DEPARTMENT OF NATURAL RESOURCES

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Chapter NR 274

NONFERROUS METALS MANUFACTURING

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	achievable (p. 254-133)	NR 274.21	Applicability; description of
NR 274.144	New source performance		the primary molybdenum
3TD 054 140	standards (p. 254-134)		and rhenium subcategory (p. 254-166)
NR 274.146	Pretreatment standards for new sources (p. 254-135)	NR 274.212	Effluent limitations repre-
	·-	1110 211.010	senting the degree of effluent
	— Primary Beryllium		reduction attainable by the
NR 274.15	the primary beryllium sub-		application of the best practi-
	Applicability; description of the primary beryllium sub- category (p. 254-135) Cyanide (p. 254-135)		cable control technology cur-
NR 274.151	Cyanide (p. 254-135)	NR 274.213	rently available (p. 254-166) Effluent limitations repre-
NR 274.152	Emilient innitations repre-	1110 214.210	senting the degree of effluent
	senting the degree of effluent		reduction attainable by the
	reduction attainable by the application of the best practi-		application of the best avail-
	cable control technology cur-		able technology economically
	rently available (p. 254-136)	NR 274.214	achievable (p. 254-168) New source performance
NR 274.153	Effluent limitations repre-	1417 714.714	standards (p. 254-170)
	senting the degree of effluent	NR 274.216	Pretreatment standards for
	reduction attainable by the		new sources (p. 254-173)
	application of the best avail- able technology economically		
	achievable (p. 254-143)		
	(p. 201 110)	_	

NR 27		1111011011	112 0022
Subchanter X	XIII — Primary Nickel and		able technology economically
Cobalt	-		achievable (p. 254-198)
NR 274.23	Applicability; description of the primary nickel and cobalt	NR 274.264	New source performance standards (p. 254-203)
NR 274.232	subcategory (p. 254-173) Effluent limitations repre-	NR 274.265	Pretreatment standards for existing sources (p. 254-208)
	senting the degree of effluent reduction attainable by the	NR 274.266	Pretreatment standards for new sources (p. 254-208)
1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	application of the best practi-	Subchapter X	XVII — Primary Rare Earth
	cable control technology cur- rently available (p. 254-173)	Metals	•
NR 274.233	Effluent limitations representing the degree of effluent	NR 274.27	Applicability; description of the primary rare earth metals
The second of th	reduction attainable by the	NR 274.271	subcategory (p. 254-208) Specialized definitions (p.
	application of the best avail- able technology economically	NR 274.274	254-209) New source performance
NR 274.234	achievable (p. 254-175) New source performance	NR 274.275	standards (p. 254-209) Pretreatment standards for
NR 274.236	standards (p. 254-176) Pretreatment standards for	NR 274.276	existing sources (p. 254-211) Pretreatment standards for
011	new sources (p. 254-178)		new sources (p. 254-212)
NR 274.24	XIV — Secondary Nickel Applicability: description of		XVIII — Secondary Tantalum
1110 214.21	Applicability; description of the secondary nickel subcat- egory (p. 254-178)	NR 274.28	Applicability; description of the secondary tantalum sub-
NR 274.244	New source performance standards (p. 254-178)	NR 274.282	category (p. 254-212) Effluent limitations repre-
NR 274.245	Pretreatment standards for existing sources (p. 254-179)		senting the degree of effluent reduction attainable by the
NR 274.246	Pretreatment standards for new sources (p. 254-180)		application of the best practi- cable control technology cur-
Curb about a V		NR 274.283	rently available (p. 254-212) Effluent limitations repre-
and Mercury	XV — Primary Precious Metals	NR 214.205	Effluent limitations representing the degree of effluent
NR 274.25	Applicability; description of		reduction attainable by the
	the primary precious metals and mercury subcategory (p.		application of the best avail- able technology economically
NR 274.252	254-180) Effluent limitations repre-	NR 274.284	achievable (p. 254-214) New source performance
	senting the degree of effluent reduction attainable by the	NR 274.286	standards (p. 254-216) Pretreatment standards for
	application of the best practi-		new sources (p. 254-218)
	cable control technology cur- rently available (p. 254-180)	Subchapter X NR 274.29	XIX — Secondary Tin
NR 274.253	Effluent limitations repre-	NIC 214.25	Applicability; description of the secondary tin subcat-
	senting the degree of effluent reduction attainable by the	NR 274.292	egory (p. 254-218) Effluent limitations repre-
	application of the best avail-	NR 214.292	senting the degree of effluent
	able technology economically achievable (p. 254-184)		reduction attainable by the
NR 274.254	New source performance		application of the best practi-
	standards (p. 254-187)		cable control technology currently available (p. 254-218)
NR 274.256	Pretreatment standards for new sources (p. 254-192)	NR 274.293	Effluent limitations repre-
	XVI — Secondary Precious		senting the degree of effluent reduction attainable by the
Metals NR 274.26	Applicability; description of		application of the best avail-
1110 214.20	the secondary precious met-	377 07 00 1	able technology economically achievable (p. 254-222)
NR 274.261	als subcategory (p. 254-192) Specialized definition (p. 254-	NR 274.294	New source performance standards (p. 254-225)
NR 274.262	192) Effluent limitations repre-	NR 274.295	Pretreatment standards for existing sources (p. 254-228)
	senting the degree of effluent reduction attainable by the	NR 274.296	Pretreatment standards for new sources (p. 254-228)
	application of the best practi- cable control technology cur-		XX — Primary and Secondary
	rently available (p. 254-192)	Titanium NR 274.30	Applicability; description of
NR 274.263	Effluent limitations representing the degree of effluent		the primary and secondary ti-
	reduction attainable by the	•	tanium subcategory (p. 254-228)
	application of the best avail-		

NR 274.302	Effluent limitations representing the degree of effluent reduction attainable by the	Subchapter X NR 274.32	XXII — Secondary Uranium Applicability; description of the secondary uranium sub-
NR 274.303	application of the best practi- cable control technology cur- rently available (p. 254-228) Effluent limitations repre- senting the degree of effluent reduction attainable by the application of the best avail-	NR 274.322	category (p. 254-260) Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (p. 254-260)
NR 274.304	able technology economically achievable (p. 254-234) New source performance	NR 274.323	Effluent limitations representing the degree of effluent reduction attainable by the
NR 274.304	standards (p. 254-239) Pretreatment standards for		application of the best avail- able technology economically
NR 274.306	existing sources (p. 254-244) Pretreatment standards for new sources (p. 254-244)	NR 274.324	achievable (p. 254-263) New source performance standards (p. 254-266)
Subchapter XX and Cobalt	XXI — Secondary Tungsten	NR 274.326	Pretreatment standards for new sources (p. 254-269)
NR 274.31	Applicability; description of the secondary tungsten and	Subchapter XX and Hafnium	XXIII — Primary Zirconium
NR 274.312	cobalt subcategory (p. 254- 244) Effluent limitations representing the degree of effluent	NR 274.33	Applicability; description of the primary zirconium and hafnium subcategory (p. 254- 269)
	reduction attainable by the application of the best practicable control technology currently available (p. 254-244)	NR 274.332	Effluent limitations representing the degree of effluent reduction attainable by the application of the best practi-
NR 274.313	Effluent limitations representing the degree of effluent reduction attainable by the	NR 274.333	cable control technology cur- rently available (p. 254-269) Effluent limitations repre-
	application of the best avail- able technology economically		senting the degree of effluent reduction attainable by the
NR 274.314	achievable (p. 254-250) New source performance standards (p. 254-254)		application of the best available technology economically achievable (p. 254-276)
NR 274.315	Pretreatment standards for existing sources (p. 254-259)	NR 274.334	New source performance standards (p. 254-282)
NR 274.316	Pretreatment standards for new sources (p. 254-259)	NR 274.336	Pretreatment standards for new sources (p. 254-288)

Note: Chapter NR 274 as it existed on March 31, 1991 was repealed and a new chapter NR 274 was created effective April 1, 1991.

NR 274.001 Purpose. The purpose of this chapter is to establish effluent limitations, performance standards, and pretreatment standards for discharges of process wastes from the nonferrous metals manufacturing point source category and its subcategories.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.002 Applicability. This chapter applies to facilities which produce primary metals from ore concentrates and recover secondary metals from recycle wastes and which discharge or may discharge pollutants to waters of the State or which introduce or may introduce pollutants into a publicly owned treatment works. The applicability of this chapter to alloying or casting of nonferrous metals is limited to alloying or casting of hot metals directly from the nonferrous metals manufacturing process without cooling. Remelting followed by alloying or cooling is regulated by aluminum forming, 40 C.F.R. Part 467, nonferrous metals forming, 40 C.F.R. Part 471, or metal molding and casting, ch. NR 256.

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NR 274.003 General definitions. In addition to the definitions set forth in ss. NR 205.03, 205.04, and 211.03, the following definitions are applicable to the terms used in this chapter:

- (1) "Existing source" means any point source, except a new source as defined in sub. (2), from which pollutants may be discharged either into waters of the state or into a publicly owned treatment works.
- (2) "New source," as defined for purposes of new source performance standards and pretreatment standards for new sources, means any point source from which pollutants are or may be discharged directly to waters of the state or into a publicly owned treatment works and for which construction commenced after the date given in the following table:

February 17, 1983

Bauxite Refining
Primary Aluminum Smelting
Secondary Aluminum Smelting
Primary Copper Smelting
Primary Copper Electrolytic
Refining
Secondary Copper
Primary Lead
Primary Zinc
Metallurgical Acid Plants
Primary Columbium-Tantalum
Secondary Silver
Secondary Lead

June 27, 1984

Primary Antimony
Primary Berillium
Primary and Secondary
Germanium and Gallium
Secondary Indium
Secondary Mercury
Primary Molybdenum and
Rhenium
Secondary Molybdenum and
Vanadium

June 27, 1984
Primary Nickel and Cobalt
Secondary Nickel
Primary Precious Metals and
Mercury
Secondary Precious Metals
Secondary Tantalum
Secondary Tin
Primary and Secondary Titanium
Secondary Tungsten and Cobalt
Secondary Uranium
Primary Zirconium and Hafnium

(3) "Primary" means the manufacture of a metal from ore concentrates or other virgin materials.

