§418.77

major contributing industry as defined in 40 CFR part 128 (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in 40 CFR part 128, for existing sources, except that, for the purpose of this section, 40 CFR 128.121, 128.122, 128.132 and 128.133 shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties 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 <i>5</i>	Do. Do. 30 mg/l. Do.

§418.77 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 50742, Aug. 29, 1979]

PART 419—PETROLEUM REFINING POINT SOURCE CATEGORY

Subpart A—Topping Subcategory

Sec.

- 419.10 Applicability; description of the topping subcategory.
- 419.11 Specialized definitions.
- 419.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 419.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

40 CFR Ch. I (7-1-06 Edition)

- 419.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
- 419.15 Pretreatment standards for existing sources (PSES).
- 419.16 Standards of performance for new sources (NSPS).
- 419.17 Pretreatment standards for new sources (PSNS).

Subpart B—Cracking Subcategory

- 419.20 Applicability; description of the cracking subcategory.
- 419.21 Specialized definitions.
- 419.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 419.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- 419.24 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
- 419.25 Pretreatment standards for existing sources (PSES).
- 419.26 Standards of performance for new sources (NSPS).
- 419.27 Pretreatment standards for new sources (PSNS).

Subpart C—Petrochemical Subcategory

- 419.30 Applicability; description of the petrochemical subcategory.
- 419.31 Specialized definitions.
- 419.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 419.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- 419.34 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
- 419.35 Pretreatment standards for existing sources (PSES).
- 419.36 Standards of performance for new sources (NSPS).
- 419.37 Pretreatment standards for new sources (PSNS).

Subpart D—Lube Subcategory

- 419.40 Applicability; description of the lube subcategory.
- 419.41 Specialized definitions.
- 419.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 419.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- 419.44 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
- 419.45 Pretreatment standards for existing sources (PSES).
- 419.46 Standards of performance for new sources (NSPS).
- 419.47 Pretreatment standards for new sources (PSNS).

Subpart E—Integrated Subcategory

- 419.50 Applicability; description of the integrated subcategory.
- 419.51 Specialized definitions.
- 419.52 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 419.53 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- 419.54 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
- 419.55 Pretreatment standards for existing sources (PSES).
- 419.56 Standards of performance for new sources (NSPS).
- 419.57 Pretreatment standards for new sources (PSNS).
- APPENDIX A TO PART 419—PROCESSES IN-CLUDED IN THE DETERMINATION OF BAT EFFLUENT LIMITATIONS FOR TOTAL CHRO-MIUM, HEXAVALENT CHROMIUM, AND PHE-NOLIC COMPOUNDS (4AAP)

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 46446, Oct. 18, 1982, unless otherwise noted.

Subpart A—Topping Subcategory

§419.10 Applicability; description of the topping subcategory.

The provisions of this subpart apply to discharges from any facility that produces petroleum products by the use of topping and catalytic reforming, whether or not the facility includes any other process in addition to topping and catalytic reforming. The provisions of this subpart do not apply to facilities that include thermal processes (coking, vis-breaking, etc.) or catalytic cracking.

§419.11 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 *runoff* shall mean the flow of storm water resulting from precipitation coming into contact with petroleum refinery property.

(c) The term *ballast* shall mean the flow of waters, from a ship, that is treated along with refinery wastewaters in the main treatment system.

(d) The term *feedstock* shall mean the crude oil and natural gas liquids fed to the topping units.

(e) The term *once-through cooling water* shall mean those waters discharged that are used for the purpose of heat removal and that do not come into direct contact with any raw material, intermediate, or finished product.

(f) The following abbreviations shall be used: (1) Mgal means one thousand gallons; (2) Mbbl means one thousand barrels (one barrel is equivalent to 42 gallons).

(g) The term *contaminated runoff* shall mean runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property.

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28522, July 12, 1985]

§419.12 Effluent limitations 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 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):

	BPT Effluent Limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
BOD5	22.7	12.0
TSS	15.8	10.1
COD ¹	117.0	60.3
Oil and grease	6.9	3.7
Phenolic compounds	0.168	0.076
Ammonia as N	2.81	1.27
Sulfide	0.149	0.068
Total chromium	0.345	0.20
Hexavalent chromium	0.028	0.012
рН	(2)	(2)
	English units (pounds per 1,000 bbl of feedstock)	
BOD5	8.0	4.25
TSS	5.6	3.6
COD 1	41.2	21.3
Oil and grease	2.5	1.3
Phenolic compounds	0.060	0.027
Ammonia as N	0.99	0.45
Sulfide	0.053	0.024
Total chromium	0.122	0.071
Hexavalent chromiumpH	0.01	0.0044
	(2)	(2)

¹See footnote following table in §419.13(d). ²Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size fac- tor
Less than 24.9	1.02
25.0 to 49.9	1.06
50.0 to 74.9	1.16
75.0 to 99.9	1.26
100 to 124.9	1.38
125.0 to 149.9	1.50
150.0 or greater	1.57

40 CFR Ch. I (7-1-06 Edition)

(2) Process factor.

Process configuration	Process factor
Less than 2.49	0.62
2.5 to 3.49	0.67
3.5 to 4.49	0.80
4.5 to 5.49	0.95
5.5 to 5.99	1.07
6.0 to 6.49	1.17
6.5 to 6.99	1.27
7.0 to 7.49	1.39
7.5 to 7.99	1.51
8.0 to 8.49	1.64
8.5 to 8.99	1.79
9.0 to 9.49	1.95
9.5 to 9.99	2.12
10.0 to 10.49	2.31
10.5 to 10.99	2.51
11.0 to 11.49	2.73
11.5 to 11.99	2.98
12.0 to 12.49	3.24
12.5 to 12.99	3.53
13.0 to 13.49	3.84
13.5 to 13.99	4.18
14.0 or greater	4.36

(3) See the comprehensive example Subpart D, §419.42(b)(3).

(c) The following allocations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to ballast, which may be discharged after the application of best practicable control technology currently available, by a point source subject to this subpart, in addition to the discharge allowed by paragraph (b) of this section. The allocation allowed for ballast water flow, as kg/cu m (lb/M gal), shall be based on those ballast waters treated at the refinery.

	BPT effluent limitations for ballast water		
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed	
	Metric units (kilograms per cubic meter of flow)		
BOD <i>5</i>	0.048	0.026	
TSS	0.033	0.021	
COD 1	0.47	0.24	
Oil and grease	0.015	0.008	
рН	(²)	(²)	
		its (pounds gal of flow)	
BOD <i>5</i>	0.40	0.21	
TSS	0.26	0.17	
COD ¹	3.9	2.0	
Oil and grease	0.126	0.067	

	BPT effluent limitations for ballast water	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
рН	(2)	(2)

¹See footnote following table in §419.13(d).

²Within the range of 6.0 to 9.0.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best practicable control technology currently available by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease and 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease or 110 mg/ 1 TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BPT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of flow)	
BOD ₅	48.	26.
TSS	33.	21.
COD ¹	360.	180.
Oil and grease	15.	8.
Phenolic compounds (4AAP)	0.35	0.17

0.73

§419.13

0.43

Hexavalent chromiumpH	0.062 (²)	0.028 (²)
	English units 1,000 gallo	(pounds per ons of flow)
BOD ₅	0.40	0.22
TSS	0.28	0.18
COD ¹	3.0	1.5
Oil and grease	0.13	0.067
Phenolic compounds (4AAP)	0.0029	0.0014
Total chromium	0.0060	0.0035
Hexavalent chromium	0.00052	0.00023
pH	(2)	(2)

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BOD₅. If in the judgment of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BOD₅.

² Within the range of 6.0 to 9.0.

Total chromium ..

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28522, 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available techeconomically achievable nology **(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 (BAT):

	BAT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
COD ¹	117	60.3
Ammonia as N Sulfide	2.81	1.27
	0.149	0.068
	English units (pounds per 1,000 bbl of feedstock)	
COD ¹	41.2	21.3
Ammonia as N	0.99	0.45
Sulfide	0.053	0.024

¹ See footnote following table in § 419.13(d).

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size fac- tor
Less than 24.9	1.02
25.0 to 49.9	1.06
50.0 to 74.9	1.16
75.0 to 99.9	1.26
100 to 124.9	1.38
125.0 to 149.9	1.50
150.0 or greater	1.57

(2) Process factor.

Process configuration	Process factor
Less than 2.49	0.62
2.5 to 3.49	0.67
3.5 to 4.49	0.80
4.5 to 5.49	0.95
5.5 to 5.99	1.07
6.0 to 6.49	1.17
6.5 to 6.99	1.27
7.0 to 7.49	1.39
7.5 to 7.99	1.51
8.0 to 8.49	1.64
8.5 to 9.99	1.79
9.0 to 9.49	1.95
9.5 to 9.99	2.12
10.0 to 10.49	2.31
10.5 to 10.99	2.51
11.0 to 11.49	2.73
11.5 to 11.99	2.98
12.0 to 12.49	3.24
12.5 to 12.99	3.53
13.0 to 13.49	3.84
13.5 to 13.99	4.18
14.0 or greater	4.36

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

40 CFR Ch. I (7-1-06 Edition)

(c)(1) In addition to the provisions contained above pertaining to COD, ammonia and sulfide, 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):

(i) For each of the regulated pollutant parameters listed below, the effluent limitation for a given refinery is the sum of the products of each effluent limitation factor times the applicable process feedstock rate, calculated as provided in 40 CFR 122.45(b). Applicable production processes are presented in appendix A, by process type. The process identification numbers presented in this appendix A are for the convenience of the reader. They can be cross-referenced in the Development Document for Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Petroleum Refining Point Source Category (EPA 440/1-82/014), Table III-7, pp. 49-54.

