Chapter NR 253

COPPER FORMING

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NR 253.01 Purpose. The purpose of this chapter is to establish effluent limitations, standards of performance, and pretreatment standards for discharges of process wastes from the copper forming point source category and its subcategories.

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.02 Applicability. This chapter applies to discharges resulting from hot rolling, cold rolling, drawing, extrusion, and forging of copper and copper alloys and the associated ancillary operations. This chapter does not apply to the forming of precious metals, which is regulated by 40 CFR 471, or the casting of copper or copper alloys, which is regulated by ch. NR 256.

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.03 General definitions. The following definitions are applicable to the terms used in this chapter. Definitions of other terms and abbreviations are set forth in ss. NR 205.03, 205.04 and 211.03.

c1d XAlkaline cleaning bathY means a bath consisting of an alkaline cleaning solution through which a workpiece is processed.

c2d XAlkaline cleaning rinseY means a rinse following an alkaline cleaning bath through which a workpiece is processed. A rinse consisting of a series of rinse tanks is considered as a single rinse.

c3d XAlkaline cleaning rinse for forged partsY means a rinse following an alkaline cleaning bath through which a forged part is processed. A rinse consisting of a series of rinse tanks is considered as a single rinse.

c4d XAncillary operationY means an operation, such as surface and heat treatment, hydrotesting, sawing, and surface coating, associated with a primary forming operation.

c5d XAnnealing with oilY means the use of oil to quench a workpiece as it passes from an annealing furnace.

c6d XAnnealing with waterY means the use of a water spray or bath, of which water is the major constituent, to quench a workpiece as it passes from an annealing furnace.

c7d XBeryllium copper alloyY means any copper alloy that is alloyed to contain 0.10% or greater beryllium.

c8d XCold rollingY means the process of rolling a workpiece below the recrystallization temperature of the copper or copper alloy.

c9d XDrawingY means pulling the workpiece through a die or succession of dies to reduce the diameter or alter its shape.

c10d XExisting sourceY means any point source, except for a new source as defined in sub. c16d, from which pollutants may be discharged either into waters of the state or into a publicly owned treatment works.

c11d XExtrusionY means the application of pressure to a copper workpiece, forcing the copper to flow through a die orifice.

c12d XExtrusion heat treatmentY means the spray application of water to a workpiece for the purpose of heat treatment immediately following extrusion.

c13d XHot rollingY means the process of rolling a workpiece above the recrystallization temperature of the copper or copper alloy.

c14d XHeat treatmentY means the application of heat to or the removal of heat from a workpiece to change the physical properties of the metal.

c15d XMiscellaneous waste streamY means hydrotesting, sawing, surface milling, and maintenance wastestreams when they are related to the forming of copper.

c16d XNew sourceY, as defined for new source performance standards and pretreatment standards for new sources, means any point source for which construction commenced after November 12, 1982 and from which pollutants are or may be discharged directly to the waters of the state or to a publicly owned treatment works.

c17d XOff kilogramY and Xoff poundY mean the mass of copper or copper alloy removed from a forming or ancillary operation at the end of a process cycle for transfer to a different machine or process.

c18d XPickling bathY means a chemical bath, other than an alkaline cleaning bath, through which a workpiece is processed.

c19d XPickling fume scrubberY means an air pollution control device which removes particulates and fumes from air above a pickling bath by entraining the pollutants in water.

c20d XPickling rinseY means a rinse, other than an alkaline cleaning rinse, through which a workpiece is processed. A rinse consisting of a series of rinse tanks is considered as a single rinse.

c21d XPickling rinse for forged partsY means a rinse, other than an alkaline cleaning rinse, through which forged parts are processed. A rinse consisting of a series of tanks is considered as a single rinse.

c22d XPrecious metalsY means gold, platinum, palladium, silver, and their alloys when the alloy contains 30% or greater percent by weight of precious metals.

c23d XPrimary forming operationY means hot rolling, cold rolling, drawing, extrusion, and forging of copper and copper alloys.

c24d XRollingY means reducing the thickness or diameter of a workpiece by passing it between rollers.

c25d XSolution heat treatmentY means introducing a workpiece into a quench bath for purposes of heat treatment.

c26d XSpent lubricantY means water or an oil and water mixture which has been used in forming operations to reduce friction, heat, and wear and which is discharged.

c27d XSurface coatingY means the process of coating a copper workpiece, as well as the associated surface washing and flattening.

c28d XTotal toxic organicsY and XTTOY mean the sum of the masses or concentrations of each of the following organic compounds which is found at a concentration greater than 0.010 mg{l:

anthracene
benzene
chloroform
2,6-dinitrotoluene
ethylbenzene
methylene chloride
naphthalene
N-nitrosodiphenylamine
phenanthrene
toluene
1,1,1-trichloroethane
trichlorethylene.

c29d XTumbling or burnishingY means polishing, deburring, removing sharp corners, and generally smoothing parts for both cosmetic and functional purposes and washing the finished parts and cleaning the abrasive media.