January 22, 1987

Primary Tungsten

Register, March, 1991, No. 423

74 204.

(4) "Secondary" means the manufacture of a metal from scrap or other recycled materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.004 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 according to the date in the following tables:

March 8, 1987

Bauxite refining
Primary aluminum smelting
Secondary aluminum smelting
Primary copper smelting
Primary electrolytic copper
refining
Secondary copper
Primary lead
Primary zinc
Mettalurgical acid plants
Primary tungsten
Primary Columbium-Tantalum
Secondary silver
Secondary lead

<u>September 20, 1988</u>

Primary antimony Primary beryllium Primary and secondary germanium and gallium Secondary indium Secondary mercury Primary molybdenum and rhenium Secondary molybdenum and ___small vanadium Primary nickel and cobalt Secondary Nickel Primary precious metals and mercury Secondary precious metals Primary rare earths metals Secondary tantalum Secondary tin Primary and secondary titanium Secondary tungsten and cobalt Secondary uranium Primary zirconium and hafnium

(4) 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, March, 1991, No. 423, eff. 4-1-91.

NR 274.005 Removal allowances for pretreatment standards. Removal allowances according to s. 40 C.F.R. 403.7(a) may be granted for the toxic metals limited in ch. NR 274 when the toxic metals are used as indicator pollutants.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.006 General provisions. (1) The monthly average regulatory values shall be the basis for the monthly average discharge in direct discharge permits and for pretreatment standards.

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(2) Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

Subchapter I — Bauxite Refining

NR 274.01 Applicability; description of the bauxite refining subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the refining of bauxite to alumina by the Bayer process and by the combination process.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.011 Specialized definitions. The following definitions apply to the terms used in this subchapter:

- (1) "Bauxite" means ore which contains alumina monohydrate or alumina trihydrate and which serves as the principal raw material for the production of alumina by the Bayer process or by the combination process.
- (2) "Within the impoundment", for purposes of calculating the volume of process wastewater which may be discharged, means the surface area within the impoundment at the maximum capacity plus the area of the inside and outside slopes of the impoundment dam and the surface area between the outside edge of the impoundment dam and seepage ditches upon which rain falls and is returned to the impoundment, but the surface area allowance for external appurtenances to the impoundment shall not be more than 30% of the water surface area within the impoundment dam at maximum capacity.
- (3) "Pond water surface area", for the purpose of calculating the volume of wastewater, means the area within the impoundment for rainfall and the actual water surface area for evaporation.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

- NR 274.012 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. (1) Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:
- (2) Except as provided in sub. (3), process wastewater pollutants may not be discharged to waters of the state.
- (3) During any calender month, a process wastewater impoundment may discharge from the overflow a volume equivalent to whatever is the greatest of the following:
- (a) The difference between the precipitation for that month which falls within the impoundment and the evaporation from the impoundment for that month; or
- (b) The difference between the mean precipitation for that month which falls within the impoundment and the mean evaporation for that month as established for the impoundment's location by the national climatic center, national oceanic and atmospheric administration, or as

otherwise established if no monthly evaporation has been determined by the national climatic center.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

- NR 274.013 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. (1) Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:
- (2) Except as provided in sub. (3), process wastewater pollutants may not be discharged to waters of the state.
- (3) During any calender month, a process wastewater impoundment may discharge from the overflow a volume equivalent to whatever is the greatest of the following:
- (a) The difference between the precipitation for that month which falls within the impoundment and the evaporation from the impoundment for that month; or
- (b) The difference between the mean precipitation for that month which falls within the impoundment and the mean evaporation for that month as established for the impoundment's location by the national climatic center, national oceanic and atmospheric administration, or as otherwise established if no monthly evaporation has been determined by the national climatic center.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

- NR 274.014 New source performance standards. (1) Except as provided in sub. (2), any new source subject to this subchapter may not discharge process wastewater pollutants to waters of the state.
- (2) During any calender month, a process wastewater impoundment may discharge from the overflow a volume equivalent to whatever is the greatest of the following:
- (a) The difference between the precipitation for that month which falls within the impoundment and the evaporation from the impoundment for that month; or
- (b) The difference between the mean precipitation for that month which falls within the impoundment and the mean evaporation for that month as established for the impoundment's location by the national climatic center, national oceanic and atmospheric administration, or as otherwise established if no monthly evaporation has been determined by the national climatic center.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.016 Pretreatment standards for new sources. Any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211.

Subchapter II — Primary Aluminum Smelting

NR 274.02 Applicability; description of the primary aluminum smelting subcategory. This subchapter applies to the discharge of pollutants to

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waters of the state and the introduction of pollutants into POTWs from the production of aluminum from alumina in the Hall-Heroult process.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.021 Measurements not detecting benzo(a)pyrene. If a permittee chooses to analyze for benzo(a)pyrene using any EPA approved method, any nondetected measurements shall be considered zeros for purposes of determining compliance with this subchapter.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.022 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 2-1
Primary Aluminum Smelting

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	kg/kkg (pounds per aluminum metal	1,000 pounds) of hot
Fluoride Total suspended solids pH	2.0 3.0 (1)	1.0 1.5 (1)

⁽¹⁾ Within the range of 6.0 to 9.0

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.023 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 2-2
Primary Aluminum Smelting
Anode and Cathode Paste Plant Wet Air Pollution Control

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0	00,000 pounds) of paste
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.005 0.263 0.075 0.831 8.092	0.002 0.117 0.050 0.369 3.591

Table 2-3 Primary Aluminum Smelting Anode Contact Cooling and Briquette Quenching

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0 cast	00,000 pounds) of anodes
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.007 0.403 0.115 1.277 12.440	0.003 0.180 0.077 0.566 5.518

Table 2-4 Primary Aluminum Smelting Anode Bake Plant Wet Air Pollution Control Closed Top Ring Furnace

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000 baked	,000 pounds) of anodes
Benzo(a)pyrene	0.146	0.067
Antimony	8.346	3.719
Nickel	2.378	1.600
Aluminum	26.420	11.720
Fluoride	257.300	114.200

Table 2-5 Primary Aluminum Smelting Anode Bake Plant Wet Air Pollution Control Open Top Ring Furnace With Spray Tower

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0 baked	00,000 pounds) of anodes
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.002 0.097 0.028 0.306 2.975	0.001 0.043 0.019 0.136 1.320

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Table 2-6
Primary Aluminum Smelting

Anode Bake Plant Wet Air Pollution Control Open Top Ring Furnace With Wet Electrostatic Precipitator and Spray Tower

	Spray ronor	
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000 baked	,000 pounds) of anodes
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.025 1.409 0.402 4.461 43.440	0.011 0.628 0.270 1.979 19.270

Table 2-7
Primary Aluminum Smelting
Anode Bake Plant Wet Air Pollution Control Tunnel Kiln

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0 baked	00,000 pounds) of anodes
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.038 2.197 0.626 6.953 67.710	0.018 0.979 0.421 3.084 30.050

Table 2-8
Primary Aluminum Smelting
Cathode Reprocessing Operated With Dry Potline Scrubbing and Not
Commingled With Other Process or Nonprocess Wastewaters

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cryolite recovered	1,000,000 pounds) of
Benzo(a)pyrene Antimony Cyanide Nickel Aluminum Fluoride	1.181 420.400 157.600 80.570 273.200 $29,430.000$	0.547 189.200 70.060 35.030 122.600 $13,310.000$

Table 2-9 Primary Aluminum Smelting
Cathode Reprocessing Operated With Dry Potline Scrubbing and
Commingled With Other Process or Nonprocess Wastewaters

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cryolite recovered	1,000,000 pounds) of
Benzo(a)pyrene Antimony Cyanide Nickel Aluminum Fluoride	$\begin{array}{c} 1.181 \\ 67.610 \\ 157.600 \\ 19.270 \\ 214.000 \\ 2,084.000 \end{array}$	0.547 30.120 70.060 12.960 94.930 924.800

Table 2-10 Primary Aluminum Smelting Cathode Reprocessing Operated With Wet Potline Scrubbing

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cryolite recovered	1,000,000 pounds) of
Benzo(a)pyrene Antimony Cyanide Nickel Aluminum Fluoride	0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000

Table 2-11
Primary Aluminum Smelting
Potline Wet Air Pollution Control Operated
Without Cathode Reprocessing

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.028 1.618 0.461 5.120 49.860	0.013 0.721 0.310 2.271 22.130

Table 2-12 Primary Aluminum Smelting
Potline Wet Air Pollution Control Operated With Cathode Reprocessing and Not Commingled With Other Process or Nonprocess Waters

	or recomproved a march	
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fro	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Antimony Cyanide Nickel Aluminum Fluoride	$egin{array}{c} 0.028 \\ 10.060 \\ 3.771 \\ 1.928 \\ 6.537 \\ 703.900 \\ \end{array}$	0.013 4.525 1.676 0.838 2.933 318.500

Table 2-13 Primary Aluminum Smelting
Potline Wet Air Pollution Control Operated With Cathode
Reprocessing and Commingled With Other Process
or Nonprocess Waters

or routhrocess waters	•
BAT Effluent Limitation	ns
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
$egin{array}{c} 0.028 \\ 1.618 \\ 3.771 \\ 0.461 \\ 5.120 \\ 49.860 \\ \end{array}$	0.013 0.721 1.676 0.310 2.271 22.130
	Maximum for any 1 day mg/kg (pounds per aluminum produced fr 0.028 1.618 3.771 0.461 5.120

Table 2-14 Primary Aluminum Smelting Potroom Wet Air Pollution Control

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of aluminum produced from electrolytic reduction	
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.056 3.204 0.913 10.140 98.770	0.026 1.428 0.614 4.499 43.830

Table 2-15
Primary Aluminum Smelting
Potline Sulfur Dioxide Emissions Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.045 2.588 0.738 8.194 79.790	0.021 1.153 0.496 3.634 35.400

Table 2-16 Primary Aluminum Smelting Degassing Wet Air Pollution Control

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	(1) 5.036 1.435 15.940 155.300	(1) 2.244 0.965 7.071 68.880

⁽¹⁾ This pollutant has no discharge allowance.

