§464.33

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

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

(i) Wet Sand Reclamation Operations.

BPT EFFLUENT LIMITATIONS

| Pollutant or pollutant prop- erty | Maximum for any 1 day | Maximum for monthly aver- age | |
|--|---|---|--|
| | kg/1,000 kkg (p lion pounds) claimed | oounds per mil- of sand re- | |
| Cooper (T) Lead (T) Zinc (T) Total phenols Oil and grease TSS PH | 0.217 0.59 1.1 0.642 22.4 28.4 (¹) | 0.12 0.291 0.418 0.224 7.47 11.2 (¹) | |

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

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

1 kg/1,000 kkg (pounds per million pounds) of sand re-

[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 tech-nology 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

40 CFR Ch. I (7-1-04 Edition)

limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

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

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant property | | Maximum for any 1 day | | Maximum for monthly aver- age | |
|---------------------------------|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| | kg/1,000 kkg (lion pound poured | | pound | | |
| Copper (T) | | | 0.0129 | | 0.0071 |
| Lead (T) | | 0.0237 | | | 0.0116 |
| Zinc (T) | | | 0.0437 | | 0.0165 |
| | for | ximum any 1 day | Maxir for mo avera | nthly | Annual aver- age 1 |
| | (r | ng/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 FEELUENT LIMITATIONS

| Pollutant or pollutant property | Maximum for any 1 day Age | |
|------------------------------------|---|---------------------------|
| | kg/1,000 kkg (pounds per m lion pounds) of met poured | |
| Copper (T) Lead (T) Zinc (T) | 0.0129 0.0353 0.0656 | 0.0071 0.0174 0.025 |

Environmental Protection Agency

| | Maximum for any 1 day | Maximum for monthly average | Annual aver- age 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 | | mum for / 1 day | ximum for hthly aver- age |
|------------------------------------|------|----------------------------|---------------------------------|
| | lior | | s per mil- of metal |
| Copper (T) Lead (T) Zinc (T) | | 0.0138 0.0252 0.0466 | 0.0076 0.0124 0.0176 |
| | | | |

| Maximum for any 1 day | Maximum for monthly average | Annual aver- age ¹ |
|-----------------------------|--|---|
| (mg/l) ² | (mg/l) ² | |
| 0.29 | 0.16 | 0.0031 |
| 0.53 | 0.26 | 0.0071 |
| 0.98 | 0.37 | 0.0124 |
| | day (mg/l) ² 0.29 0.53 | for any 1 day for monthly average (mg/l) ² (mg/l) ² 0.29 0.16 0.53 0.26 |

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 aver- age |
|------------------------------------|---|-------------------------------------|
| | kg/1,000 kkg (pounds per mi lion pounds) of meta poured | |
| Copper (T) Lead (T) Zinc (T) | 0.0138 0.0376 0.0699 | 0.0076 0.0185 0.0266 |

| | Maximum for any 1 day | Maximum for monthly average | Annual aver- age ¹ |
|------------|-----------------------------|-----------------------------------|-------------------------------------|
| | (mg/l) ² | (mg/l) ² | |
| Copper (T) | 0.29 | 0.16 | 0.0031 |
| Lead (T) | 0.79 | 0.39 | 0.0105 |
| Zinc (T) | 1.47 | 0.56 | 0.019 |

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

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

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant prop- erty | Maximum for any 1 day | Maximum for monthly aver- age | |
|--------------------------------------|--|-------------------------------------|--|
| | kg/62.3 million Sm ³ (pounds pe 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 aver- age 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 prop- erty | Maximum for any 1 day | Maximum for monthly aver- age | |
|---|--|-------------------------------------|--|
| | kg/62.3 million Sm ³ (pounds pe billion SCF) of air scrubbed | | |
| Copper (T) Lead (T) Zinc (T) Total phenols | 0.218 0.593 1.1 0.656 | 0.12 0.293 0.421 0.225 | |

§464.33

§464.33

| | Maximum for any 1 day | Maximum for monthly average | Annual aver- age 1 |
|---------------|-----------------------------|-----------------------------------|--------------------------|
| Copper (T) | (mg/l) ² 0.29 | (mg/l) ² 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 prop- erty | | | mum for 1 day | | nthly aver- age |
|--------------------------------------|---------------------------------------|--------------------|-----------------------------|------|---------------------|
| | kg/1,000 kkg (p million pounds) of | | | | |
| Copper (T) | | | 3.19 | | 1.76 |
| Lead (T) | | | 5.84 | | 2.86 |
| Zinc (T) | | | 10.8 | | 4.07 |
| | for a | mum Iny 1 ay | Maximu for mon averag | thly | Annual average 1 |
| Coppor (T) | | g/l)² 0.29 | (mg/l) 0.1 | | 0.716 |
| Copper (T) Lead (T) | | 0.29 0.53 | 0.1 | | 1.65 |
| Zinc (T) | | 0.98 0.98 | 0.2 | | 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 waste-water 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 prop- erty | Maximum for any 1 day | Maximum for monthly aver- age | |
|--------------------------------------|---|-------------------------------------|--|
| | kg/1,000 kkg (pounds per million pounds) of metal poured | | |
| Copper (T) Lead (T) Zinc (T) | 3.19 8.7 16.2 | 1.76 4.3 6.17 | |

