edition, 1992.	503.8
American Society for Testing and Materials (ASTM)	
1916 Race St., Philadelphia, PA 19103	
ASTM D 240–92, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter.	600.113–93(c); 600.510–93(g)
ASTM D 975–91 Standard Specification for Diesel Fuel Oils	435.11; 435.41(h)
ASTM D 1945–91, Standard Test Method for Analysis of Natural Gas by Gas Chromatography.	600.113–93
ASTM D 1298–85 (Reapproved 1990), Standard Practice for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method.	600.113–93(c); 600.510–93(g)
ASTM D 3338–92, Standard Test Method for Estimation of Net Heat of Combustion of Aviation Fuels.	600.113–93(c)
ASTM D 3343–90, Standard Test Method for Estimation of Hydrogen Content of Aviation Fuels.	600.113–93(c)
ASTM D 4994–89 Standard Practice for Recovery of Viruses From Wastewater Sludges.	503.8
ASTM E 29–67 (Reapproved 1973), Standard Recommended Practice for Indicating Which Places of Figures are to be Considered Significant in Specified Limiting Values.	600.002–93(a); 600.113–93(d)
National Council for Air and Stream Improvements, Inc.	
260 Madison Ave., New York, NY 10016	
Technical Bulletin 253, Dec. 1971	430.11(b); 430.21(b); 430.31(b); 430.41(b)
Availability address code: a.	
Department of Energy	
Environmental Measurements Laboratory, 376 Hudson St., New York, NY 10014	
HASL Procedures Manual, HASL–300, 1973, page EU–03	440.82(g)
Availability address code: b and c.	

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	40 CFR
Availability Address Codes	
a. National Council for Air and Stream Improvements, Inc., 260 Madison Ave., New York, NY 10016	
b. Health and Safety Research Division, Oak Ridge National Laboratory, Oak Ridge, TN 37830	
c. National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22151	
National Technical Information Service	
5285 Port Royal Road, Springfield, VA 22161	
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW–846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and Third Edition (November 1986) with Revision I (December 1987) (Third Edition and Revision I are available from Superintendent of Documents, Government Printing Office, 941 North Capitol St., NE., Washington, DC 20002.	503.8
Yanko, W.A., Occurrence of Pathogens in Distribution and Marketing Municipal Sludges, EPA 600/1–87–014, 1987.	503.8
Water Environment Federation	
601 Wythe St., Alexandria, VA 22314	
Kenner, B.A. and H.P Clark, Detection and Enumeration of Salmonella and Pseudomonas aeruginosa, Journal of the Water Pollution Control Federation, Vol. 46 no. 9, September 1974, pp. 2163–2171.	503.8

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The OMB control numbers for chapter I of title 40 were consolidated into §9.1 at 58 FR 27472, May 10, 1993 and amended at 58 FR 34199, June 23, 1993 and 58 FR 34370, June 25, 1993. Section 9.1 is reprinted below for the convenience of the user.

PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT

AUTHORITY: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

§9.1 OMB approvals under the Paperwork Reduction Act.

This part consolidates the display of control numbers assigned to collections of information in certain EPA regulations by the Office of Management and Budget (OMB) under the Paperwork Reduction Act (PRA). This part fulfills the requirements of section 3507(f) of the PRA.