Table 2-17 Primary Aluminum Smelting Pot Repair and Pot Soaking

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

Table 2-18 Primary Aluminum Smelting Direct Chill Casting Contact Cooling

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) o aluminum produced from direct chill casting	
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	$egin{array}{c} (1) \\ 2.565 \\ 0.731 \\ 8.120 \\ 79.080 \\ \end{array}$	(1) 1.143 0.492 3.602 35.090

⁽¹⁾ This pollutant has no discharge allowance.

Table 2-19 Primary Aluminum Smelting Continuous Rod Casting Contact Cooling

	<u> </u>	- C
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om rod casting
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	(1) 0.201 0.057 0.636 6.188	(1) 0.089 0.038 0.282 2.746

⁽¹⁾ This pollutant has no discharge allowance.

Table 2-20 Primary Aluminum Smelting Stationary Casting or Shot Casting Contact Cooling

Stationary custome or the constant continues		
BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr shot casting	1,000,000 pounds) of com stationary casting or
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.024 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 2-21
Primary Aluminum Smelting
Anode and Cathode Paste Plant Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0	00,000 pounds) of paste
Benzo(a)pyrene	0.000	
Antimony	0.000	0.000
Nickel	0.000	0.000
Aluminum	0.000	0.000
Fluoride	0.000	0.000
Oil and grease	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 2-22
Primary Aluminum Smelting
Anode Contact Cooling and Briquette Quenching

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0 cast	00,000 pounds) of anodes
Benzo(a)pyrene	0.007	0.003
Antimony	0.403	0.180
Nickel	0.115	0.077
Aluminum	1.277	0.566
Fluoride	12.440	5.518
Oil and grease	2.090	2.090
Total suspended solids	3.135	2.508
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 2-23 Primary Aluminum Smelting Anode Bake Plant Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,00 baked	0,000 pounds) of anodes
Benzo(a)pyrene	0.000	
Antimony	0.000	0.000
Nickel	0.000	0.000
Aluminum	0.000	0.000
Fluoride	0.000	0.000
Oil and grease	0.000	0.000
Total suspended solids	0.000	0.000
pН	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 2-24
Primary Aluminum Smelting
Cathode Reprocessing Operated With Dry Potline Scrubbing and Not
Commingled With Other Process or Nonprocess Wastewaters

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cryolite recovered	1,000,000 pounds) of
Benzo(a)pyrene	1.181	0.547
Antimony	420.400	189.200
Cyanide	157.600	70.060
Nickel	80.570	35.030
Aluminum	273,200	122.600
Fluoride	29,430.000	13,310.000
Oil and grease	350.300	350.300
Total suspended solids	2,172.000	945.800
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 2-25
Primary Aluminum Smelting
Cathode Reprocessing Operated With Dry Potline Scrubbing and
Commingled With Other Process or Nonprocess Wastewaters

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cryolite recovered	1,000,000 pounds) of
Benzo(a)pyrene	1.181	0.547
Antimony	67.610	30.120
Cyanide	157.600	70.060
Nickel	19.270	12.960
Aluminum	214.000	94.930
Fluoride	2.084.000	924.800
Oil and grease	350.300	350.300
Total suspended solids	2,172.000	945.800
pН	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 2-26
Primary Aluminum Smelting
Potline Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride Oil and grease	0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000
Total suspended solids pH	0.000 (1)	0.000 (1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 2-27 Primary Aluminum Smelting Potroom Wet Air Pollution Control

	NSPS	
5 -	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property Benzo(a)pyrene Antimony Nickel Aluminum	aluminum produced fr 0.000 0.000 0.000 0.000	1,000,000 pounds) of om electrolytic reduction 0.000 0.000 0.000
Fluoride Oil and grease Total suspended solids pH	0.000 0.000 0.000 (1)	0.000 0.000 0.000 (1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 2-28
Primary Aluminum Smelting
Potline Sulfur Dioxide Emissions Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene	0.045	0.021
Antimony	2.588	1.153
Nickel	0.738	0.496
Aluminum	8.194	3.634
Fluoride	79.790	35.400
Oil and grease	13.410	13.410
Total suspended solids	20.120	16.090
pН	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 2-29 Primary Aluminum Smelting Degassing Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced from	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride Oil and grease Total suspended solids	0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 2-30 Primary Aluminum Smelting Pot Repair and Pot Soaking

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene	0.000	
Antimony	0.000	0.000
Nickel	0.000	0.000
Aluminum	0.000	0.000
Fluoride	0.000	0.000
Oil and grease	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 2-31 **Primary Aluminum Smelting** Direct Chill Casting Contact Cooling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om direct chill casting
Benzo(a)pyrene	(1)	(1)
Antimony	2.565	1.143
Nickel	0.731	0.492
Aluminum	8.120	3.602
Fluoride	79.080	35.090
Oil and grease	13.290	13.290
Total suspended solids	19.940	15.950
pH	(2)	(2)

(1) This pollutant has no discharge allowance
(2) Within the range of 7.0 to 10.0 at all times, but if this waste is discharged separately and without commingling with any other wastewater, the pH shall be within the range of 6.0 to 10.0 at all times

Table 2-32 Primary Aluminum Smelting Continuous Rod Casting Contact Cooling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om rod casting
Benzo(a)pyrene	(1)	(1)
Antimony	0.201	0.089
Nickel	0.057	0.038
Aluminum	0.636	0.282
Fluoride	6.188	2.746
Oil and grease	1.040	1.040
Total suspended solids	1.560	1.248
pH	(2)	(2)

(1) This pollutant has no discharge allowance(2) Within the range of 7.0 to 10.0 at all times

Table 2-33
Primary Aluminum Smelting
Stationary Casting or Shot Casting Contact Cooling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr shot casting	1,000,000 pounds) of om stationary casting or
Benzo(a)pyrene	0.000	0.000
Antimony Nickel	0.000 0.000	0.000 0.000
Aluminum	0.000	0.000
Fluoride Oil and grease	0.000 0.000	0.000 0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.026 Pretreatment standards for new sources. Except as provided in NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 2-34
Primary Aluminum Smelting
Anode and Cathode Paste Plant Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of paste	
Benzo(a)pyrene Nickel Fluoride	0.000 0.000 0.000	0.000 0.000

Table 2-35
Primary Aluminum Smelting
Anode Contact Cooling and Briquette Quenching

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of anodes	
Benzo(a)pyrene Nickel Fluoride	0.007 0.115 12.440	0.003 0.077 5.518

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Table 2-36
Primary Aluminum Smelting
Anode Bake Plant Wet Air Pollution Control

PSNS		
Pollutant or pollutant property	mg/kg (pounds per 1,0 baked	00,000 pounds) of anodes
Benzo(a)pyrene Nickel Fluoride	0.000 0.000 0.000	0.000 0.000

Table 2-37
Primary Aluminum Smelting
Cathode Reprocessing Operated With Dry Potline Scrubbing and Not
Commingled With Other Process or Nonprocess Wastewaters

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cryolite recovered	1,000,000 pounds) of
Benzo(a)pyrene Cyanide Nickel Fluoride	1.181 157.600 80.570 29,430.000	0.547 70.060 35.030 13,310.000

Table 2-38
Primary Aluminum Smelting
Cathode Reprocessing Operated With Dry Potline Scrubbing and
Commingled With Other Process or Nonprocess Wastewaters

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cryolite recovered	1,000,000 pounds) of
Benzo(a)pyrene	1.181	0.547
Cyanide	157.600	70.060
Nickel	19.270	12.960
Fluoride	2,084.000	924.800

Table 2-39 Primary Aluminum Smelting Potline Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Nickel Fluoride	0.000 0.000 0.000	0.000 0.000

Table 2-40 Primary Aluminum Smelting Potroom Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of com electrolytic reduction
Benzo(a)pyrene Nickel Fluoride	0.000 0.000 0.000	0.000 0.000

Table 2-41 Primary Aluminum Smelting Potline Sulfur Dioxide Emissions Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Nickel Fluoride	0.045 0.738 79.790	0.021 0.496 35.400

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Table 2-42 Primary Aluminum Smelting Degassing Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Nickel Fluoride	0.000 0.000 0.000	0.000 0.000

Table 2-43 Primary Aluminum Smelting Pot Repair and Pot Soaking

100 100 pair and 100 counting		
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fro	1,000,000 pounds) of om electrolytic reduction
Benzo(a)pyrene Nickel Fluoride	0.000 0.000 0.000	0.000 0.000

Table 2-44
Primary Aluminum Smelting
Direct Chill Casting Contact Cooling

•	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om direct chill casting
Benzo(a)pyrene Nickel Fluoride	(1) 0.731 79.080	(1) 0.492 35.090

⁽¹⁾ This pollutant has no discharge allowance

Table 2-45
Primary Aluminum Smelting
Continuous Rod Casting Contact Cooling

-	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr	1,000,000 pounds) of om rod casting
Benzo(a)pyrene Nickel Fluoride	(1) 0.057 6.188	(1) 0.038 2.746

(1) This pollutant has no discharge allowance

Table 2-46
Primary Aluminum Smelting
Stationary Casting or Shot Casting Contact Cooling

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum produced fr shot casting	1,000,000 pounds) of om stationary casting or
Benzo(a)pyrene Nickel Fluoride	0.000 0.000 0.000	0.000 0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter III — Secondary Aluminum Smelting

NR 274.03 Applicability; description of the secondary aluminum smelting subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the recovery, processing, and remelting of aluminum scrap to produce metallic aluminum alloys.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.032 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. (1) Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

- (2) Facilities which use water for metal cooling may not discharge process wastewater pollutants to waters of the state.
- (3) Facilities which use aluminum fluoride in their magnesium removal process may not discharge process wastewater pollutants to waters of the state.
- (4) Facilities which use chlorine in their magnesium removal process shall achieve the following limitations:

254-24 NR 274

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Table 3-1 Secondary Aluminum Smelting Magnesium Removal Process Using Chlorine

•	BPT Effluent Limitations	
	Maximum average of consecutive days	daily values for 30
Pollutant or pollutant property	kg/kkg (pounds per magnesium removed	1,000 pounds) of
Total suspended solids Chemical oxygen demand	175 6.5	
pH	(1)	

⁽¹⁾ Within the range of 7.5 to 9.0

(5) Facilities which process residues by wet methods shall achieve the following limitations:

Table 3-2 Secondary Aluminum Smelting Residue Processed By Wet Methods

Residi	de Processed By Wet Methods
I	BPT Effluent Limitations
	Maximum average of daily values for 30 consecutive days
Pollutant or pollutant property	kg/kkg (pounds per 1,000 pounds) of hot aluminum metal
Total suspended solids	1.5
Fluoride	0.4
Ammonia(as N)	0.01
Aluminum	1.0
Copper	0.003
Chemical oxygen demai	nd 1.0
pH	(1)

⁽¹⁾ Within the range of 7.5 to 9.0

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.033 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 3-3 Secondary Aluminum Smelting Scrap Drying Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of sc dried	
Lead	0.000	0.000
Zinc	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000

Table 3-4 Secondary Aluminum Smelting Scrap Screening and Milling

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum scrap screen	1,000,000 pounds) of med and milled
Lead Zinc Aluminum Ammonia(as N)	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

Table 3-5 Secondary Aluminum Smelting Dross Washing

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of dross washed	
Lead Zinc Aluminum Ammonia(as N)	3.043 11.090 66.410 1,449.000	1.413 4.565 29.450 636.900

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Table 3-6 Secondary Aluminum Smelting Demagging Wet Air Pollution Control

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum demagged	1,000,000 pounds) of
Lead Zinc Aluminum Ammonia(as N)	0.216 0.786 4.711 102.800	0.100 0.324 2.090 45.180

Table 3-7 Secondary Aluminum Smelting Delacquering Wet Air Pollution Control

Delacquering wet im I onution control		
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum delacquered	1,000,000 pounds) of
Lead Zinc Aluminum Ammonia(as N) Total phenolics (4-AAP) (1)	0.093 0.340 2.035 44.389 0.004	0.043 0.140 0.903 19.514

⁽¹⁾ At or before the commingling of delacquering scrubber liquor blowdown with other process or nonprocess waters.

Table 3-8
Secondary Aluminum Smelting
Direct Chill Casting Contact Cooling

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Aluminum Ammonia(as N)	0.372 1.356 8.120 177.200	0.173 0.558 3.602 77.880

Table 3-9
Secondary Aluminum Smelting
Ingot Conveyor Contact Cooling When Chlorine Demagging
Wet Air Pollution Control Is Not Practiced On Site

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc	0.019 0.068	0.009 0.028
Aluminum Ammonia(as N)	$0.409 \\ 8.931$	$0.182 \\ 3.926$

Table 3-10
Secondary Aluminum Smelting
Ingot Conveyor Contact Cooling When Chloride Demagging
Wet Air Pollution Control Is Practiced On Site

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Aluminum Ammonia(as N)	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

Table 3-11 Secondary Aluminum Smelting Stationary Casting Contact Cooling

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Aluminum Ammonia(as N)	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

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Table 3-12 Secondary Aluminum Smelting Shot Casting Contact Cooling

	BAT Effluent Limitatio	ns
Maximum for Maximum for any 1 day monthly avera		
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.000	0.000
Zine	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.034 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 3-13 Secondary Aluminum Smelting Scrap Drying Wet Air Pollution Control

NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per dried	1,000,000 pounds) of scrap
Lead	0.000	0.000
Zinc	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000
Total suspended solids	0.000	0.000
Oil and grease	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 3-14 Secondary Aluminum Smelting Scrap Screening and Milling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum scrap screer	1,000,000 pounds) of ned and milled
Lead	0.000	0.000
Zinc	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000
Total suspended solids	0.000	0.000
Oil and grease	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 3-15 Secondary Aluminum Smelting Dross Washing

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per washed	1,000,000 pounds) of dross
Lead	0.000	0.000
Zinc	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000
Total suspended solids	0.000	0.000
Oil and grease	0.000	0.000
pН	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 3-16 Secondary Aluminum Smelting Demagging Wet Air Pollution Control

NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum demagged	1,000,000 pounds) of
Lead Zinc Aluminum Ammonia(as N) Total suspended solids Oil and grease pH	0.216 0.786 4.711 102.800 11.570 7.710 (1)	$egin{array}{c} 0.100 \\ 0.324 \\ 2.090 \\ 45.180 \\ 9.252 \\ 7.710 \\ (1) \\ \end{array}$

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 3-17 Secondary Aluminum Smelting Delacquering Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum delacquered	1,000,000 pounds) of
Lead	0.093	0.043
Zinc	0.340	0.140
Aluminum	2.035	0.903
Ammonia(as N)	44.389	19.514
Total phenolics (4-AAP) (1)	0.004	
Total suspended solids	4.995	3.996
Oil and grease	3.330	3.330
pH	(2)	(2)

⁽¹⁾ At or before the commingling of delacquering scrubber liquor blowdown with other process or nonprocess waters.

⁽²⁾ Within the range of 7.0 to 10.0 at all times

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Table 3-18 Secondary Aluminum Smelting Direct Chill Casting Contact Cooling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant-or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.372	0.173
Zinc	1.356	0.558
Aluminum	8.120	3.602
Ammonia(as N)	177.200	77.880
Total suspended solids	19.400	15.950
Oil and grease	13.290	13.290
рН	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 3-19
Secondary Aluminum Smelting
Ingot Conveyor Casting Contact Cooling When Chlorine Demagging
Wet Air Pollution Control Is Not Practiced On Site

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.019	0.009
Zinc	0.068	0.028
Aluminum	0.409	0.182
Ammonia(as N)	8.931	3.926
Total suspended solids	1.005	0.804
Oil and grease	0.670	0.670
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 3-20
Secondary Aluminum Smelting
Ingot Conveyor Contact Cooling When Chlorine Demagging
Wet Air Pollution Control Is Practiced On Site

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.000	0.000
Zinc	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000
Total suspended solids	0.000	0.000
Oil and grease	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 3-21
Secondary Aluminum Smelting
Stationary Casting Contact Cooling

	NSPS	
÷ .	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.000	0.000
Zinc	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000
Total suspended solids	0.000	0.000
Oil and grease	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 3-22 Secondary Aluminum Smelting Shot Casting Contact Cooling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.000	0.000
Zine	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000
Total suspended solids	0.000	0.000
Oil and grease	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.035 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new source subject to the secondary aluminum smelting subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 3-23 Secondary Aluminum Smelting Scrap Drying Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum scrap dried	1,000,000 pounds) of
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

Table 3-24 Secondary Aluminum Smelting Scrap Screening and Milling

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum scrap screen	1,000,000 pounds) of ned and milled
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

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Table 3-25 Secondary Aluminum Smelting Dross Washing

	25 1 0 20 11 402111110	
	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0 washed	000,000 pounds) of dross
Lead Zinc Ammonia(as N)	3.043 11.090 1,449.000	1.413 4.565 636.000

Table 3-26 Secondary Aluminum Smelting Demagging Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum demagged	1,000,000 pounds) of
Lead	0.216	0.100
Zinc	0.786	0.324
Ammonia(as N)	102.800	45.180

Table 3-27 Secondary Aluminum Smelting Delacquering Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum delacquered	1,000,000 pounds) of
Lead	0.093	0.043
Zinc	0.340	0.140
Ammonia(as N)	44.389	19.514
Total phenolics (4-AAP) (1)	0.004	

⁽¹⁾ At or before the commingling of delacquering scrubber liquor blowdown with other process or nonprocess waters.

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Table 3-28 Secondary Aluminum Smelting Direct Chill Casting Contact Cooling

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Ammonia(as N)	0.372 1.356 177.200	0.173 0.558 77.800

Table 3-29
Secondary Aluminum Smelting
Ingot Conveyor Casting Contact Cooling When Chlorine Demagging
Wet Air Pollution Control Is Not Practiced On Site

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Ammonia(as N)	0.019 0.068 8.931	0.009 0.028 3.926

Table 3-30
Secondary Aluminum Smelting
Ingot Conveyor Contact Cooling When Chlorine Demagging
Wet Air Pollution Control Is Practiced On Site

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

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Table 3-31 Secondary Aluminum Smelting Stationary Casting Contact Cooling

		Ü
	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.000	0.000
Zine	0.000	0.000
Ammonia(as N)	0.000	0.000

Table 3-32 Secondary Aluminum Smelting Shot Casting Contact Cooling

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.036 Pretreatment standards for new sources. Except as provided in NR 211.13, any new source subject to the secondary aluminum smelting subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 3-33 Secondary Aluminum Smelting Scrap Drying Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0 dried	000,000 pounds) of scrap
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

Table 3-34 Secondary Aluminum Smelting Scrap Screening and Milling

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum scrap screen	1,000,000 pounds) of ned and milled
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

Table 3-35 Secondary Aluminum Smelting Dross Washing

	21000 00011110	
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 3 washed	1,000,000 pounds) of dross
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

Table 3-36 Secondary Aluminum Smelting Demagging Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum demagged	1,000,000 pounds) of
Lead	0.216	0.100
Zinc	0.786	0.324
Ammonia(as N)	102.800	45.180

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Table 3-37 Secondary Aluminum Smelting Delacquering Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum delacquered	1,000,000 pounds) of
Lead Zinc Ammonia(as N) Total phenolics (4-AAP) (1)	0.093 0.340 44.389 0.004	0.043 0.140 19.514

⁽¹⁾ At or before the commingling of delacquering scrubber liquor blowdown with other process or nonprocess waters.