	BAT effluent limitation factor	
Pollutant or pollutant property and process type	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 cubic meters of feed- stock)	
Phenolic compounds (4AAP): Crude Cracking and coking Asphalt Lube Reforming and alkylation Total chromium: Crude Cracking and coking Asphalt Reforming and alkylation Hexavalent chromium: Crude Cracking and coking Asphalt Cracking and coking Asphalt Lube Reforming and alkylation		0.009 0.102 0.055 0.257 0.092 0.011 0.118 0.064 0.297 0.106 0.0098 0.0053 0.0053 0.0058 0.0058 0.0058 0.0058 0.0088
Phenolic compounds (4AAP): Crude Cracking and coking Asphalt Lube Reforming and alkylation	0.013 0.147 0.079 0.369 0.132	0.003 0.036 0.019 0.090 0.032

	BAT effluent limitation factor	
Pollutant or pollutant property and process type	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
Total chromium:		
Crude	0.011	0.004
Cracking and coking	0.119	0.041
Asphalt	0.064	0.022
Lube	0.299	0.104
Reforming and alkylation	0.107	0.037
Hexavalent chromium:		
Crude	0.0007	0.0003
Cracking and coking	0.0076	0.0034
Asphalt	0.0041	0.0019
Lube	0.0192	0.0087
Reforming and alkylation	0.0069	0.0031

(2) See the comprehensive example in subpart D, \$419.43(c)(2).

(d) The following allocations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to ballast, which may be discharged after the application of best available technology economically achievable by a point source subject to the provisions of this subpart. These allocations are in addition to the discharge allowed by paragraph (b) of this section. The allocation allowed for ballast water flow, as kg/cu m (lb/M gal), shall be based on those ballast waters treated at the refinery.

	BAT effluent limitations for ballast water	
Pollutant or pollutant property	Maximum for any 1 day	Average or daily val- ues for 30 consecu- tive days shall not exceed
		s (kilograms eter of flow)
COD ¹	0.47	0.24
	English units (pounds per 1,000 gal of flow)	
COD ¹	3.9	2.0

¹In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the Regional Administrator may substitute TOC as a parameter in lieu of COD Effluent limitations for TOC shall be based on effluent data from the plant correlating TOC to BOD5.

TOC shall be based on entirem using from the pain services. If in the judgment of the Regional Administrator, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations on BOD5.

(e) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(f) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best available technology economically achievable by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 110 mg/l TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BAT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		kilograms per ³ of flow)
Phenolic compounds (4AAP)	0.35	0.17
Total chromium	0.60	0.21
Hexavalent chromium	0.062	0.028
COD ¹	360.	180.
	English units (pounds per 1,000 gallons of flow)	
Phenolic compounds (4AAP)	0.0029	0.0014
Total chromium	0.0050	0.0018
Hexavalent chromium	0.00052	0.00023

	BAT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
COD ¹	3.0	1.5

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BODs. If in the judgement of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BODs.

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

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

(a) 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 effluer	nt limitations
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		(Kilograms per of feedstock)
BOD ₅	22.7	12.0
TSS	15.8	10.1
Oil and Grease	6.9	3.7
рН	(1)	(1)
		s (pounds per of feedstock)
BOD ₅	8.0	4.25
TSS	5.6	3.6
Oil and Grease	2.5	1.3
P ^H	(1)	(1)

¹ Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

40 CFR Ch. I (7-1-06 Edition)

1,000 bbl of feedstock per stream day	Size factor
Less than 24.9	1.02
25.0 to 49.9	1.06
50.0 to 74.9	1.16
75.0 to 99.9	1.26
100 to 124.9	1.38
125.0 to 149.9	1.50
150.0 or greater	1.57

(2) Process factor.

Process configuration	Process fac- tor
Less than 2.49	0.62
2.5 to 3.49	0.67
3.5 to 4.49	0.80
4.5 to 5.49	0.95
5.5 to 5.99	1.07
6.0 to 6.49	1.17
6.5 to 6.99	1.27
7.0 to 7.49	1.39
7.5 to 7.99	1.51
8.0 to 8.49	1.64
8.5 to 8.99	1.79
9.0 to 9.49	1.95
9.5 to 9.99	2.12
10.0 to 10.49	2.31
10.5 to 10.99	2.51
11.0 to 11.49	2.73
11.5 to 11.99	2.98
12.0 to 12.49	3.24
12.5 to 12.99	3.53
13.0 to 13.49	3.84
13.5 to 13.99	4.18
14.0 or greater	4.36

(3) See the comprehensive example in subpart D, \$419.43(b)(3).

(c) The following allocations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to ballast, which may be discharged after the application of best conventional pollutant control technology by a point source subject to this subpart, in addition to the discharge allowed by paragraph (b) of this section. The allocation allowed for ballast water flow, as kg/cu m (lb/1000 gal), shall be based on those ballast waters treated at the refinery.

	BCT Effluent ballast	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (m ³ of	kilograms per flow)
BOD5 TSS Oil and grease pH	0.048 0.033 0.015 (¹)	0.026 0.021 0.008 (¹)

	BCT Effluent limitations for ballast water	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		(pounds per ns of flow)
BOD ₅	0.40	0.21
TSS	0.26	0.17
Oil and grease	0.126	0.067
рН	(1)	(1)

¹ Within the range of 6.0 to 9.0.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff which may be discharged after the application of the best conventional pollutant control technology by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

§419.16

	BCT effluent	limitations for
	contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		kilograms per ³ of flow)
BOD ₅	48.	26.
TSS	33.	21.
Oil and grease	15.	8.
рН	(1)	(1)
		(pounds per ons of flow)
BOD ₅	0.40	0.22
TSS	0.28	0.18
Oil and grease	0.13	0.067
рН	(1)	(1)

¹ Within the range of 6.0 to 9.0.

[50 FR 28524, July 12, 1985]

§419.15 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). The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards for existing sources maximum for any 1 day
	(Milligrams per liter (mg/ l))
Oil and Grease Ammonia (as N)	100 1 100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in §419.13 (a) and (b).

§419.16 Standards of performance for new sources (NSPS).

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

NSPS effluent limita- tions	
Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
Metric units (kilograms per cubic meter of flow)	
11.8 8.3 61.0 3.6 0.088 2.8 0.078 0.18 0.015 (²)	6.3 4.9 32 1.9 0.043 1.3 0.035 0.105 0.0068 (²)
English units (pounds per 1,000 gal of flow)	
4.2 3.0 21.7 1.3 0.031 1.0 0.027 0.064 0.0052 (²)	2.2 1.9 11.2 0.70 0.016 0.45 0.012 0.037 0.0025 (²)
	tion Maximum for any 1 day Metric units per cubic m 11.8 8.3 61.0 3.6 0.088 2.8 0.078 0.18 0.015 (²) English un per 1,000 4.2 3.0 21.7 1.3 0.031 1.0 0.027 0.064

 1 See footnote following table in § 419.13(d). 2 Within the range of 6.0 to 9.0

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 24.9	1.02
25.0 to 49.9	1.06
50.0 to 74.9	1.16
75.0 to 99.9	1.26
100 to 124.9	1.38
125.0 to 149.9	1.50
150.0 or greater	1.57

(2) Process factor.

Process configuration	Process factor
Less than 2.49	0.62
2.5 to 3.49	0.67
3.5 to 4.49	0.80
4.5 to 5.49	0.95
5.5 to 5.99	1.07
6.0 to 6.49	1.17
6.5 to 6.99	1.27
7.0 to 7.49	1.39
7.5 to 7.99	1.51
8.0 to 8.49	1.64
8.5 to 9.99	1.79

40 CFR Ch. I (7-1-06 Edition)

Process configuration	Process factor
9.0 to 9.49	1.95
9.5 to 9.99	2.12
10.0 to 10.49	2.31
10.5 to 10.99	2.51
11.0 to 11.49	2.73
11.5 to 11.99	2.98
12.0 to 12.49	3.24
12.5 to 12.99	3.53
13.0 to 13.49	3.84
13.5 to 13.99	4.18
14.0 or greater	4.36

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c) The following allocations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to ballast, which may be discharged after the application of best practicable control technology currently available, by a point source subject to this subpart, in addition to the discharge allowed by paragraph (b) of this section. The allocation allowed for ballast water flow, as kg/cu m (lb/ Mgal), shall be based on those ballast waters treated at the refinery.

	NSPS Effluent Limita- tions for Ballast Water	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
	Metric units (kilograms per cubic meter of flow)	
BOD <i>5</i>	0.048 0.033 0.47 0.015	0.026 0.021 0.24 0.008
рН	(2) (2) English units (pounds per 1,000 gal of flow)	
BOD <i>5</i> TSS COD ¹ Oil and grease pH	0.40 0.27 3.9 0.126 (²)	0.21 0.17 2.0 0.067 (²)

¹ See footnote following table in §419.13(d). ² Within the range of 6.0 to 9.0

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Once-

through cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) *Effluent limitations for runoff*. [Reserved]

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.17 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) The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards for new sources— maximum for any 1 day
	Milligrams per liter (mg/ 1)
Oil and grease Ammonia (as N)	100 1 100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in § 419.16 (a) and (b).

(b) The following standard is applied to the cooling tower discharge part of the total refinery flow to the POTW by multiplying: (1) The standard; (2) by the total refinery flow to the POTW; and (3) by the ratio of the cooling tower discharge flow to the total refinery flow.

Subpart B—Cracking Subcategory

§419.22

§419.20 Applicability; description of the cracking subcategory.

The provisions of this subpart are applicable to all discharges from any facility that produces petroleum products by the use of topping and cracking, whether or not the facility includes any process in addition to topping and cracking. The provisions of this subpart are not applicable, however, to facilities that include the processes specified in subparts C, D, or E of this part.

§419.21 Specialized definitions.

The general definitions, abbreviations and methods of analysis set forth in part 401 of this chapter and the specialized definitions set forth in §419.11 shall apply to this subpart.