40 CFR citation	OMB control No.
Public Information	
Part 2, subpart B	2050–0143
General Regulation for Assistance Programs for Other than State and Local Governments	
30.400	2030–0020
30.500	2030–0020
30.501	2030–0020
30.503	2030–0020
30.505	2030–0020
30.510	2030–0020
30.520	2030–0020
30.530	2030–0020
30.531	2030–0020
30.532	2030–0020
30.535	2030–0020
30.1002	2030–0020
30.1003	2030–0020
30.1200	2030–0020
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31.10	2030–0020
31.20–31.21	2030–0020
31.31–31.32	2030–0020
31.36(g)–31.36(h)	2030–0020
31.40	2030–0020
31.42	2030–0020
31.6	2030–0020
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33.110	2030–0003
33.211	2030–0003
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35.2015	2040–0027
35.2025	2040–0027
35.2034	2040–0027
35.2040	2040–0027
35.2105–35.2107	2040–0027
35.2110	2040–0027
35.2114	2040–0027
35.2118	2040–0027
35.2120	2040–0027
35.2127	2040–0027
35.2130	2040–0027
35.2140	2040–0027
35.2211–35.2212	2040–0027
35.2215–35.2216	2040–0027
35.2218	2040–0027
35.3010	2040–0095
35.3030	2040–0095
35.3130	2040–0118
35.3135	2040–0118
35.3140	2040–0118
35.3145	2040–0118
35.3150	2040–0118
35.3155	2040–0118
35.3160	2040–0118
35.3165	2040–0118
35.3170	2040–0118
35.6055(a)(2)	2010–0020
35.6055(b)(1)	2010–0020
35.6055(b)(2)(i)–(ii)	2010–0020
35.6105(a)(2)(i)–(v), (vii)	2010–0020
35.6110(b)(2)	2010–0020
35.6120	2010–0020
35.6145	2010–0020
35.6155(a), (c)	2010–0020
35.6230(a), (c)	2010–0020
35.6300(a)(3)	2010–0020
35.6315(c)	2010–0020
35.6320	2010–0020
35.6340(a)	2010–0020
35.6350	2010–0020
35.6500	2010–0020
35.6550(a)(1)(ii)	2010–0020
35.6550(b)(1)(iii)	2010–0020
35.6550(b)(2)(i)	2010–0020
35.6585	2010–0020

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35.6595(a)	2010–0020
35.6600(a)	2010–0020
35.6650	2010–0020
35.6655	2010–0020
35.6660	2010–0020
35.6665(a)	2010–0020
35.6700	2010–0020
35.6705	2010–0020
35.6710	2010–0020
35.6805	2010–0020
35.6815 (a), (d), (e)	2010–0020
35.9000–35.9070	2040–0138
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51.160–51.166	2060–0003
51.321–51.323	2060–0088
51.353–51.354	2060–0252
51.365–51.366	2060–0252
51.370–51.371	2060–0252
51.850–51.860	2060–0279
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52.21	2060–0003
52.741	2060–0203
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55.4–55.8	2060–0249
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58.11–58.14	2060–0084
58.20–58.23	2060–0084
58.25–58.28	2060–0084
58.30–58.31	2060–0084
58.33	2060–0084
58.35	2060–0084
58.40–58.41	2060–0084
58.43	2060–0084
58.45	2060–0084
58.50	2060–0084
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60.7(d)	2060–0207
60.45–60.47	2060–0026
60.46a–60.49a	2060–0023
60.40b	2060–0072
60.42b	2060–0072
60.44b–60.49b	2060–0072
60.42c	2060–0202
60.44c–60.48c	2060–0202
60.53–60.54	2060–0040
60.50a	2060–0210
60.56a–60.59a	2060–0210
60.63–60.65	2060–0025
60.73–60.74	2060–0019
60.84–60.85	2060–0041
60.93	2060–0083
60.104–60.108	2060–0022
60.113a–60.115a	2060–0121
60.113b–60.116b	2060–0074
60.123	2060–0080
60.133	2060–0110
60.142–60.144	2060–0029
60.143a–60.145a	2060–0029
60.153–60.155	2060–0035
60.192(b)	2060–0031
60.194–60.195	2060–0031
60.203–60.204	2060–0037
60.213–60.214	2060–0037
60.223–60.224	2060–0037
60.233–60.234	2060–0037
60.243–60.244	2060–0037
60.253–60.254	2060–0122
60.273–60.276	2060–0038
60.273a–60.276a	2060–0038
60.284–60.286	2060–0021
60.292–60.293	2060–0054
60.296	2060–0054
60.303	2060–0082
60.310	2060–0106
60.313–60.316	2060–0106
60.334–60.335	2060–0028
60.343–60.344	2060–0063
60.373–60.374	2060–0081
60.384–60.386	2060–0016
60.393–60.396	2060–0034
60.398	2060–0034
60.403–60.404	2060–0111
60.433–60.435	2060–0105
60.443–60.447	2060–0004
60.453–60.456	2060–0108
60.463–60.466	2060–0107
60.473–60.474	2060–0002
60.482–2	2060–0012
60.482–3	2060–0012
60.482–4	2060–0012
60.482–7	2060–0012
60.482–8	2060–0012
60.482–10	2060–0012
60.483–1	2060–0012
60.483–2	2060–0012
60.484–60.487	2060–0012
60.493–60.496	2060–0001
60.502–60.503	2060–0006
60.505	2060–0006
60.530–60.536	2060–0161
60.537 (a)(1)–(2), (a)(4)–(5), (b)–(i)	2060–0161
60.538–60.539	2060–0161
60.543 (b)(2)–(4), (c)–(n)	2060–0156
60.544	2060–0156
60.545 (a)–(d), (f)	2060–0156
60.546 (a)–(e), (f)(4)–(6), (g)–(j)	2060–0156
60.547	2060–0156
60.562–1	2060–0145
60.562–2	2060–0145
60.563–60.565	2060–0145
60.580	2060–0073
60.583–60.585	2060–0073
60.592–60.593	2060–0067
60.603–60.604	2060–0059
60.613–60.615	2060–0197
60.622	2060–0079
60.624–60.625	2060–0079
60.632–60.636	2060–0120
60.640	2060–0120
60.642–60.644	2060–0120
60.646–60.647	2060–0120
60.663–60.665	2060–0197
60.670	2060–0050
60.672	2060–0050
60.674–60.676	2060–0050
60.683–60.685	2060–0114
60.692–1	2060–0172
60.692–2	2060–0172
60.692–3	2060–0172
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60.695–60.698	2060–0172

