

Environmental Protection Agency

§ 464.33

²These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

³Within the range of 7.0 to 10.0 at all times.

(h) Slag Quench Operations.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102
Oil and grease	5.46	1.82
TSS	6.91	2.73
pH	(¹)	(¹)

¹ Within the range 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.79	0.39	0.04
Zinc (T)	1.47	0.56	0.0728
Oil and grease	30	10	0.909
TSS	38	15	1.82
pH	(³)	(³)	(³)

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

²These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

³Within the range of 7.0 to 10.0 at all times.

(i) Wet Sand Reclamation Operations.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	0.418
Total phenols	0.642	0.224
Oil and grease	22.4	7.47
TSS	28.4	11.2
pH	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.79	0.39	0.164
Zinc (T)	1.47	0.56	0.299
Total phenols	0.86	0.3	0.149
Oil and grease	30	10	3.73
TSS	38	15	7.47
pH	(³)	(³)	(³)

¹ kg/1,000 kkg (pounds per million pounds) of sand reclaimed.

²These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

³Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm³ or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) *Casting Cleaning Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

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BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal poured		
Copper (T)	0.0129	0.0071	
Lead (T)	0.0237	0.0116	
Zinc (T)	0.0437	0.0165	
	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.98	0.37	0.0116

¹ kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal poured		
Copper (T)	0.0129	0.0071	
Lead (T)	0.0353	0.0174	
Zinc (T)	0.0656	0.025	
	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.47	0.56	0.0179

¹ kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(b) *Casting Quench Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/100 kkg (pounds per million pounds) of metal poured		
Copper (T)	0.0138	0.0076	
Lead (T)	0.0252	0.0124	
Zinc (T)	0.0466	0.0176	
	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.53	0.26	0.0071
Zinc (T)	0.98	0.37	0.0124

¹ kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal poured		
Copper (T)	0.0138	0.0076	
Lead (T)	0.0376	0.0185	
Zinc (T)	0.0699	0.0266	
	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.79	0.39	0.0105
Zinc (T)	1.47	0.56	0.019

¹ kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) *Dust Collection Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

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BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm ³ (pounds per billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.398	0.195
Zinc (T)	0.736	0.278
Total phenols	0.646	0.225

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.53	0.26	0.113
Zinc (T)	0.98	0.37	0.195
Total phenols	0.86	0.3	0.15

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.

²These concentrations must be multiplied by the ratio of (0.09/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm ³ (pounds per billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.593	0.293
Zinc (T)	1.1	0.421
Total phenols	0.656	0.225

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.79	0.39	0.165
Zinc (T)	1.47	0.56	0.3
Total phenols	0.86	0.3	0.15

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.

²These concentrations must be multiplied by the ratio of (0.09/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

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

(e) *Investment Casting.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron

where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	5.84	2.86
Zinc (T)	10.8	4.07

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.53	0.26	1.65
Zinc (T)	0.98	0.37	2.86

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

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

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	3.19	1.76
Lead (T)	8.7	4.3
Zinc (T)	16.2	6.17

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.47	0.56	4.41

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

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

(f) *Melting Furnace Scrubber Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

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BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm ³ (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	1.86	0.911
Zinc (T)	3.44	1.3
Total Phenols	3.01	1.05

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.53	0.26	0.526
Zinc (T)	0.98	0.37	0.911
Total Phenols	0.86	0.3	0.701

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed

²These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm ³ (pounds per billion SCF) of air scrubbed	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total Phenols	3.01	1.05

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.79	0.39	0.771
Zinc (T)	1.47	0.56	1.4
Total Phenols	0.86	0.3	0.701

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.

²These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(g) *Mold Cooling Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

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BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.0783	0.0384
Zinc (T)	0.145	0.0546

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.53	0.26	0.0222
Zinc (T)	0.98	0.37	0.0384

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

²These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0428	0.0236
Lead (T)	0.117	0.0576
Zinc (T)	0.217	0.0827

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.79	0.39	0.0325
Zinc (T)	1.47	0.56	0.0591

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

²These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(h) *Slag Quench Operations.* (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

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BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal poured		
Copper (T)	0.0527	0.0291	
Lead (T)	0.0964	0.0473	
Zinc (T)	0.178	0.0673	
	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.53	0.26	0.0273
Zinc (T)	0.98	0.37	0.0473

¹ kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal poured		
Copper (T)	0.0527	0.0291	
Lead (T)	0.144	0.0709	
Zinc (T)	0.267	0.102	
	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.79	0.39	0.04
Zinc (T)	1.47	0.56	0.0728

¹ kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(i) *Wet Sand Reclamation Operations.*

(1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting malleable iron where greater than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed		
Copper (T)	0.217	0.12	
Lead (T)	0.396	0.194	
Zinc (T)	0.732	0.276	
Total Phenols	0.642	0.224	
	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.53	0.26	0.112
Zinc (T)	0.98	0.37	0.194
Total Phenols	0.86	0.3	0.149

¹ kg/1000 kkg (pounds per million pounds) of sand reclaimed.
² These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of sand reclaimed	
Copper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	0.418
Total Phenols	0.642	0.224

PSNS

	Maximum for any 1 day	Maximum for monthly average	Annual average ¹
	(mg/l) ²	(mg/l) ²	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.79	0.39	0.164
Zinc (T)	1.47	0.56	0.299
Total Phenols	0.86	0.3	0.149

¹ kg/1000 kkg (pounds per million pounds) of sand reclaimed.
² These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]