§419.22 Effluent limitations 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 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 effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
		s (kilograms m ³ of feed-
BOD <i>5</i>	28.2	15.6
TSS	19.5	12.6
COD ¹	210.0	109
Oil and grease	8.4	4.5
Phenolic compounds	0.21	0.10
Ammonia as N	18.8	8.5
Sulfide	0.18	0.082
Total chromium	0.43	0.25
Hexavalent chromium	0.035	0.016
рН	(2)	(2)
	English units (pounds per 1,000 bbl feedstock)	
BOD <i>5</i>	9.9	5.5

Pollutant or pollutant property	Pretreatment standards for new sources— maximum for any 1 day
	Milligrams per liter (mg/ 1)
Total chromium	1

	BPT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
TSS	6.9	4.4
COD1	74.0	38.4
Oil and grease	3.0	1.6
Phenolic compounds	0.074	0.036
Ammonia as N	6.6	3.0
Sulfide	0.065	0.029
Total chromium	0.15	0.088
Hexavalent chromium	0.012	0.0056
рН	(²)	(2)

¹ See footnote following table in § 419.13(d). ² Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 24.9	0.91
25.0 to 49.9	0.95
50.0 to 74.9	1.04
75.0 to 99.9	1.13
100.0 to 124.9	1.23
125.0 to 149.9	1.35
150.0 or greater	1.41

(2) Process factor.

Process configuration	Process fac- tor
Less than 2.49	0.58
2.5 to 3.49	0.63
3.5 to 4.49	0.74
4.5 to 5.49	0.88
5.5 to 5.99	1.00
6.0 to 6.49	1.09
6.5 to 6.99	1.19
7.0 to 7.49	1.29
7.5 to 7.99	1.41
8.0 to 8.49	1.53
8.5 to 8.99	1.67
9.0 to 9.49	1.82
9.5 or greater	1.89

(3) See the comprehensive example subpart D, \$419.42(b)(3).

(c) The provisions of §419.12(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by

40 CFR Ch. I (7-1-06 Edition)

paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best practicable control technology currently available by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease and 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease or 110 mg/ l TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BPT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of flow)	
BOD ₅ TSS COD ¹ Oli and grease Phenolic compounds (4AAP) Total chromium Hexavalent chromium pH	48. 33. 360. 15. 0.35 0.73 0.062 (²)	26. 21. 180. 8. 0.17 0.43 0.028 (²)
	English units (pounds per 1,000 gallons of flow)	
BOD ₅ TSS COD ¹ Oil and grease Phenolic compounds (4AAP) Total chromium Hexavalent chromium	0.40 0.28 3.0 0.13 0.0029 0.0060 0.00052	0.22 0.18 1.5 0.067 0.0014 0.0035 0.00023

	BPT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
рН	(2)	(2)

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BODs. If in the judgment of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BODs. ² Within the range of 6.0 to 9.0.

 $[47\ {\rm FR}\ 46446,\ {\rm Oct.}\ 18,\ 1982,\ {\rm as}\ {\rm amended}\ {\rm at}\ 50$ FR 28522, 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available techeconomically achievable nology (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:

	BAT Effluen	uent limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed	
	Metric units (kilograms per 1,000 m ³ of feed stock)		
COD ¹	210	109	
Ammonia as N	18.8	8.5	
Sulfide	0.18	0.082	
	English units (pounds per 1,000 bbl of feed- stock)		
COD 1	74.0	38.4	
Ammonia as N	6.6	3.0	
Sulfide	0.065	0.029	

¹ See footnote following table in §419.13(d).

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

1,000 bbl of feedstock per stream day	Size fac- tor
Less than 24.9	0.91
25.0 to 49.9	0.95
50.0 to 74.9	1.04
75.0 to 99.9	1.13
100.0 to 124.9	1.23
125.0 to 149.9	1.35
150.0 or greater	1.41

(2)	Process	factor.
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Process configuration	Process factor
Less than 2.49	0.58
2.5 to 3.49	0.63
3.5 to 4.49	0.74
4.5 to 5.49	0.88
5.5 to 5.99	1.00
6.0 to 6.49	1.09
6.5 to 6.99	1.19
7.0 to 7.49	1.29
7.5 to 7.99	1.41
8.0 to 8.49	1.53
8.5 to 8.99	1.67
9.0 to 9.49	1.82
9.5 or greater	1.89
-	

(3) See the comprehensive example in subpart D, §419.42(b)(3).

(c)(1) In addition to the provisions contained above pertaining to COD, ammonia and sulfide, 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):

(i) For each of the regulated pollutant parameters listed below, the effluent limitation for a given refinery is the sum of the products of each effluent limitation factor times the applicable process feedstock rate, calculated as provided in 40 CFR 122.45(b). Applicable production processes are presented in appendix A, by process type. The process identification numbers presented in this appendix A are for the convenience of the reader. They can be cross-referenced in the Development Document for Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Petroleum Refining Point Source Category (EPA 440/1-82/014), Table III-7, pp. 49-54.

	BAT effluent limitation factor	
Pollutant or pollutant property and process type	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		(kilograms per meters of feed-
Phenolic compounds (4AAP): Crude Cracking and coking Asphalt Lube Reforming and alkylation Total chromium: Crude Cracking and coking Asphalt Lube Reforming and alkylation Hexavalent chromium: Crude Cracking and coking Asphalt Lube Beforming and alkylation		0.009 0.102 0.055 0.257 0.092 0.011 0.118 0.064 0.297 0.106 0.009 0.0098 0.0053 0.0248 0.0053 0.0248 0.0088
		f feedstock)
Phenolic compounds (4AAP): Crude	0.013 0.147 0.079 0.369 0.132 0.011 0.119 0.064 0.299 0.107 0.0007 0.0007 0.0076 0.0041 0.0192	0.003 0.036 0.019 0.090 0.032 0.004 0.041 0.022 0.104 0.037 0.0033 0.0034 0.0034 0.0019
Reforming and alkylation	0.0192	0.0087

(2) See the comprehensive example in subpart D, \$419.43(c)(2).

(d) The provisions of §419.13(d) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(e) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(f) Effluent limitations for contaminated runoff. The following effluent limita-

40 CFR Ch. I (7-1-06 Edition)

tions constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best available technology economically achievable by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 110 mg/l TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

BAT effluent limitations for contaminated runoff	
Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
Metric units (kilograms per 1,000 m ³ of flow)	
0.35	0.17
0.60	0.21
0.062	0.028
360.	180.
English units (pounds per 1,000 gallons of flow)	
0.0029	0.0014
0.0050	0.0018
0.00052	0.00023
3.0	1.5
	contamina Maximum for any 1 day Metric units (1,000 mi 0.35 0.60 0.062 360. English units 1,000 gallo 0.0029 0.0050 0.00052

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BODs. If in the judgement of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BOD₅.

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

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

(a) 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	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not exceed
		kilograms per f feedstock)
BOD5 TSS Oil and grease pH	28.2 19.5 8.4 (¹)	15.6 12.6 4.5 (¹)
		(pounds per f feedstock)
BOD5 TSS Oil and grease PH	9.9 6.9 3.0 (¹)	5.5 4.4 1.6 (¹)

 $^{\rm 1}\,\rm Within$ the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 24.9	0.91
25.0 to 49.9	0.95
50.0 to 74.9	1.04
75.0 to 99.9	1.13
100.0 to 124.9	1.23
125.0 to 149.9	1.35
150.0 or greater	1.41

(2) Process factor.

Process configuration	Process fac- tor
Less than 2.49	0.58
2.5 to 3.49	0.63
3.5 to 4.49	0.74
4.5 to 5.49	0.88
5.5 to 5.99	1.00
6.0 to 6.49	1.09
6.5 to 6.99	1.19
7.0 to 7.49	1.29
7.5 to 7.99	1.41
8.0 to 8.49	1.53

Process configuration	Process fac- tor
5 to 8.99	1.67
0 to 9.49	1.82
5 or greater	1.89

8.

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(3) See the comprehensive example in subpart D, §419.42(b)(3).

(c) The provisions of §419.14(c) apply to discharge of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff which may be discharged after the application of the best conventional pollutant control technology by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BCT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of flow)	
BOD ₅	48	26

	BCT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
TSS	33	21
Oil and grease	15	8
рН	(1)	(1)
	English units (pounds per 1,000 gallons of flow)	
BOD5	0.40	0.22
TSS	0.28	0.18
Oil and grease	0.13	0.067
pH	(1)	(1)

¹ Within the range of 6.0 to 9.0.

[50 FR 28525, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.25 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). The following standards apply to the total refinery flow contribution to the POTW:

Pretreatment standards for new
sources— maximum for any 1 day
Milligrams per liter (mg/ I)
100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in § 419.23 (a) and (b).

§419.26 Standards of performance for new sources (NSPS).

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

40 CFR Ch. I (7-1-06 Edition)

	NSPS effluent limita- tions	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
	Metric units (kilograms per 1,000 m ³ of feed- stock)	
BOD5 TSS COD ¹ oil and grease Phenolic compounds Ammonia (as N) Sulfide Total chromium Hexavalent chromium pH	16.3 11.3 118.0 4.8 0.119 18.8 0.105 0.24 0.020 (²) English un	
2025	stock)	bbl of feed-
BOD 5 TSS	5.8 4.0 41.5 1.7 0.042 6.6 0.037 0.084 0.0072 (²)	3.1 2.5 21 0.93 0.020 3.0 0.017 0.049 0.0032 (²)

 $^1\,\text{See}$ footnote following table in §419.13(d). $^2\,\text{Within}$ the range 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any 1 day and maximum average of daily values for 30 consecutive days.

(1) Size Factor.

1,000 bbl of feedstock per stream day	Size fac- tor
Less than 24.9	0.91 0.95 1.04 1.13 1.23 1.35
150.0 or greater	1.41

(2) Process factor.