Table 3-38 Secondary Aluminum Smelting Direct Chill Casting Contact Cooling

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Ammonia(as N)	0.372 1.356 177.200	0.173 0.558 77.880

Table 3-39
Secondary Aluminum Smelting
Ingot Conveyor Casting Contact Cooling When Chlorine Demagging
Wet Air Pollution Control Is Not Practiced On Site

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead Zinc Ammonia(as N)	0.019 0.068 8.931	0.009 0.028 3.926

Table 3-40
Secondary Aluminum Smelting
Ingot Conveyor Contact Cooling When Chlorine Demagging
Wet Air Pollution Control Is Practiced On Site

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia(as N)	0.000	0.000

Table 3-41 Secondary Aluminum Smelting Stationary Casting Contact Cooling

		•
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of
Lead	0.000	0.000
Zinc Ammonia(as N)	$0.000 \\ 0.000$	0.000 0.000

Table 3-42 Secondary Aluminum Smelting Shot Casting Contact Cooling

	PSNS		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per aluminum cast	1,000,000 pounds) of	
Lead Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000	

Subchapter IV — Primary Copper Smelting

NR 274.04 Applicability; description of the primary copper smelting subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the primary smelting of copper from ore or concentrates by processes such as roasting, converting, leaching if preceded by a pyrometallurgical step, slag granulation and dumping, and fire refining and from the casting of products from these operations.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

- NR 274.041 Specialized definitions. The following definitions apply to the terms used in this subchapter:
- (1) "Within the impoundment," for purposes of calculating the volume of process wastewater which may be discharged, has the following meanings:
- (a) If the impoundment was constructed prior to February 27, 1975, "within the impoundment" means the surface area within the impoundment at the maximum capacity plus the surface area of the inside and outside slopes of the impoundment dam and the surface area between the outside edge of the impoundment dam and any seepage ditch adjacent to the dam upon which rain falls and is returned to the impoundment, but the surface area allowance for external appurtenances to the impoundment may not be more than 30% of the water surface area within the impoundment dam at maximum capacity.
- (b) If the impoundment was constructed on or after the February 27, 1975, "within the impoundment" means the water surface area within the impoundment at maximum capacity.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.0415 Combining waste streams. If the waste streams subject to this subchapter are combined for treatment or discharge with waste streams subject to the primary electrolytic copper refining subchapter or the metallurgical acid plant subchapter, the quantity of each pollutant or pollutant property discharged may not exceed the quantity of each pollutant or pollutant property which could be discharged if each waste stream was discharged separately.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

- NR 274.042 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. (1) Except as provided in 40 C.F.R. ss. 125.30 to 125.32 and sub. (2), any existing point source subject to this primary copper smelting subchapter may not discharge process wastewater pollutants to waters of the state.
- (2) A process wastewater impoundment which is designed, constructed, and operated to contain the precipitation from the 10-year, 24-hour rainfall event as established for the impoundments location by the national climatic center, national oceanic and atmospheric administration, may discharge a volume of process wastewater equivalent to the volume of precipitation which falls within the impoundment in excess of the precipitation attributable to the 10-year, 24-hour rainfall event, when such an event occurs.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

- NR 274.043 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. (1) Except as provided in 40 C.F.R. ss. 125.30 to 125.32 and sub. (2), any existing point source subject to this subchapter may not discharge process wastewater pollutants into waters of the state.
- (2) A process wastewater impoundment which is designed, constructed, and operated to contain the precipitation from the 25-year, 24-hour rainfall event as established for the impoundment's location by the

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national climatic center, national oceanic and atmospheric administration, may discharge a volume of process wastewater equivalent to the volume of precipitation which falls within the impoundment in excess of the precipitation attributable to the 25-year, 24-hour rainfall event, when such an event occurs.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.044 New source performance standards. Any new source subject to this subchapter may not discharge process wastewater pollutants into waters of the state.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.046 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and may not discharge process wastewater pollutants to a POTW.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter V — Primary Electrolytic Copper Refining

NR 274.05 Applicability; description of the primary electrolytic copper refining subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the electrolytic refining of primary copper, such as anode casting performed at refineries which are not located on-site with a smelter, product casting, and byproduct recovery.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.052 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

254-42 NR 274

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Table 5-1 Primary Electrolytic Copper Refining

Filma	ry Electro	nythe Copp	er ive	minia		
	BPT Efflu	ent Limita	tions			
	Maximu any 1 da		7	alues fo	m of daily or 30 ive days	
Pollutant or pollutant property		(pounds tically refir			pounds)	of
Total suspended solids Copper Cadmium Lead Zinc pH		0.100 0.0017 0.00006 0.0006 0.0012 (1)			0.050 0.0008 0.00003 0.0026 0.0003 (1)	

(1) Within the range of 6.0 to 9.0

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.053 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 5-2
Primary Electrolytic Copper Refining
Casting Contact Cooling

	000000000000000000000000000000000000000	•	
	BAT Effluent Limitation	ns	
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of copp cast		
Arsenic Copper Nickel	0.692 0.638 0.274	0.309 0.304 0.184	

Table 5-3
Primary Electrolytic Copper Refining
Anode and Cathode Rinse

	BAT Effluent Limitatio	ns	
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per cathode copper produc	1,000,000 pounds) of etion	
Arsenic Copper Nickel	0.000 0.000 0.000	0.000 0.000 0.000	

Table 5-4
Primary Electrolytic Copper Refining
Spent Electrolyte

	Spent Literary to	
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of coppe cathode production	
Arsenic	0.068	0.031
Copper	0.063	0.030
Nickel	0.027	0.018

Table 5-5 Primary Electrolytic Copper Refining Casting Wet Air Pollution Control

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of casting production	
Arsenic Copper Nickel	0.000 0.000 0.000	0.000 0.000 0.000

Table 5-6
Primary Electrolytic Copper Refining
Byproduct Recovery

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) erty product recovered from electrolytic sli processing	
Arsenic Copper Nickel	0.000 0.000 0.000	0.000 0.000 0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.054 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

254-44 NR 274

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Table 5-7
Primary Electrolytic Copper Refining
Casting Contact Cooling

4424-8		
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,00 cast	00,000 pounds) of copper
Arsenic	0.692	0.309
Copper	0.638	0.304
Nickel	0.274	0.184
Total suspended solids	7.470	5.976
pH .	(1)	(1)

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

Table 5-8
Primary Electrolytic Copper Refining
Anode and Cathode Rinse

	mode and cathode itm	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cathode copper produc	1,000,000 pounds) of etion
Arsenic Copper Nickel Total suspended solids pH	0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 (1)

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

Table 5-9 Primary Electrolytic Copper Refining Spent Electrolyte

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,0 cathode production	00,000 pounds) of copper
Arsenic	0.068	0.031
Copper	0.063	0.030
Nickel	0.027	0.018
Total suspended solids	0.735	0.588
pН	(1)	(1)

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

Table 5-10 Primary Electrolytic Copper Refining Casting Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,00 production	00,000 pounds) of casting
Arsenic	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 5-11
Primary Electrolytic Copper Refining
Byproduct Recovery

- J F J	
NSPS	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per product recovered fr processing	1,000,000 pounds) of rom electrolytic slimes
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
(1)	(1)
	Maximum for any 1 day mg/kg (pounds per product recovered from processing 0.000 0.000 0.000 0.000

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.056 Pretreatment standards for new sources. Except as provided in NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 5-12 Primary Electrolytic Copper Refining Casting Contact Cooling

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of coppe cast	
Arsenic	0.692	0.309
Copper	0.638	0.304
Nickel	0.274	0.184

254-46 NR 274

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Table 5-13
Primary Electrolytic Copper Refining
Anode and Cathode Rinse

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cathode copper produc	1,000,000 pounds) of etion
Arsenic Copper Nickel	0.000 0.000 0.000	0.000 0.000 0.000

Table 5-14
Primary Electrolytic Copper Refining
Spent Electrolyte

	open nicentry to	
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per cathode copper produc	1,000,000 pounds) of tion
Arsenic Copper Nickel	0.068 0.063 0.027	0.031 0.030 0.018

Table 5-15 Primary Electrolytic Copper Refining Casting Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of casting production	
Arsenic	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000

Table 5-16
Primary Electrolytic Copper Refining
Byproduct Recovery

Dyproduct recovery	
PSNS	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per product recovered fr processing	1,000,000 pounds) of rom electrolytic slimes
0.000	0.000
0.000	0.000
0.000	0.000
	PSNS Maximum for any 1 day mg/kg (pounds per product recovered frequency processing 0.000 0.000

Subchapter VI — Secondary Copper

NR 274.06 Applicability; description of the secondary copper subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the recovery, processing, and remelting of new and used copper scrap and residues to produce copper metal and copper alloys, except for continuous rod casting.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.061 Specialized definitions. The following definitions apply to the terms used in this subchapter:

- (2) "Within the impoundment," for purposes of calculating the volume of process wastewater which may be discharged, means the following:
- (a) For all impoundments constructed prior to April 23, 1984, "within the impoundment" means the water surface area within the impoundment at the maximum capacity plus the surface area of the inside and outside slopes of the impoundment dam and the surface area between the outside edge of the impoundment dam and any seepage ditch immediately adjacent ot the dam upon which rain falls and is returned to the impoundment, but the surface area allowance for external appurtenances to the impoundment shall not be more than 30% of the water surface area within the impoundment dam at maximum capacity.
- (b) For all impoundments constructed on or after April 23, 1984, "within the impoundment" means the water surface area within the impoundment at the maximum capacity.
- (3) "Pond water surface area," for the purpose of calculating the volume of wastewater which may be discharged, means the water surface area of the pond created by the impoundment for storage of process wastewater at normal operating level, but not less than one third of the surface area of the maximum amount of water which could be contained by the impoundment.
- (4) "Normal operating level" means the average level of the pond during the preceding calander month.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

254-48 NR 274

NR 274.062 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. (1) Except as provided in 40 C.F.R. ss. 125.30 to 125.32 and subs. (2) and (3), any existing point source subject to this subchapter may not discharge process watewater pollutants to waters of the state.

