

§ 464.12

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(§ 464.15) and PSNS (§ 464.16) for the aluminum subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:

(1) Casting Quench (§ 464.15(b) and § 464.16(b)):

- 4. benzene
- 21. 2,4,6-trichlorophenol
- 22. Para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 84. pyrene
- 85. tetrachloroethylene
- 87. trichloroethylene

(2) Die Casting (§ 464.15(c) and § 464.16(c)):

- 1. acenaphthene
- 4. benzene
- 7. chlorobenzene
- 11. 1,1,1-trichloroethane
- 21. 2,4,6-trichlorophenol
- 22. para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 55. naphthalene
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 72. benzo (a)anthracene (1,2-benzanthracene)
- 73. benzo (a)pyrene (3,4-benzopyrene)
- 76. chrysene
- 78. anthracene
- 80. fluorene
- 81. phenanthrene
- 84. pyrene
- 85. tetrachloroethylene
- 86. toluene

(3) Dust Collection Scrubber (§ 464.15(d) and § 464.16(d)):

- 1. acenaphthene
- 21. 2,4,6-trichlorophenol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 73. benzo (a)pyrene (3,4-benzopyrene)
- 84. pyrene

(4) Investment Casting (§ 464.15(f) and § 464.16(f)):

- 11. 1,1,1-trichloroethane
- 23. chloroform (trichloromethane)
- 44. methylene chloride (dichloromethane)
- 66. bis(2-ethylhexyl) phthalate
- 84. pyrene
- 85. tetrachloroethylene
- 87. trichloroethylene

(5) Melting Furnace Scrubber (§ 464.15(g) and § 464.16(g)):

- 1. acenaphthene
- 21. 2,4,6-trichlorophenol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 73. benzo (a)pyrene (3,4-benzopyrene)
- 84. pyrene

(6) Mold Cooling (§ 464.15(h) and § 464.16(h)):

- 4. benzene
- 21. 2,4,6-trichlorophenol
- 22. para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 84. pyrene
- 85. tetrachloroethylene
- 87. trichloroethylene

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm<sup>3</sup> or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For

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non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitation and annual average mass limitation shall only apply to non-continuous dischargers.

**(a) Casting Cleaning Operations.**

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	0.0771	0.0421
Lead (T) .....	0.0791	0.039
Zinc (T) .....	0.114	0.0431
Oil & grease .....	3.0	1.0
TSS .....	3.80	1.50
pH .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range of 7.0 to 10.00 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T) .....	0.77	0.42	0.017
Lead (T) .....	0.79	0.39	0.022
Zinc (T) .....	1.14	0.43	0.027
Oil & grease .....	30	10	0.501
TSS .....	38	15	1.0
pH .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.  
<sup>2</sup> These concentrations must be multiplied by the ratio of (12/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.  
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

**(b) Casting Quench Operations.**

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	0.0093	0.0051
Lead (T) .....	0.0096	0.0047
Zinc (T) .....	0.0138	0.0052
Oil & grease .....	0.363	0.121
TSS .....	0.46	0.182
pH .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T) .....	0.77	0.42	0.0021
Lead (T) .....	0.79	0.39	0.0027
Zinc (T) .....	1.14	0.43	0.0033
Oil & grease .....	30	10	0.0605
TSS .....	38	15	0.121
pH .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.  
<sup>2</sup> These concentrations must be multiplied by the ratio of (1.45/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.  
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

**(c) Die Casting Operations.**

**BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	0.0066	0.0036
Lead (T) .....	0.0068	0.0034
Zinc (T) .....	0.0098	0.0037
Total Phenols .....	0.0074	0.0026
Oil & Grease .....	0.259	0.0864
TSS .....	0.33	0.13
pH .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) ( <sup>2</sup> )	(mg/l) ( <sup>2</sup> )	
Copper (T) .....	0.77	0.42	0.0015
Lead (T) .....	0.79	0.39	0.0019
Zinc (T) .....	1.14	0.43	0.0023
Total Phenols .....	0.86	0.3	0.0017
Oil & Grease .....	30	10	0.0432
TSS .....	38	15	0.0864
pH .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.  
<sup>2</sup> These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.  
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