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.04 Monitoring and reporting requirements. The following special monitoring and reporting requirements apply to all facilities subject to this chapter:

c1d The Xmonthly averageY regulatory values shall be the basis for the monthly average discharge in direct discharge permits and for pretreatment standards. Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

c2d As an alternate monitoring procedure for TTO, indirect dischargers may monitor for oil and grease and meet the alternate monitoring standards for oil and grease established for PSES and PSNS. Any indirect discharger meeting the alternate monitoring standards shall be considered to meet the TTO standard.

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.05 Compliance dates. c1d Any existing source subject to this chapter which discharges to waters of the state shall achieve:

cad The effluent limitations representing BPT by July 1, 1977; and

cbd The effluent limitations representing BAT by July 1, 1984.

c2d Any new source subject to this chapter which discharges to waters of the state shall achieve NSPS at the commencement of discharge.

c3d Any existing source subject to this chapter which introduces process wastewater pollutants into a POTW shall achieve PSES by August 15, 1986.

c4d Any new source subject to this chapter which introduces process wastewater pollutants into a POTW shall achieve PSNS at the commencement of discharge.

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

Subchapter I — The Copper Forming Subcategory

NR 253.10 Applicability; description of the copper forming subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the forming of copper and copper alloys except beryllium copper alloys.

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. Except as provided in 40 CFR 125.30 to 125.32, any existing source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BPT:

Table 1
Hot Rolling Spent Lubricant

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy hot rolled	
Chromium	0.045	0.018
Copper	0.195	0.103
Lead	0.015	0.013
Nickel	0.197	0.130
Zinc	0.150	0.062
Oil and grease	2.060	1.236
TSS	4.223	2.008
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 2
Cold Rolling Spent Lubricant

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy cold rolled	
Chromium	0.166	0.068
Copper	0.720	0.379
Lead	0.056	0.049
Nickel	0.727	0.481
Zinc	0.553	0.231
Oil and grease	7.580	4.548
TSS	15.539	7.390
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 3
Drawing Spent Lubricant c1d

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy drawn	
Chromium	0.037	0.015
Copper	0.161	0.085
Lead	0.012	0.011
Nickel	0.163	0.107
Zinc	0.124	0.051
Oil and grease	1.700	1.020
TSS	3.485	1.657
pH	c2d	c2d

c1d These effluent limitations are applicable only to those plants which actually discharge the drawing spent lubricant wastestream at the copper forming site. If these wastewaters are hauled off-site for disposal or are otherwise not discharged at the copper forming site, these limitations are neither applicable nor allowable.

c2d Within the range of 7.5 to 10.0 at all times

Table 4
Solution Heat Treatment

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	1.118	0.457
Copper	4.827	2.541
Lead	0.381	0.330
Nickel	4.878	3.227
Zinc	3.709	1.550
Oil and grease	50.820	30.492
TSS	104.181	49.549
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 5
Extrusion Heat Treatment

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.00088	0.00036
Copper	0.003	0.002
Lead	0.0003	0.00026
Nickel	0.003	0.002
Zinc	0.002	0.001
Oil and grease	0.040	0.024
TSS	0.082	0.039
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 6
Annealing With Water

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with water	
Chromium	2.439	1.020
Copper	10.767	5.667
Lead	0.850	0.736
Nickel	10.880	7.197
Zinc	8.273	3.456
Oil and grease	113.340	68.004
TSS	232.347	110.506
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 7
Annealing With Oil

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
Oil and grease	0	0
TSS	0	0
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 8
Alkaline Cleaning Rinse

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	1.854	0.758
Copper	8.006	4.214
Lead	0.632	0.547
Nickel	8.090	5.351
Zinc	6.152	2.570
Oil and grease	84.280	50.568
TSS	172.774	82.173
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 9
Alkaline Cleaning Rinse For Forged Parts