- (2) A process wastewater impoundment which is designed, constructed, and operated to contain the precipitation from the 10-year, 24-hour rainfall event as established for the impoundment's location by the national climatic center, national oceanic and atmospheric administration, may discharge a volume of process wastewater equivalent to the volume of precipitation which falls within the impoundment in excess of the precipitation attributable to the 10-year, 24-hour rainfall event, when such an event occurs.
- (3) During any calender month, a process wastewater impoundment may discharge from the overflow a volume equivalent to whatever is the greatest of the following:
- (a) The difference between the precipitation for that month which falls within the impoundment and the evaporation from the impoundment for that month; or
- (b) The difference between the mean precipitation for that month which falls within the impoundment and the mean evaporation for that month as established for the impoundment's location by the national climatic center, national oceanic and atmospheric administration or as otherwise established if no monthly evaporation has been determined by the national climatic center.
- (c) Any process wastewater discharge according to this subsection shall comply with the following limitations:

Table 6-1 Secondary Copper

	3PT Effluent Limitation	ons
	Maximum for any 1 day	Maximum average of daily values for 30 consecutive days
Pollutant or pollutant property	mg/l (ppm)	,
Total suspended solids Copper Zinc Oil and grease pH	50 0.5 10 20 (1)	$25 \\ 0.25 \\ 5 \\ 10 \\ (1)$

⁽¹⁾ Within the range of 6.0 to 9.0

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.063 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. (1) Except as provided in 40 C.F.R. ss. 125.30 to 125.32 and sub. (2), any existing point source subject to this subchapter may not discharge process wastewater pollutants into waters of the state.

(2) A process wastewater impoundment which is designed, constructed, and operated to contain the precipitation from the 25-year, 24-hour rainfall event as established for the impoundment's location by the national climatic center, national oceanic and atmospheric administration, may discharge a volume of process wastewater equivalent to the volume of precipitation which falls within the impoundment in excess of the precipitation attributable to the 25-year, 24-hour rainfall event, when such an event occurs.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.064 New source performance standards. Any new source subject to this subchapter may not discharge process wastewater pollutants into waters of the state.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.065 Pretreatment standards for existing sources. (1) Except as provided in ss. NR 211.13 and 211.14 and sub. (2), any existing source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and may not discharge process wastewater pollutants into a POTW.

(2) A process wastewater impoundment which is designed, constructed, and operated to contain the precipitation from the 25-year, 24-hour rainfall event as established for the impoundment's location by the national climatic center, national oceanic and atmospheric administration, may discharge a volume of process wastewater equivalent to the volume of precipitation which falls within the impoundment in excess of the precipitation attributable to the 25-year, 24-hour rainfall event, when such an event occurs.

NR 274.066 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to the secondary copper subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and may not discharge process wastewater pollutants into a POTW.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter VII — Primary Lead

NR 274.07 Applicability; description of the primary lead subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of lead at primary lead smelters and refineries.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.072 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

254-50 WISCONSIN ADMINISTRATIVE CODE

Table 7-1 Primary Lead Sinter Plant Materials handling Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per production	billion pounds) of sinter
Lead Zinc Total suspended solids pH	594.000 525.000 14,760.000 (1)	270.000 219.600 7,020.000 (1)

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

Table 7-2 Primary Lead Blast Furnace Wet Air Pollution Control

BPT Effluent Limitations		
·	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast oduced
Lead Zinc Total suspended solids pH	0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 (1)

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

Table 7-3 Primary Lead Blast Furnace Slag Granulation

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast oduced
Lead Zinc Total suspended solids pH	6,155.000 5,446.000 5 153,000.000 (1)	2,798.000 2,276.000 72,740.000 (1)

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

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254-51 NR 274

Table 7-4 Primary Lead Dross Reverberatory Slag Granulation

	BPT Effluent Limitati	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per speiss, or matte granul	billion pounds) of slag, lated
Lead Zinc Total suspended solids pH	9,499.000 8,405.000 8 236,000.000 (1)	4,318.000 3,512.000 112,300.000 (1)

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

Table 7-5 Primary Lead Dross Reverberatory Furnace Wet Air Pollution Control

D1055 100 C1 D0	ratory runnace wet min	1 Ollation Collator
	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property mg/kkg (pounds per billion pounds) of reverberatory furnace pollutant proproduction		
Lead Zinc Total suspended solid pH	15,920.000 14,080.000 ls 395,500.000 (1)	7,235.000 5,884.000 188,100.000 (1)

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

Table 7-6 Primary Lead Zinc Fuming Wet Air Pollution Control

•	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bill furnace lead bullion produ	lion pounds) of blast
Lead Zinc Total suspended solids pH	702.900 622.000 17,470.000 (1)	319.500 259.900 8,307.000 (1)

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

$254\text{-}52 \\ \text{NR } 274 \\ \hspace*{1.5cm} \textbf{WISCONSIN ADMINISTRATIVE CODE} \\$

Table 7-7
Primary Lead
Hard Lead Refining Slag Granulation

Dead Iteming Diag Ora	ilulation
BPT Effluent Limitation	ons
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per bil produced	lion pounds) of hard lead
0.000 0.000	0.000 0.000
0.000 (1)	0.000 (1)
	BPT Effluent Limitation Maximum for any 1 day mg/kkg (pounds per bil produced 0.000 0.000

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

Table 7-8 Primary Lead Hard Lead Refining Air Pollution Control

BPT Effluent Limita	tions
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per produced	billion pounds) of hard lead
32,730.000	14,880.000
28,960.000	12,100.000
s 813,300.000	386,800.000
(1)	(1)
	Maximum for any 1 day mg/kkg (pounds per produced 32,730.000 28,960.000

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

Table 7-9 Primary Lead Facility Washdown

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead	0.000	0.000
Zine	0.000	0.000
Total suspended solid	s 0.000	0.000
pH	(1)	(1)

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

Table 7-10 Primary Lead Employee Handwash

	BPT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc Total suspended solids pH	5.445 4.818 s 135.300 (1)	2.475 2.013 64.350 (1)

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

Table 7-11 Primary Lead Respirator Wash

	BPT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead	8.745	3.975
Zinc	7.738	3.233
Total suspended solids	217.300	103.400
pH	(1)	(1)

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

Table 7-12 Primary Lead Laundering of Uniforms

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc Total suspended solids pH	25.580 22.630 3 635.500 (1)	11.630 9.455 302.300 (1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.073 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

254-54 WISCONSIN ADMINISTRATIVE CODE NR 274

Table 7-13
Primary Lead
Sinter Plant Materials Handling Wet Air Pollution Control

	BAT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per production	billion pounds) of sinter
Lead Zinc	100.800 367.200	46.800 151.200

Table 7-14 Primary Lead Blast Furnace Wet Air Pollution Control

	BAT Effluent Limitati	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast oduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-15 Primary Lead Blast Furnace Slag Granulation

	BAT Effluent Limitat	ions
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast roduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-16 Primary Lead Dross Reverberatory Slag Granulation

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per speiss, or matte granul	billion pounds) of slag, ated
Lead Zinc	1,612.000 5,872.000	748.400 2,418.000

Table 7-17 Primary Lead Dross Reverberatory Furnace Wet Air Pollution Control

	BAT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per reverberatory furnace	billion pounds) of dross production
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-18 Primary Lead Zinc Fuming Wet Air Pollution Control

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion p	billion pounds) of blast roduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-19 Primary Lead Hard Lead Refining Slag Granulation

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billi produced	on pounds) of hard lead
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-20 Primary Lead Hard Lead Refining Wet Air Pollution Control

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bil produced	lion pounds) of hard lead
Lead Zinc	0.000 0.000	0.000 0.000

254-56 NR 274

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Table 7-21	
Primary Lead	
Facility Washdow	r

Facility Washdown	
BAT Effluent Limitation	ns
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per l bullion produced	billion pounds) of lead
0.000 0.000	0.000
Table 7-22 Primary Lead Employee Handwash	
BAT Effluent Limitation	ns
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per bullion produced	pillion pounds) of lead
0.924 3.366	$0.425 \\ 1.386$
Table 7-23 Primary Lead Respirator Wash	
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per b bullion produced	oillion pounds) of lead
1.484 5.406	0.689 2.226
Table 7-24 Primary Lead Laundering of Uniform	s
BAT Effluent Limitation	ns
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per b bullion produced	oillion pounds) of lead
4.340 15.810	2.015 6.510
	BAT Effluent Limitation Maximum for any 1 day mg/kkg (pounds per libulion produced 0.000 0.000 Table 7-22 Primary Lead Employee Handwash BAT Effluent Limitation Maximum for any 1 day mg/kkg (pounds per libulion produced 0.924 3.366 Table 7-23 Primary Lead Respirator Wash BAT Effluent Limitation Maximum for any 1 day mg/kkg (pounds per libulion produced 1.484 5.406 Table 7-24 Primary Lead Laundering of Uniform BAT Effluent Limitation Maximum for any 1 day mg/kkg (pounds per libulion produced 1.484 5.406

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.074 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 7-25 Primary Lead Sinter Plant Materials Handling Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per production	billion pounds) of sinter
Lead	0.000	0.000
Zinc	0.000	0.000
Total suspended solid	s 0.000	0.000
pH	(1)	(1)

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

Table 7-26 Primary Lead Blast Furnace Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day r	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billion furnace lead bullion produce	n pounds) of blast d
Lead	0.000	0.000
Zinc Total suspended solids	0.000 0.000	$0.000 \\ 0.000$
pH	(1)	(1)

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

Table 7-27 Primary Lead Blast Furnace Slag Granulation

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast oduced
Lead Zinc Total suspended solids pH	0.000 0.000 s 0.000 (1)	0.000 0.000 0.000 (1)

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

254-58 NR 274

WISCONSIN ADMINISTRATIVE CODE

Table 7-28 Primary Lead Dross Reverberatory Slag Granulation

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per speiss, or matte granul	billion pounds) of slag, lated
Lead Zinc	0.000 0.000	0.000 0.000
Total suspended solid pH	s 0.000 (1)	0.000 (1)