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60.703–60.705	2060–0269
60.710	2060–0171
60.713–60.717	2060–0171
60.722–60.725	2060–0162
60.734–60.736	2060–0251
60.740	2060–0181
60.743–60.747	2060–0181
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61.24–61.25	2060–0191
61.32–61.34	2060–0092
61.53–61.55	2060–0097
61.65(b)–(d)	2060–0071
61.67–61.71	2060–0071
61.93–61.95	2060–0191
61.103–61.105	2060–0191
61.107	2060–0191
61.123–61.124	2060–0191
61.126	2060–0191
61.132–61.133	2060–0185
61.135–61.139	2060–0185
61.142	2060–0101
61.144–61.147	2060–0101
61.149	2060–0101
61.150–61.155	2060–0101
61.163–61.165	2060–0043
61.203	2060–0191
61.206–61.209	2060–0191
61.223–61.224	2060–0191
61.242–1	2060–0068
61.242–2	2060–0068
61.242–3	2060–0068
61.242–4	2060–0068
61.242–7	2060–0068
61.242–8	2060–0068
61.242–10	2060–0068
61.242–11	2060–0068
61.243–1	2060–0068
61.243–2	2060–0068
61.244–61.247	2060–0068
61.253–61.255	2060–0191
61.271–61.276	2060–0185
61.300	2060–0182
61.302–61.305	2060–0182
61.342	2060–0183
61.344–61.349	2060–0183
61.354–61.357	2060–0183
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63.5(d)	2060–0330
63.52–63.56	2060–0266
63.72	2060–0222
63.74–63.79	2060–0222
63.91–63.96	2060–0264
63.103	2060–0282
63.105	2060–0282
63.117–63.118	2060–0282
63.122–63.123	2060–0282
63.129–63.130	2060–0282
63.146–63.148	2060–0282
63.151–63.152	2060–0282
63.181–63.182	2060–0282
63.302–63.311	2060–0253
63.322–63.325	2060–0234
63.345–63.347	2060–0327
63.363–63.367	2060–0283
63.403–63.406	2060–0268
63.420	2060–0325
63.422–63.428	2060–0325
63.467–63.468	2060–0273
63.525–63.528	2060–0290
63.548–63.550	2060–0296
63.563–63.567	2060–0289
63.653	2060–0340
63.654	2060–0340
63.703–63.707	2060–0326
63.752–63.753	2060–0341
63.787 (a)–(b)	2060–0330
63.788 (a)–(c)	2060–0330
63.806–63.807	2060–0324
63.829–63.830	2060–0335
63.1311	2060–0351
63.1314	2060–0351
63.1315	2060–0351
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63.1320	2060–0351
63.1325–63.1332	2060–0351
63.1335	2060–0351
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68.120 (a), (e), and (g)	2050–0127
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70.3–70.11	2060–0243
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71.5	2060–0336
71.6(a),(c),(d),(g)	2060–0336
71.7	2060–0336
71.9(e)–(j)	2060–0336
71.24–71.26	2060–0276
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72.7–72.10	2060–0258
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72.60–72.69	2060–0258
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72.80–72.85	2060–0258
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74.12	2060–0258
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74.16	2060–0258
74.18	2060–0258
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74.22	2060–0258
74.24–74.25	2060–0258
74.41	2060–0258
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40 CFR citation	OMB control No.
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79.31–79.33	2060–0150
79.51(a), (c), (d), (g), (h)	2060–0150
79.52	2060–0150
79.57(a)(5)	2060–0150
79.57(f)(5)	2060–0150
79.58(e)	2060–0150
79.59(b)–(d)	2060–0150
79.60	2060–0150
79.61(e)	2060–0150
79.62–79.68	2060–0297
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80.20	2060–0066
80.25	2060–0066
80.27	2060–0178
80.29(c)	2060–0308
80.141(c)–(f)	2060–0275
80.157	2060–0275
80.158	2060–0275
80.160	2060–0275
80.161	2060–0275
80.162	2060–0275
80.163(d)(3)	2060–0275
80.164	2060–0275
80.165	2060–0275
80.166	2060–0275
80.167(d)	2060–0275
80.170	2060–0275
80.171	2060–0275
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82.9–82.13	2060–0170
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82.42	2060–0247
82.122	2060–0259
82.156	2060–0256
82.160–82.162	2060–0256
82.164	2060–0256
82.166	2060–0256
82.176(a)	2060–0226
82.176(c)(3)	2060–0226
82.178	2060–0226
82.180	2060–0350
82.180(a)(5)	2060–0226
82.180(b)(3)	2060–0226
82.184(c)	2060–0226
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85.503	2060–0104