Process configuration	Process factor
Less than 2.49	0.58
2.5 to 3.49	0.63
3.5 to 4.49	0.74
4.5 to 5.49	0.88
5.5 to 5.99	1.00
6.0 to 6.49	1.09
6.5 to 6.99	1.19
7.0 to 7.49	1.29

Process configuration	Process factor
7.5 to 7.99 8.0 to 8.49 8.5 to 8.99 9.0 to 9.49 9.5 or greater	1.41 1.53 1.67 1.82 1.89

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c) The provisions of §419.16(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) *Effluent limitation for runoff*. [Reserved]

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.27 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 achieve the following pretreatment standards for new sources (PSNS).

(a) The following standards apply to the total refinery flow contribution to the POTW.

Pollutant or pollutant property	Pretreatment standards for new sources— maximum for any 1 day
	Milligrams per liter (mg/ l)
Oil and grease Ammonia (as N)	100 1 100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in § 419.26(a) and (b).

(b) The following standard is applied to the cooling tower discharge part of the total refinery flow to the POTW by multiplying: (1) The standard; (2) by the total refinery flow to the POTW; and (3) by the ratio of the cooling tower discharge flow to the total refinery flow.

Pollutant or pollutant property	Pretreatment standards for new sources— maximum for any 1 day
	Milligrams per liter (mg/ l)
Total chromium	1

Subpart C—Petrochemical Subcategory

§419.30 Applicability; description of the petrochemical subcategory.

The provisions of this subpart are applicable to all discharges from any facility that produces petroleum products by the use of topping, cracking, and petrochemical operations whether or not the facility includes any process in addition to topping, cracking, and petrochemical operations. The provisions of this subpart shall not be applicable, however, to facilities that include the processes specified in subpart D or E of this part.

§419.31 Specialized definitions.

For the purpose of this subpart:

(a) The general definitions, abbreviations, and methods of analysis set forth in part 401 of this chapter and the specialized definitions set forth in §419.11 shall apply.

(b) The term *petrochemical operations* shall mean the production of secondgeneration petrochemicals (*i.e.*, alcohols, ketones, cumene, styrene, etc.) or first generation petrochemicals and isomerization products (*i.e.*, BTX, olefins, cyclohexane, etc.) when 15 percent or more of refinery production is as first-generation petrochemicals and isomerization products.

§ 419.32 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 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):

BPT Effluent limitations	
Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
Metric units (kilograms per 1,000 m ³ of feed- stock)	
34.6 23.4 210.0 11.1 0.25 23.4 0.22 0.52 0.046 (²)	18.4 14.8 109.0 5.9 0.120 10.6 0.099 0.30 0.020 (²)
English units (pounds per 1,000 bbl of feed- stock)	
12.1 8.3 74.0 3.9 0.088 8.25 0.078 0.183 0.016 (²)	6.5 5.25 38.4 2.1 0.0425 3.8 0.035 0.107 0.0072 (²)
	Maximum for any 1 day Metric units per 1,000 stock) 34.6 23.4 210.0 11.1 0.25 23.4 23.4 0.22 0.52 0.046 (²) English un per 1,000 stock) 12.1 8.3 74.0 3.9 0.088 8.25 0.078 0.183 0.016

¹ See footnote following table in § 419.13(d). ² Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 barrels of feedstock per stream day	Size factor
Less than 24.9	0.73 0.76 0.83 0.91
100.0 to 124.9	0.99
125.0 to 149.9	1.08
150.0 or greater	1.13

(2) Process factor.

Process configuration	Proc- ess factor
Less than 4.49	0.73

40 CFR Ch. I (7-1-06 Edition)

Process configuration	Proc- ess factor
4.5 to 5.49	0.80
5.5 to 5.99	0.91
6.0 to 6.49	0.99
6.5 to 6.99	1.08
7.0 to 7.49	1.17
7.5 to 7.99	1.28
8.0 to 8.49	1.39
8.5 to 8.99	1.51
9.0 to 9.49	1.65
9.5 or greater	1.72

(3) See the comprehensive example in subpart D, §419.42(b)(3).

(c) The provisions of §419.12(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best practicable control technology currently available by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease and 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease or 110 mg/ 1 TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BPT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of flow)	
BOD ₅	48.	26.
TSS	33.	21.
COD 1	360.	180.
Oil and grease	15.	8.
Phenolic compounds (4AAP)	0.35	0.17
Total chromium	0.73	0.43
Hexavalent chromium	0.062	0.028
рН	(2)	(2)
	English units (pounds per 1,000 gallons of flow)	
BOD5	0.40	0.22
TSS	0.28	0.18
COD ¹	3.0	1.5
Oil and grease	0.13	0.067
Phenolic compounds (4AAP)	0.0029	0.0014
Total chromium	0.0060	0.0035
Hexavalent chromium	0.00052	0.00023
рН	(2)	(²)

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BOD₅. If in the judgment of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BOD₅.

² Within the range of 6.0 to 9.0.

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28522, 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

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

(a) Except as provided in $40\ \mathrm{CFR}$ 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 techology economically achievable (BAT):

	BAT Effluent Limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
COD ¹ Ammonia as N Sulfide	210.0 23.4 0.22	109.0 10.6 0.099
		(pounds per f feedstock)
COD ¹ Ammonia as N Sulfide	74.0 8.25 0.078	38.4 3.8 0.035

¹ See footnote following table in § 419.13(d).

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 24.9	0.73
25.0 to 49.9	0.76
50.0 to 74.9	0.83
75.0 to 99.9	0.91
100.0 to 124.9	0.99
125.0 to 149.9	1.08
150.0 or greater	1.13

(2) Process factor.

Process configuration	Proc- ess factor
Less than 4.49	0.73
4.5 to 5.49	0.80
5.5 to 5.99	0.91
6.0 to 6.49	0.99
6.5 to 6.99	1.08
7.0 to 7.49	1.17
7.5 to 7.99	1.28
8.0 to 8.49	1.39
8.5 to 8.99	1.51
9.0 to 9.49	1.65
9.5 or greater	1.72

(3) See the comprehensive example in subpart D, §419.42(b)(3).

(c)(1) In addition to the provisions contained above pertaining to COD, ammonia and sulfide, 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):

(i) For each of the regulated pollutant parameters listed below, the effluent limitation for a given refinery is the sum of the products of each effluent limitation factor times the applicable process feedstock rate, calculated as provided in 40 CFR 122.45(b). Applicable production processes are presented in appendix A, by process type. The process identification numbers presented in this appendix A are for the convenience of the reader. They can be cross-referenced in the Development Document for Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Petroleum Refining Point Source Category (EPA 440/1-82/014), Table III-7, pp. 49-54.

	BAT effluent limitation	
Pollutant or pollutant property and process type	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		(kilograms per meters of feed-
Phenolic compounds (4AAP): Crude Cracking and coking Asphalt Lube Reforming and alkylation Total chronium: Crude Cracking and coking Asphalt Reforming and alkylation Hexavalent chromium: Crude Cracking and coking Asphalt Cracking and coking Asphalt Lube Reforming and alkylation	0.037 0.419 0.226 1.055 0.377 0.030 0.340 0.183 0.855 0.305 0.0019 0.0218 0.0117 0.0549 0.0196 English units	0.009 0.102 0.055 0.257 0.092 0.011 0.118 0.064 0.297 0.106 0.0098 0.0053 0.0248 0.0088
		(pounds per f feedstock)
Phenolic compounds (4AAP): Crude Cracking and coking Asphalt Reforming and alkylation Total chromium: Crude Cracking and coking Asphalt Lube Reforming and alkylation Hexavalent chromium:	0.013 0.147 0.079 0.369 0.132 0.011 0.119 0.064 0.299 0.107	0.003 0.036 0.019 0.090 0.032 0.004 0.041 0.022 0.104 0.037
Crucke Cracking and coking Asphalt Lube Reforming and alkylation	0.0007 0.0076 0.0041 0.0192 0.0069	0.0003 0.0034 0.0019 0.0087 0.0031

40 CFR Ch. I (7-1-06 Edition)

(2) See the comprehensive example in subpart D, \$419.43(c)(2).

(d) The provisions of §419.13(d) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(e) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(f) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best available technology economically achievable by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 110 mg/l TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BAT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		kilograms per ³ of flow)
Phenolic compounds (4AAP)	0.35	0.17
Total chromium	0.60	0.21
Hexavalent chromium	0.062	0.028

	BAT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
COD 1	360.	180.
		(pounds per ons of flow)
Phenolic compounds (4AAP) Total chromium Hexavalent chromium COD ¹	0.0029 0.0050 0.00052 3.0	0.0014 0.0018 0.00023 1.5

¹In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BODs. If in the judgement of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BOD₅

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

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

(a) 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	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
BOD ₅	34.6	18.4
TSS	23.4	14.8
Oil and grease	11.1	5.9
рН	(1)	(1)
	English units (pounds per 1,000 bbl of feedstock)	
BOD ₅	12.1	6.5
TSS	8.3	5.25
Oil and grease	3.9	2.1
рН	(1)	(1)

¹ Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied

by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 24.9	0.73
25.0 to 49.9	0.76
50.0 to 74.9	0.83
75.0 to 99.9	0.91
100.0 to 124.9	0.99
125.0 to 149.9	1.08
150.0 or greater	1.13

(2) Process factor.

Process configuration	Process fac- tor
Less than 4.49	0.73
4.5 to 5.49	0.80
5.5 to 5.99	0.91
6.0 to 6.49	0.99
6.5 to 6.99	1.08
7.0 to 7.49	1.17
7.5 to 7.99	1.28
8.0 to 8.49	1.39
8.5 to 8.99	1.51
9.0 to 9.49	1.65
9.5 or greater	1.72

(3) See the comprehensive example in subpart D, §419.42(b)(3).

(c) The provisions of §419.14(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff which may be discharged after the application of the best conventional pollutant control technology by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

BCT effluent limitations for contaminated runoff	
Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
Metric units (kilograms per 1,000 m ³ of flow)	
48. 33. 15. (¹)	26. 21. 8. (¹)
	(pounds per ons of flow)
0.40 0.28 0.13 (¹)	0.22 0.18 0.067 (¹)
	Contamina Maximum for any 1 day Metric units (1,000 m 48. 33. 15. (1) English units 1,000 gallo 0.40 0.28 0.13

¹Within the range of 6.0 to 9.0.