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

Table 7-29 Primary Lead Dross Reverberatory Furnace Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per reverberatory furnace	billion pounds) of dross production
Lead Zinc Total suspended solids pH	0.000 0.000 0.000 (1)	0.000 0.000 0.000 (1)

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

Table 7-30 Primary Lead Zinc Fuming Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bi furnace lead bullion prod	llion pounds) of blast uced
Lead Zinc	0.000 0.000	0.000 0.000
Total suspended solids pH		0.000 (1)

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

Table 7-31 Primary Lead Hard Lead Refining Slag Granulation

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billion produced	pounds) of hard lead
Lead Zinc Total suspended solids pH	0.000 0.000 s 0.000 (1)	0.000 0.000 0.000 (1)

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

Table 7-32 Primary Lead Hard Lead Refining Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billior produced	pounds) of hard lead
Lead Zinc Total suspended solids pH	0.000 0.000 0.000 (1)	0.000 0.000 0.000 (1)

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

Table 7-33 Primary Lead Facility Washdown

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc Total suspended solids pH	0.000 0.000 0.000 (1)	0.000 0.000 0.000 (1)

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

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Table 7-34 Primary Lead Employee Handwash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc Total suspended solids pH	0.924 3.366 s 49.500 (1)	$0.429 \\ 1.386 \\ 39.600 \\ (1)$

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

Table 7-35 Primary Lead Respirator Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc Total suspended solids pH	1.484 5.406 s 79.500 (1)	0.689 2.226 63.600 (1)

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

Table 7-36 Primary Lead Laundering of Uniforms

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc Total suspended solids pH	4.340 15.810 3 232.500 (1)	2.015 6.510 186.000 (1)

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

NR 274.075 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

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254-61 NR 274

Table 7-37 Primary Lead

Primary Lead				
Sinter Plant Materials	Handling	Wet Air	Pollution	Control

PSES	
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per production	billion pounds) of sinter
100.800 367.200	46.800 151.200
	Maximum for any 1 day mg/kkg (pounds per production 100.800

Table 7-38 Primary Lead Blast Furnace Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast oduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-39 Primary Lead Blast Furnace Slag Granulation

•	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast oduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-40 Primary Lead Dross Reverberatory Slag Granulation

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per b speiss, or matte granulat	oillion pounds) of slag,
Lead Zinc	1,612.000 5,872.000	748.400 2,418.000

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Table 7-41
Primary Lead
Dross Reverberatory Furnace Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per reverberatory furnace	billion pounds) of dross production
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-42 Primary Lead Zinc Fuming Wet Air Pollution Control

Zinc	running weerin ronder	OII COIIGIOI
	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast coduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-43 Primary Lead Hard Lead Refining Slag Granulation

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billion pounds) of hard lead produced	
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-44 Primary Lead Hard Lead Refining Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billior produced	pounds) of hard lead
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-45 Primary Lead

	ry Lead Washdown
PS	SES

	PSES		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead	
Lead Zinc	0.000 0.000	0.000 0.000	

Table 7-46 Primary Lead Employee Handwash

	Employee Handwas	11
	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc	0.924 3.366	0.429 1.386

Table 7-47 Primary Lead Respirator Wash

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc	1.484 5.406	0.689 2.226

Table 7-48 Primary Lead Laundering of Uniforms

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc	4.340 15.810	2.015 6.510

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

254-64 WISCONSIN ADMINISTRATIVE CODE

NR 274.076 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 7-49
Primary Lead
Sinter Plant Materials Handling Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per production	billion pounds) of sinter
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-50 Primary Lead Blast Furnace Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast oduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-51 Primary Lead Blast Furnace Slag Granulation

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion p	billion pounds) of blast roduced
Lead Zinc	0.000 0.000	0.000 0.000

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254-65 NR 274

Table 7-52 Primary Lead Dross Reverberatory Slag Granulation

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per b speiss, or matte granula	oillion pounds) of slag,
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-53 Primary Lead Dross Reverberatory Furnace Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per reverberatory furnace	billion pounds) of dross production
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-54 Primary Lead Zinc Fuming Wet Air Pollution Control

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per furnace lead bullion p	billion pounds) of blast oduced
Lead Zinc	0.000 0.000	0.000 0.000

Table 7-55 Primary Lead Hard Lead Refining Slag Granulation

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billion pounds) of hard lead produced	
Lead Zinc	0.000 0.000	0.000 0.000

254-66 NR 274

WISCONSIN ADMINISTRATIVE CODE

Table 7-56			
Primary Lead			
Hard Lead Refining Wet Air Pollution Con	trol		

Hard Le	ead Refining Wet Air Pollut	ion Control
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per billio produced	on pounds) of hard lead
Lead Zinc	0.000 0.000	0.000 0.000
	Table 7-57 Primary Lead Facility Washdown	
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bi bullion produced	llion pounds) of lead
Lead Zinc	0.000 0.000	0.000 0.000
	Table 7-58 Primary Lead Employee Handwash	
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bi bullion produced	llion pounds) of lead
Lead Zinc	0.924 3.366	0.429 1.386
	Table 7-59 Primary Lead	

Respirator Wash

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead	1.484	0.689
Zinc	5 406	2 226

Table 7-60
Primary Lead
Laundering of Uniforms

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per bullion produced	billion pounds) of lead
Lead Zinc	4.340 15.810	2.015 6.510

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter VIII — Primary Zinc

NR 274.08 Applicability; description of the primary zinc subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of primary zinc by either electrolytic or pyrolytic means.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.082 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 8-1 Primary Zinc

	i i i i i i i i i i i i i i i i i i i	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	kg/kkg (pounds per 1,000	pounds) of zinc metal
Total suspended solids Arsenic Cadmium Selenium Zinc pH	0.42 0.0016 0.008 0.08 0.08 (1)	0.21 0.0008 0.004 0.04 0.04 (1)

(1) Within the range of 6.0 to 9.0 at all times

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.083 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

254-68 NR 274

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Table 8-2 Primary Zinc Zinc Reduction Furnace Wet Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per reduced	million pounds) of zinc
Cadmium Copper Lead Zinc	0.334 2.135 0.467 1.702	0.134 1.018 0.217 0.701

Table 8-3 Primary Zinc Preleach of Zinc Concentrates

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate leached	million pounds) of
Cadmium Copper Lead Zinc	0.180 1.153 0.252 0.919	0.072 0.550 0.117 0.378

Table 8-4 Primary Zinc Leaching Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per i processed through lead	million pounds) of zinc
Cadmium	0.000	0.000
Copper	0.000	0.000
Lead	0.000	0.000
Zinc	0.000	0.000

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Table 8-5 Primary Zinc Electrolyte Bleed Wastewater

	Dicciroly to Dicca Wastew	acci
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi zinc produced	llion pounds) of cathode
Cadmium Copper Lead Zinc	0.086 0.553 0.121 0.441	0.035 0.264 0.056 0.182

Table 8-6 Primary Zinc Cathode and Anode Wash Wastewater

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of cathode zinc produced	
Cadmium	0.150	0.060
Copper	0.961	0.458
Lead	0.210	0.098
Zinc	0.766	0.315

Table 8-7 Primary Zinc Casting Wet Air Pollution Control

BAT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zinc cast		
Cadmium Copper Lead Zinc	0.051 0.329 0.072 0.262	0.021 0.157 0.033 0.108	

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Table 8-8 Primary Zinc Casting Contact Cooling

	Cabund Contact Coom	ю.
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zinc cast	
Cadmium Copper Lead Zinc	0.036 0.232 0.051 0.185	0.014 0.110 0.024 0.076

Table 8-9 Primary Zinc Cadmium Plant Wastewater

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of cadm produced	
Cadmium Copper Lead Zinc	1.234 7.899 1.728 6.295	0.494 3.765 0.802 2.592

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.084 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 8-10 Primary Zinc Zinc Reduction Furnace Wet Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per reduced	million pounds) of zinc
Cadmium Copper Lead Zinc Total suspended solids pH	0.334 2.135 0.467 1.702 25.020 (1)	0.134 1.018 0.217 0.701 20.020 (1)

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

Table 8-11 Primary Zinc Preleach of Zinc Concentrates

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate leached	million pounds) of
Cadmium	0.180	0.072
Copper	1.153	0.550
Lead	0.252	0.117
Zinc	0.919	0.378
Total suspended solids	13.520	10.810
pH	(1)	(1)

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

Table 8-12 Primary Zinc Leaching Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per processed through lea	million pounds) of zincaching
Cadmium	0.000	0.000
Copper Lead	0.000 0.000	$0.000 \\ 0.000$
Zinc	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 8-13 Primary Zinc Electrolyte Bleed Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per zinc produced	million pounds) of cathode
Cadmium Copper Lead Zinc Total suspended solids pH	$egin{array}{c} 0.086 \\ 0.553 \\ 0.121 \\ 0.441 \\ 6.480 \\ (1) \end{array}$	$egin{array}{c} 0.035 \\ 0.264 \\ 0.056 \\ 0.182 \\ 5.184 \\ (1) \end{array}$

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

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Table 8-14 Primary Zinc Cathode and Anode Wash Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per zinc produced	million pounds) of cathode
Cadmium	0.150	0.060
Copper	0.961	0.458
Lead	0.210	0.098
Zinc	0.766	0.315
Total suspended solids	11.270	9.012
pH	(1)	(1)

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

Table 8-15 Primary Zinc Casting Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million	n pounds) of zinc cast
Cadmium Copper Lead Zinc Total suspended solids pH	0.051 0.329 0.072 0.262 3.855 (1)	$egin{array}{c} 0.021 \\ 0.157 \\ 0.033 \\ 0.108 \\ 3.084 \\ (1) \end{array}$

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

Table 8-16 Primary Zinc Casting Contact Cooling

	NSPS	· · · · · · · · · · · · · · · · · · ·
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi	llion pounds) of zinc cast
Cadmium	0.036	0.014
Copper	0.232	0.110
Lead	0.051	0.024
Zinc	0.185	0.076
Total suspended solids	2.715	2.172
pH	(1)	(1)