85.505	2060–0104
85.1503–85.1507	2060–0095
85.1509–85.1510	2060–0095
85.1511(b)–(d), (f)	2060–0095
85.1511(b)(3)	2060–0007
85.1512	2060–0095
85.1514–85.1515	2060–0095
85.1703	2060–0124
85.1705–85.1706	2060–0007
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85.2112–85.2123	2060–0065
85.2114	2060–0016
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86.079–31–86.079–33	2060–0104
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86.090–25	2060–0104
86.090–26	2060–0104
86.090–27	2060–0104
86.091–7	2060–0104
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86.091–23	2060–0104
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86.091–30	2060–0104
86.092–14	2060–0104
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86.095–24	2060–0104
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86.096–35	2060–0104
86.097–9	2060–0104
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86.098–28	2060–0104
86.099–8	2060–0104
86.099–9	2060–0104
86.099–10	2060–0104
86.111–94	2060–0104
86.113–82	2060–0104
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86.142–90	2060–0104
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88.204–94(b)(1)	2060–0314
88.204–94(c)	2060–0314
88.305–94	2060–0104
88.306–94(a), (b) introductory text	2060–0104
88.306–94(b)(1)	2060–0314
88.306–94(b)(2)	2060–0314
88.306–94(b)(4)	2060–0314
88.306–94(c)	2060–0314
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89.122–96–89.127–96	2060–0287
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89.203–96–89.207–96	2060–0287
89.209–96–89.211–96	2060–0287
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90.115–90.124	2060–0338
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90.304–90.329	2060–0338
90.404–90.427	2060–0338
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90.511–90.512	2060–0295
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90.611–90.613	2060–0294
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40 CFR citation	OMB control No.
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122.21(f)–(l)	2040–0086, 2040–0170
122.21(j)(4)	2040–0150
122.21(m)–(p)	2040–0068, 2040–0170
122.26(c), (d)	2040–0086
122.41(h)	2040–0068, 2040–0170
122.41(j)	2040–0009, 2040–0110, 2040–0170
122.41(l)	2040–0110, 2040–0068, 2040–0170
122.42(c)	2040–0086
122.42(a), (b), (l)	2040–0068, 2040–0170
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40 CFR citation	OMB control No.
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40 CFR citation	OMB control No.
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265.54	2050–0120
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265.255	2050–0050
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265.260	2050–0050
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265.276	2050–0050
265.278	2050–0050
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265.301	2050–0050
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721.7480	2070–0012
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721.7655	2070–0012
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721.9740	2070–0012
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721.9850	2070–0012
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761.75	2070–0011
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761.93	2070–0149
761.93(a)(1)(iii)	2070–0149
761.93(b)	2070–0149
761.125	2070–0112
761.180	2070–0112
761.185	2070–0008
761.187	2070–0008
761.193	2070–0008
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761.205	2070–0112
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761.207(a)	2050–0039
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761.210	2070–0112
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790.50	2070–0033
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799.4440	2070–0033
799.5000	2070–0033
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799.5055	2070–0033
799.5075	2070–0033