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy forged parts alkaline cleaned	
Chromium	5.562	2.275
Copper	24.019	12.642
Lead	1.896	1.643
Nickel	24.272	16.055
Zinc	18.457	7.711
Oil and grease	252.840	151.704
TSS	518.322	246.519
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 10
Alkaline Cleaning Bath

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kgcpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	0.020	0.0084
Copper	0.089	0.046
Lead	0.0070	0.0060
Nickel	0.089	0.059
Zinc	0.068	0.028
Oil and grease	0.93	0.56
TSS	1.91	0.91
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 11
Pickling Rinse

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	1.593	0.651
Copper	6.881	3.622
Lead	0.543	0.470
Nickel	6.954	4.599
Zinc	5.288	2.209
Oil and grease	72.440	43.464
TSS	148.502	70.629
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 12
Pickling Rinse For Forged Parts

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy forged parts pickled	
Chromium	1.723	0.705
Copper	7.444	3.918
Lead	0.587	0.509
Nickel	7.522	4.975
Zinc	5.720	2.389
Oil and grease	78.360	47.016
TSS	160.638	76.401
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 13
Pickling Bath

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070
Oil and grease	2.320	1.392
TSS	4.756	2.262
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 14
Pickling Fume Scrubber

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381
Oil and grease	12.520	7.512
TSS	25.666	12.207
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 15
Tumbling or Burnishing

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy tumbled or burnished	
Chromium	0.256	0.104
Copper	1.107	0.583
Lead	0.087	0.075
Nickel	1.119	0.740
Zinc	0.851	0.355
Oil and grease	11.660	6.996
TSS	23.903	11.368
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 16
Surface Coating

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy surface coated	
Chromium	0.326	0.133
Copper	1.411	0.743
Lead	0.111	0.096
Nickel	1.426	0.943
Zinc	1.084	0.453
Oil and grease	14.680	8.916
TSS	30.463	14.488
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 17
Miscellaneous Waste Streams

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy formed	
Chromium	0.009	0.003
Copper	0.041	0.021
Lead	0.003	0.002
Nickel	0.041	0.027
Zinc	0.031	0.013
Oil and grease	0.436	0.261
TSS	0.893	0.425
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. Except as provided in 40 CFR 125.30 to 125.32, any existing source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BAT:

Table 18
Hot Rolling Spent Lubricant

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy hot rolled	
Chromium	0.045	0.018
Copper	0.195	0.103
Lead	0.015	0.013
Nickel	0.197	0.130
Zinc	0.150	0.062

Table 19
Cold Rolling Spent Lubricant

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy cold rolled	
Chromium	0.166	0.068
Copper	0.720	0.379
Lead	0.056	0.049
Nickel	0.727	0.481
Zinc	0.553	0.231

Table 20
Drawing Spent Lubricant

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy drawn	
Chromium	0.037	0.015
Copper	0.161	0.085
Lead	0.012	0.011
Nickel	0.163	0.107
Zinc	0.124	0.051

Table 21
Solution Heat Treatment

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.284	0.116
Copper	1.227	0.646
Lead	0.096	0.083
Nickel	1.240	0.820
Zinc	0.943	0.394

Table 22
Extrusion Heat Treatment

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.00088	0.00036
Copper	0.003	0.0020
Lead	0.0003	0.00026
Nickel	0.003	0.002
Zinc	0.002	0.001

Table 23
Annealing With Water

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with water	
Chromium	0.545	0.223
Copper	2.356	1.240
Lead	0.186	0.161
Nickel	2.380	1.574
Zinc	1.810	0.756

Table 24
Annealing With Oil

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0

Table 25
Alkaline Cleaning Rinse

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	1.854	0.758
Copper	8.006	4.214
Lead	0.632	0.547
Nickel	8.090	5.351
Zinc	6.152	2.570

Table 26
Alkaline Cleaning Rinse For Forged Parts

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy forged parts alkaline cleaned	
Chromium	5.562	2.275
Copper	24.019	12.642
Lead	1.896	1.643
Nickel	24.272	16.055
Zinc	18.457	7.711

Table 27
Alkaline Cleaning Bath

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	0.020	0.0084
Copper	0.088	0.046
Lead	0.0070	0.0060
Nickel	0.089	0.059
Zinc	0.068	0.028

