State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

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CR 88-154

STATE OF WISCONSIN)
)
DEPARTMENT OF NATURAL RESOURCES)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Bruce B. Braun, Deputy Secretary of the Department of Natural Resources and custodian of the official records of said Department, do hereby certify that the annexed copy of Natural Resources Board Order No. WW-35-88 was duly approved and adopted by this Department on December 15, 1988. I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Natural Resources Building in the City of Madison, this 13th day of February, 1989.

Bruce B. Braun, Deputy Secretary

(SEAL)

6-1-89

ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
CREATING RULES

IN THE MATTER of creating ch. NR 253 of the Wisconsin Administrative Code pertaining to effluent limitations and pretreatment standards for the copper forming industry	WW-35-88

Analysis Prepared by Department of Natural Resources

Statutory authority: ss. 147.01, 147.035, 147.04, 147.06, 147.07, and 227.11(2)(a), Stats. Statutes interpreted: ss. 147.035, 147.04, 147.06, and 147.07, Stats.

The Federal Water Pollution Control Act amendments of 1972 established a comprehensive program to "restore and maintain the chemical, physical and biological integrity of the Nation's waters" (section 101(a)). To implement the act, the U.S. Environmental Protection Agency issues effluent limitations, pretreatment standards, and new source performance standards for industrial wastewater discharges. The Clean Water Act of 1977 expanded the federal pollution control program by setting different types of effluent limitations: "best practicable technology" (BPT), "best available technology" (BAT), "best conventional technology" (BCT), "new source performance standards" (NSPS), "pretreatment standards for existing sources" (PSES), and "pretreatment standards for new sources" (PSNS). The Clean Water Act stressed control of toxic pollutants, including 65 "priority" pollutants and classes of pollutants from 21 major industries.

The Wisconsin Department of Natural Resources instituted the Wisconsin pollutant discharge elimination system in 1976. This system includes regulating effluent discharges of various industries. The Wisconsin Department of Natural Resources is promulgating ch. NR 253, Wis. Adm. Code, to regulate the copper forming industry. The provisions of this chapter are based upon the U.S. Environmental Protection Agency's regulations in 40 C.F.R. Part 468.

The purpose of this rule is to specify effluent limitations for BPT, BAT, BCT, and NSPS for the direct discharge of pollutants to waters of the state and to establish pretreatment standards for the introduction of pollutants to publicly owned treatment works. The effect of the creation of ch. NR 253, Wis. Adm. Code, will be to establish state standards and limitations for industrial wastewater discharges from the copper forming industry. The code will reflect changes made by the U.S. Environmental Protection Agency under authority of sections 301, 304, 306, 307, 308, and 501 of the Clean Water Act.

Copper forming encompasses five basic operations: hot rolling, cold rolling, extrusion, drawing, and forging. Nine ancillary surface cleaning and heat treatment operations are associated with copper forming: annealing with oil, annealing with water, pickling bath and rinse, pickling fume scrubbing, alkaline bath and rinse, extrusion press solution heat treatment, and solution heat treatment. In additon, copper forming plants may perfom tumbling or burnishing, surface coating, hydrotesting, surface milling, and sawing. Pollutants found in significant amounts include chromium, copper, lead, nickel, oil and grease, suspended solids, toxic organics, and zinc.

Wastewater at copper forming plants is generated from both forming and ancillary operations. Hot rolling, cold rolling, and drawing utilize water, oil-water emulsions, or soluble oil-water mixtures as lubricants during metal deformation. After being hot rolled, cold rolled, drawn, or extruded, copper products can be cooled in a water bath. Some extrusion operations utilize emulsified or soluble oils to quench extruded parts. The annealing process includes a water, oil, or oil-water bath to cool the annealed product. Pickling baths and rinses are used after forming operations to remove oxidized metal from copper surfaces. Some plants use wet scrubbers to control the release of pickling fumes. Alkaline cleaning uses an alkaline solution to remove oil, tarnish, and smut from the copper surface.

Tumbling and burnishing operations use water to rinse and cool the finished parts and clean the abrasive media and sometimes use water or oil-water lubricants. Waste streams associated with surface coating include a flux bath used to prepare the copper surface, emission scrubbing water, and spent abrasives. Sawing and milling operations use water soluble lubricants and cooling solutions.

Three federal documents form the basis for 40 CFR Part 468 and ch. NR 253: (1) development document for effluent limitations guidelines, new source performance standards, and pretreatment standards for the copper forming point source category (USEPA, Washington, D.C., EPA 440/1-84/074, March, 1984), (2) economic impact analysis of effluent limitations guidelines and standards for the copper forming industry (USEPA, Washington, D.C., EPA 440/2-83/006, July, 1983), and (3) sampling and analysis procedures for screening of industrial effluents for priority pollutants (USEPA, Cincinnati, Ohio, April 1977). Copies of these documents are available for inspection at the central office of the Wisconsin Department of Natural Resources, 101 south Webster street, Madison, and may be obtained from the National Technical Information Service (NTIS), Springfield, Virginia 22161, (703) 487-4600.