[1] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 60, subpart A, which are not independent information collection requirements.

[2] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 61, subpart A, which are not independent information collection requirements.

[3] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 63, subpart A, which are not independent information collection requirements.

[58 FR 27472, May 10, 1993]

EDITORIAL NOTE: For Federal Register citations affecting §9.1 see the List of CFR Sections Affected in the Finding Aids section of this volume.

List of CFR Sections Affected

All changes in this volume of the Code of Federal Regulations which were made by documents published in the FEDERAL REGISTER since January 1, 1986 are enumerated in the following list. Entries indicate the nature of the changes effected. Page numbers refer to FEDERAL REGISTER pages. The user should consult the entries for chapters and parts as well as sections for revisions.

For the period before January 1, 1986, see the ''List of CFR Sections Affected, 1949–1963, 1964–1972, and 1973–1985'' published in seven separate volumes.

1986

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426 Authority citation revised 25000
426.17 Added 25000
426.47 Added 25000
426.57 Revised 25000
426.67 Revised 25000
426.77 Revised 25000
426.87 Revised 25000
426.107 Revised 25000
426.117 Revised 25000
426.123 Revised 25001
426.127 Revised 25000
426.133 (c) removed 25001
426.137 Revised 25000
Removed 25001
430.13 Text added 45241
430.23 Text added 45241
430.43 Text added 45241
430.53 Text added 45241
430.63 Text added 45240
430.73 Text added 45240
430.83 Text added 45240
430.93 Text added 45240
430.103 Text added 45240
430.113 Text added 45240
430.143 Text added 45240
430.153 Text added 45240
430.163 Text added 45240
430.173 Text added 45240
430.183 Text added 45240
430.193 Text added 45240
430.203 Text added 45240
430.213 Text added 45240

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430.223 Text added 45241
430.233 Text added 45240
430.243 Text added 45240
430.253 Text added 45240
430.263 Text added 45240
431.13 Text added 45242
432 Authority citation revised 25001
432.17 Revised 25001
432.27 Revised 25001
432.37 Revised 25001
432.47 Revised 25001
432.57 Added 25001
432.67 Revised 25001
432.77 Revised 25001
432.87 Revised 25001
432.97 Revised 25001
432.107 Added 25001
433.10 (c) amended 40421
433.11 (e) amended 40421
439.13 Text added 45098
439.23 Text added 45099
439.33 Text added 45099
439.43 Text added 45099
455.10 (f) and (g) removed 44911
455.11 Removed 44911
455.20 (d) removed 44911
455.23—455.27 Removed 44911
455.33—455.37 Removed 44911
455.40 Revised 44911
455.41 Removed 44911
455.43—455.47 Removed 44911
455.50 Removed 44911
455.51 Removed 44911