Table 28
Pickling Rinse

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.574	0.235
Copper	2.481	1.306
Lead	0.195	0.169
Nickel	2.507	1.658
Zinc	1.906	0.796

Table 29
Pickling Rinse For Forged Parts

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy forged parts pickled	
Chromium	1.723	0.705
Copper	7.444	3.918
Lead	0.587	0.509
Nickel	7.522	4.975
Zinc	5.720	2.389

Table 30
Pickling Bath

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070

Table 31
Pickling Fume Scrubber

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381

Table 32
Tumbling or Burnishing

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy tumbled or burnished	
Chromium	0.256	0.104
Copper	1.107	0.583
Lead	0.087	0.075
Nickel	1.119	0.740
Zinc	0.851	0.355

Table 33
Surface Coating

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy surface coated	
Chromium	0.326	0.133
Copper	1.411	0.743
Lead	0.111	0.096
Nickel	1.426	0.943
Zinc	1.084	0.453

Table 34
Miscellaneous Waste Streams

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy formed	
Chromium	0.009	0.003
Copper	0.041	0.021
Lead	0.003	0.002
Nickel	0.041	0.027
Zinc	0.031	0.013

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.13 New source performance standards. The discharge of process wastewater pollutants from any new source subject to this subchapter may not exceed the following NSPS:

Table 35
Hot Rolling Spent Lubricant

NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy hot rolled	
Chromium	0.038	0.015
Copper	0.131	0.062
Lead	0.010	0.0092
Nickel	0.056	0.038
Zinc	0.105	0.043
Oil and grease	1.030	1.030
TSS	1.545	1.236
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 36
Cold Rolling Spent Lubricant

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy cold rolled	
Chromium	0.140	0.056
Copper	0.485	0.231
Lead	0.037	0.034
Nickel	0.208	0.140
Zinc	0.386	0.159
Oil and grease	3.790	3.790
TSS	5.685	4.548
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 37
Drawing Spent Lubricant

	NSPS	
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy drawn	
Chromium	0.031	0.012
Copper	0.108	0.051
Lead	0.0085	0.0076
Nickel	0.046	0.031
Zinc	0.086	0.035
Oil and grease	0.85	0.85
TSS	1.275	1.020
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 38
Solution Heat Treatment

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.239	0.096
Copper	0.826	0.394
Lead	0.064	0.058
Nickel	0.355	0.239
Zinc	0.658	0.271
Oil and grease	6.460	6.460
TSS	9.690	7.752
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 39
Extrusion Heat Treatment

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.00074	0.00030
Copper	0.0020	0.0010
Lead	0.00020	0.00018
Nickel	0.0010	0.00074
Zinc	0.0020	0.00084
Oil and grease	0.020	0.020
TSS	0.030	0.024
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 40
Annealing With Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with water	
Chromium	0.458	0.186
Copper	1.587	0.756
Lead	0.124	0.111
Nickel	0.682	0.458
Zinc	1.264	0.520
Oil and grease	12.400	12.400
TSS	18.600	14.880
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 41
Annealing With Oil

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
Oil and grease	0	0
TSS	0	0
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 42
Alkaline Cleaning Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	1.559	0.632
Copper	5.393	2.570
Lead	0.421	0.379
Nickel	2.317	1.559
Zinc	4.298	1.769
Oil and grease	42.140	42.140
TSS	63.210	50.568
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 43
Alkaline Cleaning Rinse For Forged Parts

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	4.677	1.896
Copper	16.181	7.711
Lead	1.264	1.137
Nickel	6.953	4.677
Zinc	12.894	5.309
Oil and grease	126.420	126.420
TSS	189.630	151.704
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 44
Alkaline Cleaning Bath

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	0.017	0.0070
Copper	0.059	0.028
Lead	0.0046	0.0042
Nickel	0.025	0.017
Zinc	0.047	0.019
Oil and grease	0.46	0.46
TSS	0.70	0.56
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 45
Pickling Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.216	0.087
Copper	0.748	0.356
Lead	0.058	0.052
Nickel	0.321	0.216
Zinc	0.596	0.245
Oil and grease	5.850	5.850
TSS	8.775	7.020
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 46
Pickling Rinse For Forged Parts

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy forged parts pickled	
Chromium	0.649	0.263
Copper	2.246	1.070
Lead	0.175	0.157
Nickel	0.965	0.649
Zinc	1.790	0.737
Oil and grease	17.550	17.550
TSS	26.325	21.060
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 47
Pickling Bath