[50 FR 28526, July 12, 1985]

§ 419.35 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). The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards max- imum for any 1 day
	(Milligrams per liter (mg/l))
Oil and grease Ammonia (as N)	100 1 100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in §419.33 (a) and (b).

40 CFR Ch. I (7-1-06 Edition)

§419.36 Standards of performance for new sources (NSPS).

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

NSPS Effluent Limitations Pollutant or pollutant property Maximum for any 1 day Average of daily values so 20 con- secutive days shall not ex- ceed BOD5 21.8 11.6 TSS 21.8 11.6 TSS 21.8 0.00 Oil and grease 6.6 3.5 Phenolic compounds 0.158 .077 Ammonia as N 23.4 10.7 Sulfide 0.140 0.063 pH .025 0.012 pH .77 4.1 TSS 5.2 3.3 COD ¹ 5.2 3.3 COD1 0.056 0.027 Phenolic compounds 2.4 1.3 OD5 7.7 4.1 SUBIde 0.056 0.027 pH .056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.16 0.068 TS 5.2 3.3 COD ¹			
Pollutant or pollutant property Maximum for any 1 day daily values for 30 con- secutive days shall not ex- ceed BOD5 21.8 11.6 TSS 21.8 11.6 TSS 14.9 9.5 COD ¹ 0.6.6 3.5 Phenolic compounds 0.158 .077 Ammonia as N 23.4 10.7 Sulfide 0.140 0.063 pH .025 (2) English units (pounds per 1,000 bbl of feedstock) 2 BOD5 7.7 4.1 TSS 5.2 3.3 COD ¹ 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 pH .056 0.027 pH .056 0.027 at the diffed 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.056 0.0227 Total chromium 0.116 0.068		NSPS Effluent Limitations	
1,000 m³ of feedstock) BOD5 21.8 11.6 TSS 14.9 9.5 COD1 6.6 3.5 Phenolic compounds 0.158 .077 Ammonia as N 23.4 10.7 Sulfide 0.140 0.063 PH - Normalian 0.32 0.19 Hexavalent chromium 0.225 0.012 PH (²) (²) English units (pounds per 1,000 bbl of feedstock) 5.2 3.3 COD1 47.0 24.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.0227	Pollutant or pollutant property		daily values for 30 con- secutive days shall not ex-
TSS 14.9 9.5 COD ¹ 133.0 69.0 Oil and grease 6.6 3.5 Phenolic compounds 0.158 .077 Ammonia as N 23.4 10.7 Sulfide 0.140 0.063 Total chromium 0.32 0.19 Hexavalent chromium 0.025 0.012 pH (²) (²) English units (pounds per 1,000 bbl of feedstock) 5.2 BOD 5 7.7 4.1 TSS 5.2 3.3 COD ¹ 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068			
COD1 133.0 69.0 Oil and grease 6.6 3.5 Phenolic compounds 0.158 .077 Ammonia as N 23.4 10.7 Sulfide 0.140 0.663 Total chromium 0.32 0.19 Hexavalent chromium 0.025 0.012 pH (2) (2) English units (pounds per 1,000 bbl of feedstock) 5.2 BOD5 7.7 4.1 TSS 5.2 3.3 COD1 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068	BOD <i>5</i>	21.8	11.6
COD1 133.0 69.0 Oil and grease 6.6 3.5 Phenolic compounds 0.158 .077 Ammonia as N 23.4 10.7 Sulfide 0.140 0.663 Total chromium 0.32 0.19 Hexavalent chromium 0.025 0.012 pH (2) (2) English units (pounds per 1,000 bbl of feedstock) 5.2 BOD5 7.7 4.1 TSS 5.2 3.3 COD1 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068	TSS	14.9	9.5
Phenolic compounds 0.158 .077 Ammonia as N 0.140 0.063 Sulfide 0.32 0.19 Hexavalent chromium 0.32 0.012 PH (2) (2) English units (pounds per 1,000 bbl of feedstock) (2) BOD5 7.7 4.1 TSS 5.2 3.3 COD1 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.056 0.027 Total chromium 0.116 0.068		133.0	69.0
Ammonia as N 23.4 10.7 Sulfide 0.140 0.063 Total chromium 0.32 0.19 Hexavalent chromium 0.025 0.012 pH (2) (2) English units (pounds per 1,000 bbl of feedstock) 1.00 bbl of feedstock) BOD5 7.7 4.1 TSS 5.2 3.3 COD ¹ 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068	Oil and grease	6.6	3.5
Sulfide 0.140 0.063 Total chromium 0.32 0.19 Hexavalent chromium 0.025 0.012 PH (2) (2) English units (pounds per 1,000 bbl of feedstock) (2) BOD5 7.7 4.1 TSS 5.2 3.3 COD1 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.116 0.068 Hexavalent chromium 0.0096 0.0044	Phenolic compounds	0.158	.077
Total chromium 0.32 0.19 Hexavalent chromium 0.025 0.012 pH (2) (2) English units (pounds per 1,000 bbl of feedstock) BOD5 7.7 4.1 TSS 5.2 3.3 COD1 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.016 0.066 Notal chromium 0.116 0.068		23.4	10.7
Hexavalent chromium 0.025 0.012 (2) pH (2) (2) (2) English units (pounds per 1,000 bbl of feedstock) English units (pounds per 1,000 bbl of feedstock) BOD5 7.7 4.1 TSS 5.2 3.3 COD ¹ 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044			
pH (2) (2) English units (pounds per 1,000 bbl of feedstock) English units (pounds per 1,000 bbl of feedstock) BOD5 7.7 4.1 TSS 5.2 3.3 COD ¹ 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.116 0.068 Hexavalent chromium 0.0096 0.0044			
BOD5 T.7 4.1 TSS 5.2 3.3 COD1 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.0116 0.066 Notal chromium 0.116 0.068			
1,000 bbl of feedstock) BOD5 7.7 4.1 TSS 5.2 3.3 COD ¹ 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.0227 Ammonia as N 8.3 3.8 Sulfide 0.050 0.0222 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044	рН	(2)	(2)
TSS 5.2 3.3 COD ¹ 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044			
COD1 47.0 24.0 Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044	BOD5	7.7	4.1
Oil and grease 2.4 1.3 Phenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044	TSS	5.2	3.3
Dhenolic compounds 0.056 0.027 Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044			
Ammonia as N 8.3 3.8 Sulfide 0.050 0.022 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044			
Sulfide 0.050 0.022 Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044			
Total chromium 0.116 0.068 Hexavalent chromium 0.0096 0.0044			
Hexavalent chromium 0.0096 0.0044			
pH (2) (2)			
	рн	(~)	(~)

 1 See footnote following table in § 419.13(d). 2 Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 24.9	0.73
25.0 to 49.9	0.76
50.0 to 74.9	0.83
75.0 to 99.9	0.91
100.0 to 124.9	0.99
125.0 to 149.9	1.08
150.0 or greater	1.13

(2) Process factor.

Process configuration	Process fac- tor
Less than 4.49	0.73
4.5 to 5.49	0.80
5.5 to 5.99	0.91
6.0 to 6.49	0.99

Process configuration	Process fac- tor
6.5 to 6.99	1.08
7.0 to 7.49	1.17
7.5 to 7.99	1.28
8.0 to 8.49	1.39
8.5 to 8.99	1.51
9.0 to 9.49	1.65
9.5 or greater	1.72

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c) The provisions of §419.16(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) Effluent Limitations for Runoff. [Reserved]

[47 FR 46446, Oct. 18, 1982, as amended at 50
FR 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.37 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) The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards for new sources maximum for any 1 day
	Milligrams per liter (mg/l)
Oil and grease Ammonia (as N)	100 ¹ 100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in § 419.36 (a) and (b).

(b) The following standard is applied to the cooling tower discharge part of the total refinery flow to the POTW by multiplying: (1) The standard; (2) by the total refinery flow to the POTW; and (3) by the ratio of the cooling tower discharge flow to the total refinery flow.

Pollutant or pollutant property	Pretreatment standards for new sources maximum for any 1 day
	Miligrams per liter (mg/l)
Total chromium	1

Subpart D—Lube Subcategory

§419.40 Applicability; description of the lube subcategory.

The provisions of this subpart are applicable to all discharges from any facility that produces petroleum products by the use of topping, cracking, and lube oil manufacturing processes, whether or not the facility includes any process in addition to topping, cracking, and lube oil manufacturing processes. The provisions of this subpart are not applicable, however, to facilities that include the processes specified in subparts C and E of this part.

§419.41 Specialized definitions.

The general definitions, abbreviations and methods of analysis set forth in part 401 of this chapter and the specialized definitions set forth in §419.11 shall apply to this subpart.

§ 419.42 Effluent limitations 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 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):

	BPT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
BOD ⁵ TSS COD ¹ Phenolic compounds Ammonia as N Sulfide Total chromium Hexavalent chromium pH		25.8 22.7 187.0 8.5 0.184 10.6 0.150 0.45 0.030 (2) (pounds per f feedstock)
BOD5 TSS COD1 Oil and grease Phenolic compounds Ammonia as N Sulfide Total chromium Hexavalent chromium pH	17.9 12.5 127.0 5.7 0.133 8.3 0.118 0.273 0.024 (²)	9.1 8.0 66.0 3.0 0.065 3.8 0.053 0.160 0.011 (²)

¹See footnote following table in §419.13(d). ²Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 49.9	0.71
50.0 to 74.9	0.74
75.0 to 99.9	0.81
100.0 to 124.9	0.88
125.0 to 149.9	0.97
150.0 to 174.9	1.05
175.0 to 199.9	1.14
200.0 or greater	1.19

(2) Process factor.