**(d) Dust Collection Scrubber Operations.**

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Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm <sup>3</sup> (pounds per billion SCF) of air scrubbed	
Copper (T) .....	0.231	0.126
Lead (T) .....	0.237	0.117
Zinc (T) .....	0.343	0.129
Total Phenols .....	0.258	0.09
Oil & Grease .....	9.01	3.0
TSS .....	11.4	4.51
pH .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	mg/l) <sup>2</sup>	
Copper (T) .....	0.77	0.42	0.0511
Lead (T) .....	0.79	0.39	0.0661
Zinc (T) .....	1.14	0.43	0.0811
Total Phenols .....	0.86	0.3	0.0601
Oil & Grease .....	30	10	1.5
TSS .....	38	15	3.0
pH .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/62.3 million SM<sup>3</sup> (pounds per billion SCF) of air scrubbed.

<sup>2</sup> These concentrations must be multiplied by the ratio of (0.036/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

(e) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

(f) *Investment Casting.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	8.48	4.63
Lead (T) .....	8.7	4.3
Zinc (T) .....	12.6	4.74
Oil and grease .....	330	110
TSS .....	419	165
pH .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T) .....	0.77	0.42	1.87
Lead (T) .....	0.79	0.39	2.42
Zinc (T) .....	1.14	0.43	2.97
Oil and grease .....	30	10	55.1
TSS .....	38	15	110
pH .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.

<sup>2</sup> These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

(g) *Melting Furnace Scrubber Operations.*

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm <sup>3</sup> (pounds per billion SCF) of air scrubbed	
Copper (T) .....	3.01	1.64
Lead (T) .....	3.09	1.52
Zinc (T) .....	4.45	1.68
Total phenols .....	3.36	1.17
Oil and grease .....	117	39.1
TSS .....	148	58.6
pH .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T) .....	0.77	0.42	0.664
Lead (T) .....	0.79	0.39	0.859
Zinc (T) .....	1.14	0.43	1.05
Total phenols .....	0.86	0.3	0.781
Oil and grease .....	30	10	19.5
TSS .....	38	15	39.1
pH .....	( <sup>2</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/62.3 million Sm<sup>3</sup> (pounds per billion SCF) of air scrubbed.

<sup>2</sup> These concentrations must be multiplied by the ratio of (0.468/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

(h) *Mold Cooling Operations.*

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Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	0.297	0.162
Lead (T) .....	0.305	0.151
Zinc (T) .....	0.44	0.166
Oil and grease .....	11.6	3.86
TSS .....	14.7	5.79
pH .....	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>1</sup>	(mg/l) <sup>1</sup>	
Copper (T) .....	0.77	0.42	0.0656
Lead (T) .....	0.79	0.39	0.0849
Zinc (T) .....	1.14	0.43	0.104
Oil and grease .....	30	10	1.93
TSS .....	38	15	3.86
pH .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal  
<sup>2</sup> These concentrations must be multiplied by the ratio of (46.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.  
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm<sup>3</sup> or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.*

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	0.0771	0.0421
Lead (T) .....	0.0791	0.039
Zinc (T) .....	0.114	0.0431

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T) .....	0.77	0.42	0.017
Lead (T) .....	0.79	0.39	0.022
Zinc (T) .....	1.14	0.43	0.027

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.  
<sup>2</sup> These concentrations must be multiplied by the ratio of (12/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(b) *Casting Quench Operations.*

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	0.0093	0.0051
Lead (T) .....	0.0096	0.0047
Zinc (T) .....	0.0138	0.0052

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T) .....	0.77	0.42	0.0021
Lead (T) .....	0.79	0.39	0.0027
Zinc (T) .....	1.14	0.43	0.0033

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.  
<sup>2</sup> These concentrations must be multiplied by the ratio of (1.45/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) *Die Casting Operations.*

**BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) .....	0.0066	0.0036
Lead (T) .....	0.0068	0.0034
Zinc (T) .....	0.0098	0.0037
Total Phenols .....	0.0074	0.0026