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.042	0.017
Copper	0.148	0.070
Lead	0.011	0.010
Nickel	0.063	0.042
Zinc	0.118	0.048
Oil and grease	1.160	1.160
TSS	1.740	1.392
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 48
Pickling Fume Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.231	0.093
Copper	0.801	0.381
Lead	0.062	0.056
Nickel	0.344	0.231
Zinc	0.638	0.262
Oil and grease	6.260	6.260
TSS	9.390	7.512
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 49
Tumbling or Burnishing

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy tumbled or burnished	
Chromium	0.215	0.087
Copper	0.746	0.355
Lead	0.058	0.052
Nickel	0.320	0.215
Zinc	0.594	0.244
Oil and grease	5.830	5.830
TSS	8.745	6.996
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 50
Surface Coating

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy surface coated	
Chromium	0.274	0.111
Copper	0.951	0.453
Lead	0.074	0.066
Nickel	0.408	0.274
Zinc	0.757	0.312
Oil and grease	7.430	7.430
TSS	11.145	8.916
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

Table 51
Miscellaneous Waste Streams

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy formed	
Chromium	0.008	0.003
Copper	0.027	0.013
Lead	0.0021	0.0019
Nickel	0.011	0.008
Zinc	0.022	0.009
Oil and grease	0.218	0.218
TSS	0.327	0.261
pH	c1d	c1d

c1d Within the range of 7.5 to 10.0 at all times

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.14 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any existing source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

Table 52
Hot Rolling Spent Lubricant

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy hot rolled	
Chromium	0.045	0.018
Copper	0.195	0.103
Lead	0.015	0.013
Nickel	0.197	0.130
Zinc	0.150	0.062
TTO	0.066	0.035
Oil and greasec1d	2.060	1.236

c1d For alternate monitoring

Table 53
Cold Rolling Spent Lubricant

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy cold rolled	
Chromium	0.166	0.068
Copper	0.720	0.379
Lead	0.056	0.049
Nickel	0.727	0.481
Zinc	0.553	0.231
TTO	0.246	0.128
Oil and greasec1d	7.580	4.548

c1d For alternate monitoring

Table 54
Drawing Spent Lubricantc1d

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy drawn	
Chromium	0.037	0.015
Copper	0.161	0.085
Lead	0.012	0.011
Nickel	0.163	0.107
Zinc	0.124	0.051
TTO	0.055	0.028
Oil and greasec2d	1.700	1.020

c1d These standards are applicable only to those plants which actually discharge the drawing spent lubricant waste stream at the copper forming site. If these wastewaters are hauled off-site for disposal or are otherwise not discharged at the copper forming site, these standards are neither applicable nor allowable.

c2d For alternate monitoring

Table 55
Solution Heat Treatment

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.284	0.116
Copper	1.227	0.646
Lead	0.096	0.083
Nickel	1.240	0.820
Zinc	0.943	0.394
TTO	0.419	0.219
Oil and grease[c1d]	12.920	7.752

c1d For alternate monitoring

Table 56
Extrusion Heat Treatment

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.00088	0.00036
Copper	0.0030	0.0020
Lead	0.00030	0.00026
Nickel	0.0030	0.0020
Zinc	0.0020	0.0010
TTO	0.0010	0.00068
Oil and greasec1d	0.040	0.024

c1d For alternate monitoring

Table 57
Annealing With Water

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with water	
Chromium	0.545	0.223
Copper	2.356	1.240
Lead	0.186	0.161
Nickel	2.380	1.574
Zinc	1.810	0.756
TTO	0.806	0.421
Oil and greasec1d	24.800	14.880

c1d For alternate monitoring

Table 58
Annealing With Oil

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with oil	
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
TTO	0	0
Oil and greasec1d	0	0

c1d For alternate monitoring

Table 59
Alkaline Cleaning Rinse

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	1.854	0.758
Copper	8.006	4.214
Lead	0.632	0.547
Nickel	8.090	5.351
Zinc	6.152	2.570
TTO	2.739	1.432
Oil and greasec1d	84.280	50.568

c1d For alternate monitoring

Table 60
Alkaline Cleaning Rinse For Forged Parts

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	5.562	2.275
Copper	24.019	12.642
Lead	1.896	1.643
Nickel	24.272	16.055
Zinc	18.457	7.711
TTO	8.217	4.298
Oil and greasec1d	252.840	151.704