Process configuration	Process factor
Less than 6.49	0.81
6.5 to 7.49	0.88
7.5 to 7.99	1.00
8.0 to 8.49	1.09
8.5 to 8.99	1.19
9.0 to 9.49	1.29
9.5 to 9.99	1.41
10.0 to 10.49	1.53
10.5 to 10.99	1.67
11.0 to 11.49	1.82
11.5 to 11.99	1.98
12.0 to 12.49	2.15

40 CFR Ch. I (7-1-06 Edition)

Process configuration	Process factor
12.5 to 12.99	2.34
13.0 or greater	2.44

(3) Example of the application of the above factors. Example-Lube refinery 125, 000 bbl per stream day throughput.

CALCULATION OF THE PROCESS CONFIGURATION

Process category	Process included	Weighting factor
Crude	Atm crude distillation Vacuum, crude distillation Desalting	1
Cracking and cok- ing.	Fluid cat. cracking Vis-breaking Thermal cracking Moving bed cat. cracking Hydrocracking Fluid coking Delayed coking	6
Lube	Further defined in the de- velopment document.	13
Asphalt	Asphalt production Asphalt oxidation Asphalt emulsifying	12

Process	Capacity (1,000 bbl per stream day)	Capacity relative to throughput	Weighting Factor	Proc- essing con- figura- tion
Crude:				
Atm	125.0	1.0		
Vacu-	12010			
um	60.0	0.48		
Desalti-				
ng	125.0	1.0		
Total		2.48	×1	=2.48
Cracking-				
FCC	41.0	0.328		
Hydrocra-				
cking	20.0	0.160		
Total		0.488	×6	=2.93
Lubes	5.3	0.042		
	4.0	0.032		
	4.9	0.039		
Total		0.113	×13	=1.47
Asphalt	4.0	0.032	×12	= .38
Refinery				
process				
con-				
figura-				7.00
tion				=7.26
Notos:				

Notes: See Table §419.42(b)(2) for process factor. Process factor=0.88. See Table §419.42(b)(1) for size factor for 125,000 bbl per stream day lube refinery. Size factor=0.97. To calculate the limits for each parameter, multiply the limit §419.42(a) by both the process factor and size factor. BOD5 limit (maximum for any 1 day)=17.9×0.88×0.97=15.3 lb. per 1,000 bbl of feedstock.

(c) The provisions of 419.12(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best practicable control technology currently available by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease and 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease or 110 mg/ 1 TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

§419.43

	BPT effluent I contamina	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		(pounds per ons of flow)
BOD5 TSS	0.40	0.22 0.18
COD ¹	3.0	1.5
Oil and grease	0.13	0.067
Phenolic compounds (4AAP)	0.0029	0.0014
Total chromium	0.0060	0.0035
Hexavalent chromium	0.00052	0.00023
рН	(²)	(²)

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BOD₃. If in the judgment of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable affluent fluent informations for RDD. to 1 to the applicable effluent limitations for BOD₅. ²Within the range of 6.0 to 9.0.

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28522, 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.43 Effluent limitations guidelines 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 (BAT):

	BPT effluent contamina		
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed	Pollutar
		kilograms per ³ of flow)	
BOD ₅	48.	26.	COD 1
TSS	33.	21.	Ammonia
COD ¹	360.	180.	Sulfide
Oil and grease	15.	8.	
Phenolic compounds (4AAP)	0.35	0.17	
Total chromium	0.73	0.43	
Hexavalent chromium	0.062	0.028	
рН	(2)	(2)	COD ¹ Ammonia

	BAT effluent	t limitations
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
	Metric units	kilograms er
COD ¹ Ammonia as N Sulfide	360.0 23.4 0.33	187.0 10.6 0.150
	English un per 1,000 stock)	its (pounds bbl of feed-
COD ¹ Ammonia as N	127.0 8.3	66.0 3.8

	BAT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
Sulfide	0.118	0.053

¹ See footnote following table in §419.13(d).

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size fac- tor
Less than 49.9	0.71 0.74 0.81 0.88 0.97 1.05 1.14 1.19

(2) Process factor.

Process configuration	Process factor
Less than 6.49	0.81
6.5 to 7.49	0.88
7.5 to 7.99	1.00
8.0 to 8.49	1.09
8.5 to 8.99	1.19
9.0 to 9.49	1.29
9.5 to 9.99	1.41
10.0 to 10.49	1.53
10.5 to 10.99	1.67
11.0 to 11.49	1.82
11.5 to 11.99	1.98
12.0 to 12.49	2.15
12.5 to 12.99	2.34
13.0 or greater	2.44

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c)(1) In addition to the provisions contained above pertaining to COD, ammonia and sulfide, 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):

(i) For each of the regulated pollutant parameters listed below, the effluent limitation for a given refinery is the sum of the products of each effluent limitation factor times the applicable process feedstock rate, calculated

40 CFR Ch. I (7-1-06 Edition)

as provided in 40 CFR 122.45(b). Applicable production processes are presented in appendix A, by process type. The process identification numbers presented in this appendix A are for the convenience of the reader. They can be cross-referenced in the Development Document for Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Petroleum Refining Point Source Category (EPA 440/1-82/014), Table III-7, pp. 49-54.

	D.4.7 (1)	
	BAT effluent li	mitation factor
Pollutant or pollutant property and process type	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		kilograms per f feedstock)
Phenolic compounds (4AAP):		
Crude	0.037	0.009
Cracking and coking	0.419	0.102
Asphalt	0.226	0.055
Lube	1.055	0.257
Reforming and alkylation	0.377	0.092
Total chromium:		
Crude	0.030	0.011
Cracking and coking	0.340	0.118
Asphalt	0.183	0.064
Lube	0.855	0.297
Reforming and alkylation Hexavalent chromium:	0.305	0.106
Crude	0.0019	0.0009
Cracking and coking	0.0218	0.0098
Asphalt	0.0117	0.0053
Lube	0.0549	0.0248
Reforming and alkylation	0.0196	0.0088
		(pounds per f feedstock)
Phenolic compounds (4AAP):		
Crude	0.013	0.003
Cracking and coking	0.147	0.036
Asphalt	0.079	0.019
Lube	0.369	0.090
Reforming and alkylation	0.132	0.032
Total chromium:	0.011	0.004
Crude	0.011	0.004
Cracking and coking	0.119 0.064	0.041 0.022
Asphalt	0.064	0.022
Lube Reforming and alkylation	0.299	0.104
Herorming and alkylation Hexavalent chromium:	0.107	0.037
Crude	0.0007	0.0003
Cracking and coking	0.0076	0.0003
Asphalt	0.0070	0.0034
Lube	0.0192	0.0013
Reforming and alkylation	0.0069	0.0031
	0.0000	0.0001

(2) Example Application of Effluent Limitations Guidelines as Applicable to Phenolic Compounds, Hexavalent Chromium, and Total Chromium.

The following example presents the derivation of a BAT phenolic compound

(4AAP) effluent limitation (30-day average) for a petroleum refinery permit. The methodology is also applicable to hexavalent chromium and total chromium.

Refinery process	Process feedstock rate 1,000 bbl/day
Atmospheric crude distillation Crude desalting Vacuum crude distillation	100 50 75
Total crude processes (C) 6. Fluid catalytic cracking	225 25 20
Total cracking and coking processes (K) 18. Asphalt production	45 5
Total asphalt processes (A) 21. Hydrofining	5 3
Total lube processes (L) 8. Catalytic reforming	3 10
Total reforming and alkylation processes (R)	10

NOTE: 30 day average effluent limitation for phenolic compounds (4AAP), lb/ day=(0.003) (225)+(0.036) (45)+(0.019) (5)+(0.090) (3)+(0.032) (10)=2.98 lb/day.

(d) The provisions of §419.13(d) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(e) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(f) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best available technology economically achievable by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample. §419.44

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 110 mg/l TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BAT effluent I contamina	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		kilograms per ³ of flow)
Phenolic compounds (4AAP)	0.35	0.17
Total chromium	0.60	0.21
Hexavalent chromium	0.062	0.028
COD ¹	360.	180.
		(pounds per ons of flow)
Phenolic compounds (4AAP)	0.0029	0.0014
Total chromium	0.0050	0.0018
Hexavalent chromium	0.00052	0.00023
COD ¹	3.0	1.5

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BOD₅. If in the judgement of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BOD₅.

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, 28524, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

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

(a) 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	
Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not exceed
	kilograms per If feedstock
50.6	25.8
35.6	22.7
	8.5
(')	(1)
English units	(pounds per
1,000 bbl o	f feedstock)
17.9	9.1
12.5	8.0
5.7	3.0
(1)	(1)
	Maximum for any 1 day Metric units (1,000 m ³ c 50.6 35.6 16.2 (1) English units 1,000 bbl o 17.9 12.5 5.7

¹ Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 49.9	0.71
50.0 to 74.9	0.74
75.0 to 99.9	0.81
100.0 to 124.9	0.88
125.0 to 149.9	0.97
150.0 to 174.9	1.05
175.0 to 199.9	1.14
200.0 or greater	1.19

(2) Process factor.

Process configuration	Process fac- tor
Less than 6.49	0.81
6.5 to 7.49	0.88
7.5 to 7.99	1.00
8.0 to 8.49	1.09
8.5 to 8.99	1.19
9.0 to 9.49	1.29
9.5 to 9.99	1.41
10.0 to 10.49	1.53
10.5 to 10.99	1.67
11.0 to 11.49	1.82
11.5 to 11.99	1.98
12.0 to 12.49	2.15
12.5 to 12.99	2.34
13.0 or greater	2.44

(c) The provisions of §419.14(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable

40 CFR Ch. I (7-1-06 Edition)

to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff which may be discharged after the application of the best conventional pollutant control technology by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BCT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric unit (kilograms per 1,000 m ³ of flow)	
BOD ₅	48.	26.
TSS	33.	21.
Oil and grease	15.	8.
pH	(1)	(1)
	English units (pounds pe 1,000 gallons of flow)	
BOD ₅	0.40	0.22
TSS	0.28	0.18
Oil and grease	0.13	0.067
рН	(1)	(1)

¹ Within the range of 6.0 to 9.0.