40 CFR Ch. I (7-1-04 Edition)

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

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

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

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant prop- erty | | | mum for 1 day | | aximum for nthly aver- age |
|--------------------------------------|-------|-------------|--------------------------|-----|----------------------------------|
| | | | 3 million S on SCF) o | | pounds per scrubbed |
| Copper (T) | | | 1.02 | | 0.561 |
| Lead (T) Zinc (T) | | | 1.86 | | 0.911 |
| | | 3.44 | | | 1.3 |
| Total Phenols | | | 3.01 | | 1.05 |
| | Maxi | mum | Maxim | | |
| | for a | iny 1 ay | for mon averag | hly | Annual average ¹ |
| | (mg | g/l)2 | (mg/l) | 2 | |
| Copper (T) | | 0.29 | 0.1 | 6 | 0.228 |
| Lead (T) | | 0.53 | 0.2 | 6 | 0.526 |
| Zinc (T) | (| 0.98 | 0.3 | 7 | 0.911 |

0.86 $^1\,kg/62.3$ million Sm 3 (pounds per billion SCF) of air ²These concentrations must be multiplied by the ratio of

0.3

0.701

Total Phenols

(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 prop- erty | Maximum for any 1 day | Maximum for monthly aver- age | |
|--------------------------------------|--|-------------------------------------|--|
| | kg/62.3 million Sm ³ (pounds pe 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 | |

Environmental Protection Agency

| | 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.

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant p | roperty | ty Maximum for monthly | | ximum for hthly aver- age | |
|--------------------------|-----------------|------------------------|--------------------|---------------------------------|-------------------------|
| | | lior | | | ds per mil- of metal |
| Copper (T) Lead (T) | | | 0.0428 0.0783 | | 0.0236 |
| Zinc (T) | | | 0.145 | | 0.0546 |
| | Maxim for an | | Maximu for mont | | Annual aver- |

| | for any 1 day | for monthly average | aver- age1 |
|------------|---------------------|------------------------|---------------|
| | (mg/l) ² | (mg/l) 2 | |
| Copper (T) | 0.29 | 0.16 | 0.0096 |
| Lead (T) | 0.53 | 0.26 | 0.0222 |
| Zinc (T) | 0.98 | 0.37 | 0.0384 |
| | | | |

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

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

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant property | Maximum for any 1 day Age | | |
|------------------------------------|---|----------------------------|--|
| | kg/1,000 kkg (pounds per mi lion pounds) of meta poured | | |
| Copper (T) Lead (T) Zinc (T) | 0.0428 0.117 0.217 | 0.0236 0.0576 0.0827 | |

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

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

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

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average | |
|---------------------------------|--|-----------------------------|--|
| | kg/1,000 kkg (pounds per n lion pounds) of me poured | | |
| Copper (T) | 0.0527 | 0.0291 | |
| Lead (T) | 0.0964 | 0.0473 | |
| Zinc (T) | 0.178 0.0 | | |

| | Maximum for any 1 day | Maximum for monthly average | Annual aver- age 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 |

 $^1\,\text{Kg/1,000}$ kkg (pounds per million pounds) of metal poured. $^2\,\text{These}$ 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

| Maximum for any 1 day | | |
|--|---|--|
| kg/1,000 kkg (pounds per mil lion pounds) of meta poured | | |
| 0.0527 | 0.0291 | |
| 0.144 | 0.0709 | |
| 0.267 | 0.102 | |
| | any 1 day kg/1,000 kkg (µ lion pound poured 0.0527 0.144 | |

§464.33

§464.34

| | Maximum for any 1 day | Maximum for monthly average | Annual aver- age 1 |
|------------|-----------------------------|-----------------------------------|--------------------------|
| Copper (T) | (mg/l) ² 0.29 | (mg/l) ² 0.16 | 0.0118 |
| Lead (T) | 0.79 | 0.39 | 0.04 |
| Zinc (T) | 1.47 | 0.56 | 0.0728 |

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

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

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant prop- erty | | | | | Maximum for monthly aver- age | |
|--------------------------------------|---------------|------|-----------------------------|-------|-------------------------------------|--|
| | | lion | 00 kkg (p pounds) med | | ls per mil- sand re- | |
| | | | | | | |
| Copper (T) Lead (T) Zinc (T) | | | 0.217 | | 0.12 | |
| | | | 0.396 | | 0.194 | |
| | | | 0.732 | 0.276 | | |
| Total Phenols | | | 0.642 | 0.224 | | |
| | | 1 | | | | |
| | Maxi for a | mum | Maximu | | Annual | |

| | for any 1 day | for monthly average | 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.

claimed. 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.

40 CFR Ch. I (7-1-04 Edition)

BAT EFFLUENT LIMITATIONS

| Pollutant or pollutant prop- erty | Maximum for any 1 day | Maximum for monthly aver- age | |
|---|--|-------------------------------------|--|
| | kg/1,000 kkg (pounds per mil- lion pounds) of sand re- claimed | | |
| Copper (T) Lead (T) Zinc (T) Total Phenols | 0.217 0.59 1.1 0.642 | 0.12 0.291 0.418 0.224 | |

| PS | Ν | S |
|----|---|---|
|----|---|---|

| Maximum for any 1 day | Maximum for monthly average | Annual aver- age 1 |
|-----------------------------|---|---|
| (mg/l) ² | (mg/l) 2 | |
| 0.29 | 0.16 | 0.0485 |
| 0.79 | 0.39 | 0.164 |
| 1.47 | 0.56 | 0.299 |
| 0.86 | 0.3 | 0.149 |
| | for any 1 day (mg/l) ² 0.29 0.79 1.47 | for any 1 day for monthly average (mg/l) ² (mg/l) ² 0.29 0.16 0.79 0.39 1.47 0.56 |

¹ kg/1000 kkg (pounds per million pounds) of sand reclaimed.

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

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

§464.34 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm³ or lb/billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

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