c1d For alternate monitoring

Table 61
Alkaline Cleaning Bath

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	0.020	0.0084
Copper	0.088	0.046
Lead	0.0070	0.0060
Nickel	0.089	0.059
Zinc	0.068	0.028
TTO	0.030	0.015
Oil and greasec1d	0.93	0.56

c1d For alternate monitoring

Table 62
Pickling Rinse

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.574	0.235
Copper	2.481	1.306
Lead	0.195	0.169
Nickel	2.507	1.658
Zinc	1.906	0.796
TTO	0.848	0.444
Oil and grease	26.120	15.672

c1d For alternate monitoring

Table 63
Pickling Rinse For Forged Parts

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy forged parts pickled	
Chromium	1.723	0.705
Copper	7.444	3.918
Lead	0.587	0.509
Nickel	7.522	4.975
Zinc	5.720	2.389
TTO	2.546	1.332
Oil and greasec1d	78.360	47.016

c1d For alternate monitoring

Table 64
Pickling Bath

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070
TTO	0.075	0.039
Oil and greasec1d	2.320	1.392

c1d For alternate monitoring

Table 65
Pickling Fume Scrubber

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381
TTO	0.406	0.212
Oil and greasec1d	12.520	7.512

c1d For alternate monitoring

Table 66
Tumbling or Burnishing

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy tumbled or burnished	
Chromium	0.256	0.104
Copper	1.107	0.583
Lead	0.087	0.075
Nickel	1.119	0.740
Zinc	0.851	0.355
TTO	0.378	0.198
Oil and greasec1d	11.660	6.996

c1d For alternate monitoring

Table 67
Surface Coating

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy surface coated	
Chromium	0.326	0.133
Copper	1.411	0.743
Lead	0.111	0.096
Nickel	1.426	0.943
Zinc	1.084	0.453
TTO	0.482	0.252
Oil and greasec1d	14.860	8.916

c1d For alternate monitoring

Table 68
Miscellaneous Waste Streams

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy formed	
Chromium	0.009	0.003
Copper	0.041	0.021
Lead	0.003	0.002
Nickel	0.041	0.027
Zinc	0.031	0.013
TTO	0.014	0.007
Oil and greasec1d	0.436	0.261

c1d For alternate monitoring

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

NR 253.15 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any existing [new] source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 69
Hot Rolling Spent Lubricant

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy hot rolled	
Chromium	0.038	0.015
Copper	0.131	0.062
Lead	0.010	0.0092
Nickel	0.056	0.038
Zinc	0.105	0.043
TTO	0.035	0.035
Oil and greasec1d	1.030	1.030

c1d For alternate monitoring

Table 70
Cold Rolling Spent Lubricant

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy cold rolled	
Chromium	0.140	0.056
Copper	0.485	0.231
Lead	0.037	0.034
Nickel	0.208	0.140
Zinc	0.386	0.159
TTO	0.128	0.128
Oil and greasec1d	3.790	3.790

c1d For alternate monitoring

Table 71
Drawing Spent Lubricantc1d

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy drawn	
Chromium	0.031	0.012
Copper	0.108	0.051
Lead	0.0085	0.0076
Nickel	0.046	0.031
Zinc	0.086	0.035
TTO	0.028	0.028
Oil and greasec2d	0.850	0.850

c1d These standards are applicable only to those plants which actually discharge the drawing spent lubricant waste stream at the copper forming site. If these wastewaters are hauled off-site for disposal or are otherwise not discharged at the copper forming site, these standards are neither applicable nor allowable.
c2d For alternate monitoring

Table 72
Solution Heat Treatment

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.239	0.096
Copper	0.826	0.394
Lead	0.064	0.058
Nickel	0.355	0.239
Zinc	0.658	0.271
TTO	0.219	0.219
Oil and grease[c1d]	6.460	6.460

c1d For alternate monitoring

Table 73
Extrusion Heat Treatment

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy heat treated	
Chromium	0.00074	0.00030
Copper	0.0020	0.0010
Lead	0.00020	0.00018
Nickel	0.0010	0.00074
Zinc	0.0020	0.00084
TTO	0.00068	0.00068
Oil and grease[c1d]	0.020	0.020