[50 FR 28526, July 12, 1985]

§419.45 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13 any existing source subject to this subpart 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). The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards for ex- isting sources— maximum for any 1 day
	Milligrams per liter (mg/l)
Oil and grease Ammonia (as N)	100 ¹ 100

 1 Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in \$419.43 (a) and (b).

§419.46 Standards of performance for new sources (NSPS).

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

	NSPS effluent limitations	
Pollutant or pollutant prop- erty	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
BOD <i>5</i> TSS OD ¹ Oil and grease Phenolic compounds Ammonia as N Sulfide Total chromium Hexavalent chromium pH	34.6 23.4 245.0 10.5 23.4 0.220 0.52 0.046 (²)	18.4 14.9 126.0 5.6 0.12 10.7 0.10 0.31 0.021 (²)
	English units (pounds per 1,000 bbl of feedstock)	
BOD ¹ TSS Oil and grease Phenolic compounds Ammonia as N Sulfide Total chromium Hexavalent chromium	12.2 8.3 87.0 3.8 0.088 8.3 0.078 0.180 0.022	6.5 5.3 45.0 2.0 0.043 3.8 0.035 0.105 0.0072

	NSPS effluer	nt limitations
Pollutant or pollutant prop- erty	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
рН	(2)	(2)

¹See footnote following table in §419.13(d). ²Within the range 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size fac- tor
Less than 49.9	0.71
50.0 to 74.9	0.74
75.0 to 99.9	0.81
100.0 to 124.9	0.88
125.0 to 149.9	0.97
150.0 to 174.9	1.05
175.0 to 199.9	1.14
200.0 or greater	1.19

(2) Process factor.

Process configuration	Process factor
Less than 6.49	0.81
6.5 to 7.49	0.88
7.5 to 7.99	1.00
8.0 to 8.49	1.09
8.5 to 8.99	1.19
9.0 to 9.49	1.29
9.5 to 9.99	1.41
10.0 to 10.49	1.53
10.5 to 10.99	1.67
11.0 to 11.49	1.82
11.5 to 11.99	1.98
12.0 to 12.49	2.15
12.5 to 12.99	2.34
13.0 or greater	2.44

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c) The provisions of §419.16(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provision of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) *Effluent Limitations for Runoff.* [Reserved]

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, 28528, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.47 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) The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards for new sources, max- imum for any 1 day
	Milligrams per liter (mg/l)
Oil and grease Ammonia (as N)	100 1 100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in §419.46 (a) and (b).

(b) The following standard is applied to the cooling tower discharge part of the total refinery flow to the POTW by multiplying: (1) The standard; (2) by the total refinery flow to the POTW; and (3) by the ratio of the cooling tower discharge flow to the total refinery flow.

Pollutant or pollutant property	Pretreatment standards for new sources, max- imum for any 1 day
	Milligrams per liter (mg/l)
Total chromium	1

Subpart E—Integrated Subcategory

§419.50 Applicability; description of the integrated subcategory.

The provisions of this subpart are applicable to all discharges resulting from any facility that produces petroleum products by the use of topping, cracking, lube oil manufacturing processes, and petrochemical operations,

40 CFR Ch. I (7-1-06 Edition)

whether or not the facility includes any process in addition to topping, cracking, lube oil manufacturing processes, and petrochemical operations.

§419.51 Specialized definitions.

The general definitions, abbreviations, and methods of analysis set forth in part 401 of this chapter and the specialized definitions set forth in §419.31 shall apply to this subpart.

§ 419.52 Effluent limitations 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 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):

	BPT Effluent Limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
BOD <i>5</i>	54.4	28.9
TSS	37.3	23.7
COD ¹	388.0	198.0
Oil and grease	17.1	9.1
Phenolic compounds	0.40	0.192
Ammonia as N	23.4	10.6
Sulfide	0.35	0.158
Total Chromium	0.82	0.48
Hexavalent chromium	0.068	0.032
рН	(2)	(2)
	English units (pounds per 1,000 bbl of feedstock)	
BOD ¹	19.2	10.2
TSS	13.2	8.4
COD ¹	136.0	70.0
Oil and grease	6.0	3.2
Phenolic compounds	0.14	0.068
Ammonia as N	8.3	3.8
Sulfide	0.124	0.056
Total chromium	0.29	0.17
Hexavalent chromium	0.025	0.011
рН	(2)	(2)
40 4 4 4 4 4 4 4 4 4		

¹ See footnote following table in §419.13(d). ² Within the range 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and

maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 124.9	0.73
125.0 to 149.9	0.76
150.0 to 174.9	0.83
175.0 to 199.9	0.91
200.0 to 224.9	0.99
225 or greater	1.04

(2) Process factor.

Process configuration	Process fac- tor
Less than 6.49	0.75
6.5 to 7.49	0.82
7.5 to 7.99	0.92
8.0 to 8.49	1.00
8.5 to 8.99	1.10
9.0 to 9.49	1.20
9.5 to 9.99	1.30
10.0 to 10.49	1.42
10.5 to 10.99	1.54
11.0 to 11.49	1.68
11.5 to 11.99	1.83
12.0 to 12.49	1.99
12.5 to 12.99	2.17
13.0 or greater	2.26

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c) The provisions of §419.12(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provision of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best practicable control technology currently available by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease and 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease or 110 mg/ l TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BPT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of flow)	
BOD5 TSS OD 1 Oil and grease Phenolic compounds (4AAP) Total chromium Hexavalent chromium pH	48. 33. 360. 15. 0.35 0.73 0.062 (²)	26. 21. 180. 8. 0.17 0.43 0.028 (²)
	English units (pounds pe 1,000 gallons of flow)	
BOD <i>5</i> TSS OD ¹ Oil and grease Phenolic compounds (4AAP) Total chromium Hexavalent chromium PH	0.40 0.28 3.0 0.13 0.0029 0.0060 0.00052 (²)	0.22 0.18 1.5 0.067 0.0014 0.0035 0.00023 (²)

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BODs. If in the judgment of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BODs. ² Within the range of 6.0 to 9.0.

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28522, 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§ 419.53 Effluent limitations guidelines 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 (BAT):

	BAT Effluent Limita- tions	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed
		kilograms m ³ of feed-
COD 1	388.0	198.0
Ammonia as N	23.4	10.6
Sulfide	0.35	0.158
		its (pounds bbl of feed-
COD ¹	136.0	70.0
Ammonia as N	8.3	3.8
Sulfide	0.124	0.056

¹ See footnote following table in § 419.13(d).

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 124.9 125.0 to 149.9	0.73
150.0 to 174.9	0.83
175.0 to 199.9 200 to 224.9	0.91 0.99
225 or greater	1.04

(2) Process factor.

Process configuration	Process fac- tor
Less than 6.49	0.75
6.5 to 7.49	0.82
7.5 to 7.99	0.92
8.0 to 8.49	1.00
8.5 to 8.99	1.10
9.0 to 9.49	1.20
9.5 to 9.99	1.30
10.0 to 10.49	1.42
10.5 to 10.99	1.54
11.0 to 11.49	1.68
11.5 to 11.99	1.83
12.0 to 12.49	1.99
12.5 to 12.99	2.17
13.0 or greater	2.26

40 CFR Ch. I (7-1-06 Edition)

(3) See the comprehensive example in subpart D, §419.42(b)(3).

(c)(1) In addition to the provisions contained above pertaining to COD, ammonia and sulfide, 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):

(i) For each of the regulated pollutant parameters listed below, the effluent limitation for a given refinery is the sum of the products of each effluent limitation factor times the applicable process feedstock rate, calculated as provided in 40 CFR 122.45(b). Applicable production processes are pre-sented in appendix A, by process type. The process identification numbers presented in this appendix A are for the convenience of the reader. They can be cross-referenced in the Development Document for Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Petroleum Refining Point Source Category (EPA 440/1-82/014), Table III-7, pp. 49-54.

	BAT effluent limitation factor	
Pollutant or pollutant property and process type	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
		(kilograms per meters of feed-
Phenolic compounds (4AAP): Crude		0.009 0.102 0.055 0.257 0.092 0.011 0.118 0.064 0.297 0.106 0.009 0.0098 0.0053 0.0248 0.0053 0.0248 0.0088 f (pounds per f feedstock)
Phenolic compounds (4AAP): Crude Cracking and coking Asphalt	0.013 0.147 0.079	0.003 0.036 0.019

	BAT effluent limitation factor	
Pollutant or pollutant property and process type	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
Lube	0.369	0.090
Reforming and alkylation Total chromium:	0.132	0.032
Crude	0.011	0.004
Cracking and coking	0.119	0.041
Asphalt	0.064	0.022
Lube	0.299	0.104
Reforming and alkylation Hexavalent chromium:	0.107	0.037
Crude	0.0007	0.0003
Cracking and coking	0.0076	0.0034
Asphalt	0.0041	0.0019
Lube	0.0192	0.0087
Reforming and alkylation	0.0069	0.0031

(2) See the comprehensive example in subpart D, \$419.43(c)(2).