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455 Appendixes A through E removed 44911
461.32 (a)(4) revised 30816
461.33 (a)(4) revised 30816
461.34 (a)(4) revised; (c) added 30817
461.35 (a)(4) revised 30817
464.12 (a), (b), (g), and (h) tables corrected 21760
464.13 Introductory text, (a) table, and (f) table corrected 21760
464.14 (c) table, (f) table, and (g) table corrected 21760
464.15 (d) table corrected 21760
464.22 (c) correctly designated; (f) table and (g) table corrected 21760
464.23 (f) table and (g) table corrected 21761
464.24 (a) table, (b) table, (f) table, and (g) table corrected 21761
464.32 (a) table, (c) table, and (e) table corrected 21761
464.33 (a)(1) table, (2) introductory text and table, and (i)(1) table corrected 21761
464.34 (a)(1) table and (2) tables, (g)(1) introductory text and tables, (2) introductory text and tables, (h)(2) table, and (i)(1) table corrected; (e) correctly designated 21761
464.35 (g) (1) and (2) tables corrected 21762
464.41 (a)(1) heading corrected 21762
464.42 (c) table and (d) tables corrected 21762
464.43 (a) table and (d) table corrected 21762
464.44 (a) tables and (d) table corrected 21762
464.46 (a) table corrected 21762
468.01 (a) revised 7570
Correctly revised 22521
468.02 (y) added 7571
468.10 Revised 7571
468.14 (n) table corrected 22521
468.20 (Subpart B) Added 7571
471.11 (h) table and (j) table corrected 2884
471.12 (k) table corrected 2884
471.13 (i) table and (k) table corrected 2884

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471.14 (h) table corrected 2884
471.15 (i) table and (k) table corrected 2884
471.23 (c) table and (h) table corrected 2884
471.24 (h) table corrected 2884
471.25 (a) table corrected 2884
471.31 (c) table, (k) table, (u) table, (w) table, and (y) table corrected 2884
471.32 (k) table, (r) table, (u) table, (w) table, (x) table, and (dd) table corrected 2885
471.33 (k) table and (w) table corrected 2885
471.34 (k) table, (r) table, (t) table, (w) table, (x) table, and (dd) table corrected 2885
471.35 (k) table, (w) table, and (dd) table corrected 2885
471.41 (o) table and (q) table corrected 2886
471.42 (b) table and (g) table corrected 2886
471.43 (e) table, (j) table, and (u) table corrected 2886
471.44 (d) table corrected 2886
471.45 (h) table and (p) table corrected 2886
471.51 (h) table, (i) table, (p) table, (q) table, and (x) table corrected 2886
471.52 (e) table, (l) table, (u) table, (w) table, and (x) table corrected 2886
471.53 (e) table, (g) table, (w) table, and (x) table corrected 2886
471.54 (x) table corrected 2887
471.55 (e) table, (w) table, and (x) table corrected 2887
471.61 (b) table, (e) table, (h) table, (m) table, (n) table, (r) table, and (u) table corrected 2887
471.62 (b) table, (e) table, (m) table, (n) table, (u) table, and (x) table corrected 2887
471.63 (e) table, (i) table, (m) table, (n) table, and (p) table corrected 2887
471.64 (m) table corrected 2887
471.65 (m) table and (o) table corrected 2887
471.71 (f) table, (g) table, and (m) table corrected 2888