This rule uses the format and text of 40 C.F.R. Part 468 and is identical to the federal regulation for purposes of s. 227.14(1m)(a), Stats. However, changes have been made in the text of the federal regulation to make the rule useful to Wisconsin citizens, industry, and regulating authorities. These changes are consistent with the current state regulatory framework and reflect the conventions of state rule drafting.

As required by the administrative rules procedures manual, a purpose section has been added. In addition, revisions have been made to the numbering system, citation formats and definition formats. Where possible, Wisconsin Administrative Code references were substituted in the text for references to the Code of Federal Regulations. Citations in the text to the Code of Federal Regulations may be cross-referenced to corresponding sections of the Wisconsin Administrative Code in the table which has been added at the end of the rule. The authority section and subpart divisions in the federal regulation have been deleted. Definitions for "existing source" and "new source" have been added to the general definitions section in the state rule.

SECTION 1. Chapter NR 253 is created to read:

Chapter NR 253

COPPER FORMING

NR 253.01 Purpose
NR 253.02 Applicability
NR 253.03 General definitions
NR 253.04 Monitoring and reporting requirements
NR 253.05 Compliance dates

Subchapter I - The copper forming subcategory

NR 253.10 Applicability; description of the copper forming subcategory
NR 253.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available
NR 253.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable
NR 253.13 New source performance standards
NR 253.14 Pretreatment standards for existing sources
NR 253.15 Pretreatment standards for new sources

Subchapter II - The beryllium copper forming subcategory

[Reserved]

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.

NR 253.02 APPLICABILITY. (1) 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 C.F.R. 471, or the casting of copper or copper alloys, which is regulated by ch. NR 256.

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.

(1) "Alkaline cleaning bath" means a bath consisting of an alkaline cleaning solution through which a workpiece is processed.

(2) "Alkaline cleaning rinse" 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.

(3) "Alkaline cleaning rinse for forged parts" 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.

(4) "Ancillary operation" means an operation, such as surface and heat treatment, hydrotesting, sawing, and surface coating, associated with a primary forming operation.

(5) "Annealing with oil" means the use of oil to quench a workpiece as it passes from an annealing furnace.

(6) "Annealing with water" 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.

(7) "Beryllium copper alloy" means any copper alloy that is alloyed to contain 0.10 % or greater beryllium.

(8) "Cold rolling" means the process of rolling a workpiece below the recrystallization temperature of the copper or copper alloy.

(9) "Drawing" means pulling the workpiece through a die or succession of dies to reduce the diameter or alter its shape.

(10) "Existing source" means any point source, except for a new source as defined in sub. (16), from which pollutants may be discharged either into waters of the state or into a publicly owned treatment works.

(11) "Extrusion" means the application of pressure to a copper workpiece, forcing the copper to flow through a die orifice.

(12) "Extrusion heat treatment" means the spray application of water to a workpiece for the purpose of heat treatment immediately following extrusion.

(13) "Hot rolling" means the process of rolling a workpiece above the recrystallization temperature of the copper or copper alloy.

(14) "Heat treatment" means the application of heat to or the removal of heat from a workpiece to change the physical properties of the metal.

(15) "Miscellaneous waste stream" means hydrotesting, sawing, surface milling, and maintenance wastestreams when they are related to the forming of copper.

(16) "New source", 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.

(17) "Off kilogram" and "off pound" 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.

(18) "Pickling bath" means a chemical bath, other than an alkaline cleaning bath, through which a workpiece is processed.

(19) "Pickling fume scrubber" means an air pollution control device which removes particulates and fumes from air above a pickling bath by entraining the pollutants in water.

(20) "Pickling rinse" 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.

(21) "Pickling rinse for forged parts" 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.

(22) "Precious metals" means gold, platinum, palladium, silver, and their alloys when the alloy contains 30 percent or greater percent by weight of precious metals.

(23) "Primary forming operation" means hot rolling, cold rolling, drawing, extrusion, and forging of copper and copper alloys.

(24) "Rolling" means reducing the thickness or diameter of a workpiece by passing it between rollers.

(25) "Solution heat treatment" means introducing a workpiece into a quench bath for purposes of heat treatment.

(26) "Spent lubricant" means water or an oil and water mixture which has been used used in forming operations to reduce friction, heat, and wear and which is discharged.

(27) "Surface coating" means the process of coating a copper workpiece, as well as the associated surface washing and flattening.

(28) "Total toxic organics" and "TTO" 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
napthalene
N-nitrosodiphenylamine
phenanthrene
toluene
1,1,1-trichloroethane
trichloroethylene.

(29) "Tumbling or burnishing" 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.

NR 253.04 MONITORING AND REPORTING REQUIREMENTS. The following special monitoring and reporting requirements apply to all facilities subject to this chapter:

(1) The "monthly average" 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.