(d) The provisions of §419.13(d) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(e) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(f) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff, which may be discharged after the application of the best available technology economically achievable by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 110 mg/l total organic carbon (TOC) based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 110 mg/l TOC is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quan§419.54

tity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BAT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not ex- ceed
	Metric units (kilograms per 1,000 m ³ of flow)	
Phenolic compounds (4AAP)	0.35	0.17
Total chromium	0.60	0.21
Hexavalent chromium	0.062	0.028
COD ¹	360.	180.
		(pounds per ons of flow)
Phenolic compounds (4AAP)	0.0029	0.0014
Total chromium	0.0050	0.0018
Hexavalent chromium	0.00052	0.00023
COD ¹	3.0	1.5

¹ In any case in which the applicant can demonstrate that the chloride ion concentration in the effluent exceeds 1,000 mg/l (1,000 ppm), the permitting authority may substitute TOC as a parameter in lieu of COD. A TOC effluent limitation shall be based on effluent data from the particular refinery which correlates TOC to BODs. If in the judgement of the permitting authority, adequate correlation data are not available, the effluent limitations for TOC shall be established at a ratio of 2.2 to 1 to the applicable effluent limitations for BOD₅

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

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

(a) Any existing point 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	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not exceed
	Metric units (1,000 m ³ of	kilograms per f feedstock)
BOD <i>5</i> TSS Oil and grease	54.4 37.3 17.1	28.9 23.7 9.1

	BCT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not exceed
рН	(1)	(1)
		(pounds per f feedstock)
BOD <i>5</i> TSS	19.2 13.2	10.2 8.4
Oil and grease	6.0	3.2
ph	(1)	(1)

¹ Within the range of 6.0 to 9.0.

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size factor
Less than 124.9	0.73
125.0 to 149.9	0.76
150.0 to 174.9	0.83
175. to 199.9	0.91
200.0 to 224.9	0.99
225.0 or greater	1.04

(2) Process factor.

Process configuration	Process fac- tor
Less than 6.49	0.75
6.5 to 7.49	0.82
7.5 to 7.99	0.92
8.0 to 8.49	1.00
8.5 to 8.99	1.10
9.0 to 9.49	1.20
9.5 to 9.99	1.30
10.0 to 10.49	1.42
10.5 to 10.99	1.54
11.0 to 11.49	1.68
11.5 to 11.99	1.83
12.0 to 12.49	1.99
12.5 to 12.99	2.17
13.0 or greater	2.26

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c) The provisions of §419.14(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provisions of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section.

40 CFR Ch. I (7-1-06 Edition)

(e) Effluent limitations for contaminated runoff. The following effluent limitations constitute the quantity and quality of pollutants or pollutant properties controlled by this paragraph and attributable to contaminated runoff which may be discharged after the application of the best conventional pollutant control technology by a point source subject to this subpart.

(1) If wastewater consists solely of contaminated runoff and is not commingled or treated with process wastewater, it may be discharged if it does not exceed 15 mg/l oil and grease based upon an analysis of any single grab or composite sample.

(2) If contaminated runoff is commingled or treated with process wastewater, or if wastewater consisting solely of contaminated runoff which exceeds 15 mg/l oil and grease is not commingled or treated with any other type of wastewater, the quantity of pollutants discharged shall not exceed the quantity determined by multiplying the flow of contaminated runoff as determined by the permit writer times the concentrations listed in the following table:

	BCT effluent limitations for contaminated runoff	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 con- secutive days shall not exceed
	Metric units (kilograms per 1,000 m ³ of feedstock)	
BOD5	48.	26.
TSS	33.	21.
Oil and grease	15.	8.
рН	(1)	(1)
		(pounds per ons of flow)
BOD5	0.40	0.22
TSS	0.28	0.18
Oil and grease	0.13	0.067

pH| ¹ Within the range of 6.0 to 9.0.

[50 FR 28527, July 12, 1985]

§419.55 Pretreatment standards for existing sources (PSES).

(1)

(1)

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 403 and achieve the following pretreatment standards for existing sources (PSES). The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards for existing sources— maximum for any 1 day
	Milligrams per liter (mg/ I)
Oil and grease Ammonia (as N)	100 1100
1Where the discharge to the DOTM experiets	

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in § 419.53 (a) and (b).

§419.56 Standards of performance for new sources (NSPS).

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

	NSPS efflue	nt limitation	
Pollutant or pollutant property	Maximum for any 1 day	Average of daily val- ues for 30 consecu- tive days shall not exceed	
	Metric units (kilograms per 1,000 m ³ of feed- stock)		
BOD <i>5</i> TSS COD ¹ Oil and grease Phenolic compounds Ammonia as N Sulfide Total chromium Hexavalent chromium pH	41.6 28.1 295.0 12.6 0.30 23.4 0.26 0.64 0.052 (²)	22.1 17.9 152.0 6.7 0.14 10.7 0.12 0.37 0.024 (²)	
	English units (pounds per 1,000 bbl of feed- stock)		
BOD5 TSS COD ¹ Oil and grease Phenolic compounds Ammonia as N Sulfide Total chromium Hexavalent chromium	14.7 9.9 104.0 4.5 0.105 8.3 0.093 0.220 0.019	7.8 6.3 54.0 2.4 0.051 3.8 0.042 0.13 0.0084	
pH	(2)	(2)	

¹ See footnote following table in § 419.13(d).

² Within the range 6.0 to 9.0.

§419.57

(b) The limits set forth in paragraph (a) of this section are to be multiplied by the following factors to calculate the maximum for any one day and maximum average of daily values for thirty consecutive days.

(1) Size factor.

1,000 bbl of feedstock per stream day	Size fac- tor
Less than 124.9	0.73
125.0 to 149.9	0.76
150.0 to 174.9	0.83
175.0 to 199.9	0.91
200 to 224.9	0.99
225 or greater	1.04

(2) Process factor.

Process configuration	Process factor
Less than 6.49	0.75
6.5 to 7.49	0.82
7.5 to 7.99	0.92
8.0 to 8.49	1.00
8.5 to 8.99	1.10
9.0 to 9.49	1.20
9.5 to 9.99	1.30
10.0 to 10.49	1.42
10.5 to 10.99	1.54
11.0 to 11.49	1.68
11.5 to 11.99	1.83
12.0 to 12.49	1.99
12.5 to 12.99	2.17
13.0 or greater	2.26

(3) See the comprehensive example in subpart D, \$419.42(b)(3).

(c) The provisions of §419.16(c) apply to discharges of process wastewater pollutants attributable to ballast water by a point source subject to the provision of this subpart.

(d) The quantity and quality of pollutants or pollutant properties controlled by this paragraph, attributable to once-through cooling water, are excluded from the discharge allowed by paragraph (b) of this section. Oncethrough cooling water may be discharged with a total organic carbon concentration not to exceed 5 mg/l.

(e) *Effluent Limitations for Runoff.* [Reserved]

[47 FR 46446, Oct. 18, 1982, as amended at 50 FR 28523, 28528, July 12, 1985; 50 FR 32414, Aug. 12, 1985]

§419.57 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart

Pt. 419, App. A

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) The following standards apply to the total refinery flow contribution to the POTW:

Pollutant or pollutant property	Pretreatment standards for new sources— maximum for any 1 day
	Milligrams per liter (mg/ I)
Oil and grease Ammonia (as N)	100 1 100

¹Where the discharge to the POTW consists solely of sour waters, the owner or operator has the option of complying with this limit or the daily maximum mass limitation for ammonia set forth in § 419.56 (a) and (b).

(b) The following standard is applied to the cooling tower discharge part of the total refinery flow to the POTW by multiplying: (1) The standards; (2) by the total refinery flow to the POTW; and (3) by the ratio of the cooling tower discharge flow to the total refinery flow.

Pollutant or pollutant property	Pretreatment standards for new sources— maximum for any 1 day
	Milligrams per liter (mg/ 1)
Total chromium	1

APPENDIX A TO PART 419-PROCESSES INCLUDED IN THE DETERMINATION OF BAT EFFLUENT LIMITATIONS FOR TOTAL CHROMIUM, HEXAVALENT CHROMIUM, AND PHENOLIC COM-POUNDS (4AAP)

Crude Processes

- 1. Atmospheric Crude Distillation
- 2. Crude Desalting
- 3. Vacuum Crude Distillation

Cracking and Coking Processes

- 4. Visbreaking
- 5. Thermal Cracking
- 6. Fluid Catalytic Cracking 7. Moving Bed Catalytic Cracking
- 10. Hydrocracking
- 15. Delayed Coking
- 16. Fluid Coking

40 CFR Ch. I (7-1-06 Edition)

54. Hydrotreating

Asphalt Processes

- 18. Asphalt Production
- 32. 200° F Softening Point Unfluxed Asphalt
- 43. Asphalt Oxidizing
- 89. Asphalt Emulsifying

Lube Processes

- Hydrofining, Hydrofinishing, Lube 21 Hydrofining
- 22. White Oil Manufacture
- 23.Propane Dewaxing, Propane Deasphalting, Propane Fractioning, Propane Deresining
- 24. Duo Sol, Solvent Treating, Solvent Extraction, Duotreating, Solvent Dewaxing, Solvent Deasphalting
- 25. Lube Vac Twr, Oil Fractionation, Batch Still (Naphtha Strip), Bright Stock Treating

26. Centrifuge and Chilling

- 27. MEK Dewaxing, Ketone Dewaxing, MEK-Toluene Dewaxing
- 28. Deoiling (wax)
- 29. Naphthenic Lubes Production
- 30. SO_2 Extraction
- 34. Wax Pressing
- 35. Wax Plant (with Neutral Separation)
- 36. Furfural Extraction
- 37. Clay Contacting—Percolation
- 38. Wax Sweating 39. Acid Treating
- 40. Phenol Extraction

Reforming and Alkylation Processes

8. H_2SO_4 Alkylation

12. Catalytic Reforming

[50 FR 28528, July 12, 1985; 50 FR 32414, Aug. 12. 19851

PART 420—IRON AND STEEL MANU-FACTURING POINT SOURCE CAT-EGORY

GENERAL PROVISIONS

420.01 Applicability.

Sec.

- 420.02 General definitions.
- 420.03 Alternative effluent limitations representing the degree of effluent reduction attainable by the application of best practicable control technology currently available, best available technology economically achievable, best available demonstrated control technology, and best conventional pollutant control technology (the "water bubble").
- 420.04 Calculation of pretreatment standards.
- 420.05 Pretreatment standards compliance date.
- 420.06 Removal credits for phenols (4AAP).