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471.72 (h) table, (k) table, and (m) table corrected 2888
471.73 (h) table and (m) table corrected 2888
471.75 (f) table, (g) table, (h) table, (j) table, and (m) table corrected 2888
471.81 (b) table, (j) table, and (l) table corrected 2888
471.82 (h) table corrected 2888
471.83 (d) table, (k) table, (l) table, and (m) table corrected 2888
471.85 (h) table and (j) table corrected 2888
471.91 (m) table, (p) table, and (q) table corrected 2888
471.92 (k) table, (m) table, and (t) table corrected 2888
471.93 (i) table, (k) table, (m) table, and (p) table corrected 2888
471.94 (d) table and (m) corrected 2889
471.95 (d) table and (m) table corrected 2889
471.101 (j) table corrected 2889
471.102 (e) table, (g) table, and (j) table corrected 2889
471.103 (d) table, (e) table, (g) table, (i) table, and (j) table corrected 2889
471.104 (d) table and (j) table corrected 2889
471.105 (d) table, (e) table, (g) table, (i) table, and (j) table corrected 2889
600.006–89 Added 37850
600.113–88 Added 37851
600.510–86 (e) revised 37852
600 Appendix II revised 37852

1987

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600.007–80 (b)(7) added; (f) revised 36164
600.306–86 (c)(2) revised 47877

1988

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425 Authority citation revised 9181
425.02 (a) revised 9181
425.03 Revised 9181
425.04 (d) and (e) added 9181
425.05 Revised 9182
425.11 Table revised 9182
425.15 (b) revised 9182
425.31 Table revised 9182
425.35 (a) table and (b) revised 9182
425.41 Heading and table revised 9182
425.44 Table revised 9182
425.51 Table revised 9182
425.61 Table revised 9183
425.64 Table revised 9183
425.71 Table revised 9183
425.91 Table revised 9183
425.95 (b) revised 9183
425 Appendix A added 9183
Appendix B added 9184
Appendix C added 9186
440 Authority citation revised 18788
440.102 (e) removed; (f) through (i) redesignated as (e) through (h); eff. 7–7–88 18788
Comment time clarification 24939
440.103 (e) removed; eff. 7–7–88 18788
Comment time clarification 24939
440.104 (e) removed; eff. 7–7–88 18788
Comment time clarification 24939
440.140—440.148 (Subpart M) Added; eff. 7–7–88 18788
Comment time clarification 24939
467 Authority citation revised 52369
467.02 (m) through (z) redesignated as (n) through (aa); new (m) added 52369
467.15 Tables amended 52369, 52370
467.22 Table footnote 1 revised 52370
467.24 Table footnote 1 revised 52370
467.25 Tables amended 52369, 52370

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467.32 Table footnote 1 revised 52370
467.33 Table revised 52370
467.34 Table footnote 1 revised 52370
467.35 Tables amended 52369, 52370, 52371
467.45 Tables amended 52369, 52370, 52371
467.55 Tables amended 52369–52372
467.65 Tables amended 52369–52372
600.007–80 Petition granted; conditional effective date deferred to 10–1–88 25331

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440 Decision 25
471.31 (d) revised 11348
471.32 (d) revised 11348
(d)(4) corrected 13606
471.33 (d) revised 11349
(d)(2) corrected 13606
471.34 (d) revised 11349
(d) (2) and (4) introductory text corrected 13606
471.35 (d) revised 11350
471.91 (g) revised 11350
471.92 (g) revised 11351
471.93 (g) revised 11351
471.94 (g) revised 11352
471.95 (g) revised 11352
501 (Subchapter O and Part) Added 18786

1990

(No regulations published)

1991

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600 Authority citation revised 55465
600.513–91 Added 55465

1992

(No regulations published)

1993

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435 Authority citation revised 12504
435.10—435.15 (Subpart A) Revised 12504
455 Authority citation revised 50689
455.10 (f) added 50689
455.11 Added 50689
455.20 (a) revised; (d) and (e) added 50689
455.21 (d) and (e) added 50689
455.23 Added 50689
455.24 Added 50690
455.25 Added 50690
455.26 Added 50690
455.27 Added 50690
455.33 Heading added 50690
455.34 Heading added 50690
455.35 Heading added 50690
455.36 Heading added 50690
455.37 Heading added 50690
455.50 (Subpart D) Added 50690
455 Tables 1 through 7 added 50691
501.1 (c)(5) revised; (f) redesignated as (f)(1); (f)(2) added 67983
501.2 Amended 67983
501.11 (a)(1) revised; (b) redesignated as (b)(1); (b)(2) added 67983
501.12 (g) added 67984
501.13 Amended 67984
501.14 (b)(1) redesignated as (b)(1)(i); (b)(1)(ii) added 67984
501.15 (d)(1)(ii)(A), (B) and (C) redesignated as (d)(1)(ii)(B), (C) and (E); new (d)(1)(ii)(B) and (C) revised; new (d)(1)(ii)(A) and (D) added 9414
(b)(15) added 67984
501.17 (e) added 67984
501.22 Added 67984
501.23 Added 67984
501.24 Added 67985
501.25 Added 67985
503 Added 9387
600 OMB number 34370