c1d For alternate monitoring

Table 74
Annealing With Water

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with water	
Chromium	0.458	0.186
Copper	1.587	0.756
Lead	0.124	0.111
Nickel	0.682	0.458
Zinc	1.264	0.520
TTO	0.421	0.421
Oil and grease[c1d]	12.400	12.400

c1d For alternate monitoring

Table 75
Annealing With Oil

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy annealed with oil	
Chromium	0	0
Copper	0	0
Lead	0	0
Nickel	0	0
Zinc	0	0
TTO	0	0
Oil and grease[c1d]	0	0

c1d For alternate monitoring

Table 76
Alkaline Cleaning Rinse

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	1.559	0.632
Copper	5.393	2.570
Lead	0.421	0.379
Nickel	2.317	1.559
Zinc	4.298	1.769
TTO	1.432	1.432
Oil and grease[c1d]	42.140	42.140

c1d For alternate monitoring

Table 77
Alkaline Cleaning Rinse For Forged Parts

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	4.677	1.896
Copper	16.181	7.711
Lead	1.264	1.137
Nickel	6.953	4.677
Zinc	12.894	5.309
TTO	4.298	4.298
Oil and grease[c1d]	126.420	126.420

c1d For alternate monitoring

Table 78
Alkaline Cleaning Bath

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy alkaline cleaned	
Chromium	0.017	0.0070
Copper	0.059	0.028
Lead	0.0046	0.0042
Nickel	0.025	0.017
Zinc	0.047	0.019
TTO	0.015	0.015
Oil and grease[c1d]	0.46	0.46

c1d For alternate monitoring

Table 79
Pickling Rinse

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.216	0.087
Copper	0.748	0.356
Lead	0.058	0.052
Nickel	0.321	0.216
Zinc	0.596	0.245
TTO	0.198	0.198
Oil and grease[c1d]	5.850	5.850

c1d For alternate monitoring

Table 80
Pickling Rinse For Forged Parts

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy forged parts pickled	
Chromium	0.649	0.263
Copper	2.246	1.070
Lead	0.175	0.157
Nickel	0.965	0.649
Zinc	1.790	0.737
TTO	0.596	0.596
Oil and grease[c1d]	17.550	17.550

c1d For alternate monitoring

Table 81
Pickling Bath

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.042	0.017
Copper	0.148	0.070
Lead	0.011	0.010
Nickel	0.063	0.042
Zinc	0.118	0.048
TTO	0.039	0.039
Oil and grease[c1d]	1.160	1.160

c1d For alternate monitoring

Table 82
Pickling Fume Scrubber

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy pickled	
Chromium	0.231	0.093
Copper	0.801	0.381
Lead	0.062	0.056
Nickel	0.344	0.231
Zinc	0.638	0.262
TTO	0.212	0.212
Oil and grease[c1d]	6.260	6.260

c1d For alternate monitoring

Table 83
Tumbling or Burnishing

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy tumbled or burnished	
Chromium	0.215	0.087
Copper	0.746	0.355
Lead	0.058	0.052
Nickel	0.320	0.215
Zinc	0.594	0.244
TTO	0.198	0.198
Oil and grease[c1d]	5.830	5.830

c1d For alternate monitoring

Table 84
Surface Coating

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy surface coated	
Chromium	0.274	0.111
Copper	0.951	0.453
Lead	0.074	0.066
Nickel	0.408	0.274
Zinc	0.757	0.312
TTO	0.252	0.252
Oil and grease[c1d]	7.430	7.430

c1d For alternate monitoring

Table 85
Miscellaneous Waste Streams

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg{off-kg cpounds per 1,000,000 off-poundsd of copper or copper alloy formed	
Chromium	0.008	0.003
Copper	0.027	0.013
Lead	0.0021	0.0019
Nickel	0.011	0.008
Zinc	0.022	0.009
TTO	0.007	0.007
Oil and grease[c1d]	0.218	0.218

c1d For alternate monitoring

History: Cr. Register, May, 1989, No. 401, eff. 6-1-89.

Note: The Wisconsin administrative code corresponds to the code of federal regulations as cross referenced in the following table:

State Code	Corresponding Federal Regulation
s. NR 205.03	40 CFR 401.11
s. NR 205.04	40 CFR 401.11
ch. NR 211	40 CFR Part 403
s. NR 211.03	40 CFR 403.03
s. NR 211.13	40 CFR 403.7
s. NR 211.14	40 CFR 403.13
ch. NR 253	40 CFR Part 468
ch. NR 256	40 CFR Part 464