(2) 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.

NR 253.05 COMPLIANCE DATES. (1) Any existing source subject to this chapter which discharges to waters of the state shall achieve:

(a) the effluent limitations representing BPT by July 1, 1977; and

(b) the effluent limitations representing BAT by July 1, 1984.

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

(3) Any existing source subject to this chapter which introduces process wastewater pollutants into a POTW shall achieve PSES by August 15, 1986:

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

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.

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 C.F.R. ss. 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) Within the range of 7.5 to 10.0 at all times

Table 3

Drawing Spent Lubricant(1)

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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	(2)	(2)

(1) These effluent limitations 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 limitations are neither applicable nor allowable.
(2) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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-kg (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) Within the range of 7.5 to 10.0 at all times

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 C.F.R. ss. 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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 (pounds per 1,000,000 off-pounds) 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

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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) Within the range of 7.5 to 10.0 at all times

Table 37

Drawing Spent Lubricant

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) 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 (pounds per 1,000,000 off-pounds) 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	(1)	(1)

(1) Within the range of 7.5 to 10.0 at all times

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 (pounds per 1,000,000 off-pounds) 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 grease(1)	2.060	1.236

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	7.580	4.548

(1) For alternate monitoring

Table 54

Drawing Spent Lubricant(1)

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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 grease(2)	1.700	1.020

(1) 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 or allowable.
(2) 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 (pounds per 1,000,000 off-pounds) 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	12.920	7.752

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	0.040	0.024

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	24.800	14.880

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	0	0

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	84.280	50.568

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	252.840	151.704

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	0.93	0.56

(1) For alternate monitoring

Table 62

Pickling Rinse

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	78.360	47.016

(1) For alternate monitoring

Table 64

Pickling Bath

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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 grease(1)	2.320	1.392

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	12.520	7.512

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	11.660	6.996

(1) For alternate monitoring

Table 67

Surface Coating

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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 grease(1)	14.860	8.916

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	0.436	0.261

(1) For alternate monitoring

NR 253.15 PRETREATMENT STANDARDS FOR NEW SOURCES. Except as provided in s. NR 211.13, any existing 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	1.030	1.030

(1) 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 (pounds per 1,000,000 off-pounds) 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 grease(1)	3.790	3.790

(1) For alternate monitoring

Table 71

Drawing Spent Lubricant(1)

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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 grease(2)	0.850	0.850

(1) 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.
(2) 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 (pounds per 1,000,000 off-pounds) 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(1)	6.460	6.460

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	0.020	0.020

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	12.400	12.400

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	0	0

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	42.140	42.140

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	126.420	126.420

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	0.46	0.46

(1) For alternate monitoring

Table 79

Pickling Rinse

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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(1)	5.850	5.850

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	17.550	17.550

(1) For alternate monitoring

Table 81

Pickling Bath

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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(1)	1.160	1.160

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	6.260	6.260

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	5.830	5.830

(1) For alternate monitoring

Table 84

Surface Coating

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/off-kg (pounds per 1,000,000 off-pounds) 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(1)	7.430	7.430

(1) 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 (pounds per 1,000,000 off-pounds) 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(1)	0.218	0.218

(1) For alternate monitoring

SUBCHAPTER II - THE BERYLIUM COPPER FORMING SUBCATEGORY

[Reserved]

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 C.F.R. s. 401.11
s. NR 205.04	40 C.F.R. s. 401.11
ch. NR 211	40 C.F.R. Part 403
s. NR 211.03	40 C.F.R. s. 403.03
s. NR 211.13	40 C.F.R. s. 403.7
s. NR 211.14	40 C.F.R. s. 403.13
ch. NR 253	40 C.F.R. Part 468
ch. NR 256	40 C.F.R. Part 464

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on December 15, 1988.

The rules shall take effect the first day of the month following publication in the Wisconsin administrative register, as provided in s. 227.22(2) (intro.), Stats.

Dated at Madison, Wisconsin, February 13, 1989.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

SEAL

By Carroll D. Besadny
Carroll D. Besadny, Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

BOX 7921
MADISON, WISCONSIN 53707

February 13, 1989

1020

RECEIVED
FEB 2) 1989
Revisor of Statutes
Bureau

Mr. Orlan L. Prestegard
Revisor of Statutes
Suite 702
30 W. Mifflin Street

Dear Mr. Prestegard:

Enclosed are two copies, including one certified copy, of State of Wisconsin Natural Resources Board Order No. WW-35-88. These rules were reviewed by the Assembly Committee on Natural Resources and the Senate Committee on Urban Affairs, Environmental Resources, Utilities and Elections pursuant to s. 227.19, Stats. A summary of the final regulatory flexibility analysis and comments of the legislative review committees is also enclosed.

You will note that this order takes effect following publication. Kindly publish it in the Administrative Code accordingly.

Sincerely,

C. D. Besadny
Secretary

Enc.