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501.11 (a)(1) and (b)(2) amended 64346
501.12 (g) amended 64346
501.22 Heading, (a) introductory text and (4) amended 64346
501.23 Heading, introductory text, (b) introductory text, (c), (d) introductory text, (1) and (e) amended; (f) revised 64346
501.24 Heading and (a) amended; (b) through (e) removed; (f) redesignated as (b) 64346
503.13 (b)(2), (3) and (4) revised 9099
503.40 (c) added 9099
600 Authority citation revised 678, 39649
600.001–93 Added 39649
600.002–93 Added 39650
600.004–77 Revised 39651
600.006–89 (b)(1)(i) revised; (h) added 39652
600.007–80 (f) introductory text revised 39652
600.011–93 Added 39652
600.101–93 Added 39652
600.107–93 Added 39652
600.111–80 (a) revised 16309
600.111–93 Added 39652
600.113–93 Added 39654
(e)(1) and (g) corrected 44795
Introductory text, (a), (b)(1), (2) and (d) revised; (c)(3) and (h) added 48537
600.201–93 Added 39655
600.206–93 Added (OMB number pending) 39655
600.207–93 Added (OMB number pending) 39655
600.209–95 Added (OMB number pending) 39656
600.301–95 Added 39657
600.307–95 Added (OMB number pending) 39657
600.501–93 Added 39659
600.502–81 (a)(1) revised 678
(a)(1)(iii) corrected 33914
600.510–93 Added (OMB number pending) 39659
600.511–80 (a) introductory text, (1) and (b)(2) introductory text revised; (b)(3), (4) and (5) added 679
(a)(1) corrected 33914

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600.513–91 (a) introductory text, (2) and (b)(2)(xii) revised 39661
600 Appendix VIII revised 39661

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426.16 Introductory text added; (b) removed 33958
426.22 Revised 33958
426.24 Introductory text revised 33958
426.26 Revised 33958
426.32 Revised 33958
426.34 Introductory text revised 33958
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426.86 Introductory text revised 33959
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426.106 Introductory text revised 33959
426.112 Introductory text revised 33959
426.116 Introductory text revised 33959
426.122 Introductory text revised 33960
426.126 Introductory text revised 33960
426.132 Introductory text revised 33960
426.136 Introductory text revised 33960

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427.12 Introductory text revised 33960
427.14 Introductory text revised 33960
427.16 Revised 33960
427.22 Introductory text revised 33960
427.24 Introductory text revised 33960
427.26 Revised 33960
427.32 Introductory text revised 33961
427.34 Introductory text revised 33961
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427.96 Introductory text revised 33962
427.102 Revised 33962
427.106 Introductory text revised 33962
427.112 Introductory text revised 33962
427.116 Introductory text revised 33962
428.12 Introductory text removed; (a) revised 33963
428.16 Revised 33963
428.22 Introductory text revised 33963
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436.142 Introductory text removed; (a) revised 33968
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455.41 Added 57549
455.42 Revised 57550
455.43 Added 57550
455.44 Added 57551
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455.60—455.67 (Subpart E) Added 57552
455 Table 8 added 57553
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435.41 Second (y) and (z) through (ee) correctly designated as (z) and (aa) through (ff) 1681
435.43 Table corrected 1681
435.44 Table corrected 1682
435.45 Table correctly revised 1682
435.70 (Subpart G) Correctly designated 1682