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

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Table 8-17 Primary Zinc Cadmium Plant Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli produced	on pounds) of cadmium
Cadmium Copper Lead Zinc Total suspended solids pH	$egin{array}{c} 1.234 \\ 7.899 \\ 1.728 \\ 6.295 \\ 92.570 \\ (1) \end{array}$	0.494 3.765 0.802 2.592 74.050 (1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.085 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new [existing] source subject to the primary zinc subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

Table 8-18 Primary Zinc Zinc Reduction Furnace Wet Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per reduced	million pounds) of zinc
Cadmium Zinc	0.334 1.702	0.134 0.701

Table 8-19 Primary Zinc Preleach of Zinc Concentrates

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate leached	million pounds) of
Cadmium Zinc	0.180 0.919	0.072 0.378

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	Table	e 8-20	
	Primai	y Zinc	
Leaching	Wet Air	Pollution	Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per processed through lea	million pounds) of zincaching
Cadmium Zinc	0.000 0.000	0.000 0.000

Table 8-21 Primary Zinc Electrolyte Bleed Wastewater

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of catho zinc produced	
Cadmium Zinc	0.086 0.441	0.035 0.182

Table 8-22 Primary Zinc Cathode and Anode Wash Wastewater

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
Cadmium Zinc	0.150 0.766	0.060 0.315

Table 8-23 Primary Zinc Casting Wet Air Pollution Control

	PSES		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zinc cast		
Cadmium Zinc	0.051 0.262	0.021 0.108	

Table 8-24 Primary Zinc Casting Contact Cooling

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zinc cast	
Cadmium Zinc	0.036 0.185	0.014 0.076

Table 8-25
Primary Zinc
Cadmium Plant Wastewater

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of cadmiur produced	
Cadmium Zinc	1.234 6.295	0.494 2.592

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.086 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the standards set forth in s. NR 274.085.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter IX — Metallurgical Acid Plants

NR 274.09 Applicability; description of the metallurgical acid plants subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the byproduct sulfuric acid at primary copper smelters, primary zinc facilities, primary lead facilities, and primary molybdenum facilities, including any associated air pollution control or gas conditioning systems for sulfur dioxide off-gasses from pyrometallurgical acid plants operations.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.092 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 9-1 Metallurgical Acid Plants

	BPT Effluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n sulfuric acid capacity	nillion pounds) of 100%
Cadmium	0.180	0.090
Copper	5.000	2.000
Lead	1.800	0.790
Zinc	3.600	0.900
Fluoride (1)	212.800	121.000
Molybdenum (1)	40.180	20.790
Total suspended solids	304.000	152.000
pH	(2)	(2)

(1) For molybdenum acid plants only

(2) Within the range of 6.0 to 9.0 at all times

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.093 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 9-2 Metallurgical Acid Plants

		·=
	BPT Effluent Limitation	S
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi sulfuric acid capacity	llion pounds) of 100%
Arsenic	3.550	1.584
Cadmium	0.511	0.204
Copper	3.269	1.558
Lead	0.715	0.332
Zinc	2.605	1.073
Fluoride (1)	89.390	50.820

(1) For molybdenum acid plants only

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.094 New source performance standards. Any new source subject to this subchapter shall achieve the following at and ards:

Table 9-3
Metallurgical Acid Plants

	wietanuigical Acid i i	21103
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per sulfuric acid capacity	million pounds) of 100%
Arsenic	3.550	1.584
Cadmium	0.511	0.204
Copper	3.269	1.558
Lead	0.715	0.332
Zinc	2.605	1.073
Fluoride (1)	89.390	50.820
Total suspended solids	38.310	30.650
pH	(2)	(2)

(1) For molybdenum acid plants only

(2) Within the range of 6.0 to 9.0 at all times

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.095 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new [existing] source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

Table 9-4 Metallurgical Acid Plants

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n sulfuric acid capacity	nillion pounds) of 100%
Cadmium Zinc	0.511 2.605	0.204 1.073

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.096 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.093.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter X — Primary Tungsten

NR 274.10 Applicability; description of the primary tungsten subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of tungsten at primary tungsten facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology

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currently available. Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 10-1 Primary Tungsten Tungstic Acid Rinse

	I ungstie Acid Iun	DC
	BPT Effluent Limita	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per r acid produced	million pounds) of tungstic
Lead Zinc	17.230 59.900	8.205 25.030
Ammonia (as N)	5,469.000	2,404.000
Total suspended solid pH	s 1,682.000 (1)	800.000 (1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-2 Primary Tungsten Acid Leach Wet Air Pollution Control

	BPT Effluent Limit	ations
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per acid produced	million pounds) of tungstic
Lead	15.040	7.162
Zinc	52.280	21.840
Ammonia (as N)	4,773.000	2,098.000
Total suspended solid	s 1,468.000	698.300
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-3 Primary Tungsten Alkali Leach Wash

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of sodium
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	s 0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 10-4 Primary Tungsten Alkali Leach Wash Condesate

	BPT Effluent Limits	ations
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of sodium
Lead Zinc Ammonia (as N) Total suspended solids pH	8.057 28.011 2,557.000 786.200 (1)	$3.837 \\ 11.700 \\ 1,124.000 \\ 374.100 \\ (1)$

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-5
Primary Tungsten
Ion-Exchange Raffinate
Commingled With Other Process or Nonprocess Waters

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of ammonit tungstate produced	
Lead	37.160	17.700
Zinc	129.200	53.970
Ammonia (as N)	11,790.000	5,185.000
Total suspended solids		1,726.800
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 10-6 Primary Tungsten Ion-Exchange Raffinate Not Commingled With Other Process or Nonprocess Waters

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli- tungstate produced	on pounds) of ammonium
Lead	37.160	17.700
Zine	129.200	53.970
Ammonia (as N)(1)	11,790.000	5,185.000
Total suspended solids	3,627.000	1,726.800
рН	(2)	(2)

⁽¹⁾ The limitation for ammonia does not apply if the mother liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1,000 mg/l, this mother liquor or raffinate is treated by ammonia stripping, and this mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.
(2) Within the range of 7.0 to 10.0 at all times

Table 10-7 Primary Tungsten Calcium Tungstate Precipitate Wash

	BPT Effluent Limita	ations
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of calcium
Lead	31.000	14.760
Zine	107.800	45.020
Ammonia (as N)	9,838.000	4,325.000
Total suspended solids	3,036.000	1,439.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-8 Primary Tungsten Crystallization and Drying of Ammonium Paratungstate

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million paratungstate produced	pounds) of ammonium
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-9
Primary Tungsten
Ammonium Paratungstate Conversion to Oxides
Wet Air Pollution Control

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million oxide produced	pounds) of tungsten
Lead	11.600	5.300
Zinc	40.320	16.380
Ammonia (as N)	3.681.000	1,618.000
Total suspended solids	s 1.132.000	538,500
pH	(1)	(1)

(1) Within the range of 7.0 to 10.0 at all times

Table 10-10
Primary Tungsten
Ammonium Paratungstate Conversion to Oxides
Water of Formation

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million oxide produced	pounds) of tungsten
Lead	0.026	0.013
Zinc	0.092	0.038
Ammonia (as N)	8.398	3.692
Total suspended solids	2.583	1.229
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-11 Primary Tungsten Reduction to Tungsten Wet Air Pollution Control

	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi metal produced	llion pounds) of tungsten
Lead	12.940	6.161
Zinc	44.970	18.790
Ammonia (as N)	4,106.000	1,805.000
Total suspended solids	s 1,263.000	600.700
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-12 Primary Tungsten Reduction to Tungsten Water of Formation

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio metal produced	n pounds) of tungsten
Lead	0.205	0.098
Zinc	0.714	0.298
Ammonia (as N)	65.190	28.660
Total suspended solid	s 20.050	9.536
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-13
Primary Tungsten
Tungsten Powder Acid Leach and Wash

1 uligo	ten i owder Acid Deach and	wasii
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million metal produced	pounds) of tungsten
Lead	1.008	0.480
Zinc	3.504	1.464
Ammonia (as N)	319.900	140.700
Total suspended solid:	s 98.400	46.800
pH	· (1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-14
Primary Tungsten
Molybdenum Sulfide Precipitation
Wet Air Pollution Control

	BPT Effluent Limitations					
		aximum for any 1 day	•		imum for ly average	
Pollutant or pollutant property	mg/kg molybde	(pounds enum sulfid	per e pre	million cipitated	pounds)	of
Lead		0.000			0.000	
Zinc Ammonia (as N)		$0.000 \\ 0.000$			0.000	
Total suspended solid	9	0.000			$0.000 \\ 0.000$	
pH	Ь	(1)			(1)	

(1) Within the range of 7.0 to 10.0 at all times

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.103 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 10-15 Primary Tungsten Tungstic Acid Rinse

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil acid produced	lion pounds) of tungstic
Lead Zinc Ammonia (as N)	11.490 41.850 5,469.000	5.333 17.230 2,404.000

Table 10-16
Primary Tungsten
Acid Leach Wet Air Pollution Control

	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per milli acid produced	on pounds) of tungstic	
Lead Zinc Ammonia (as N)	1.003 3.653 477.400	0.466 1.504 209.900	

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Table 10-17 Primary Tungsten Alkali Leach Wash

	TIMOTI ISOMOTI II WE	**
	BAT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of sodium
Lead Zinc Ammonia (as N)	0.000 0.000 0.000	0.000 0.000 0.000

Table 10-18 Primary Tungsten Alkali Leach Wash Condensate

•	Alkalı Leacli Wasii Coli	uensate
	BAT Effluent Limita	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of sodium
Lead Zinc Ammonia (as N)	5.372 19.570 2,557.000	2.494 8.057 1,124.000

Table 10-19 Primary Tungsten Ion-Exchange Raffinate Commingled With Other Process of Nonprocess Waters

	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of amm y tungstate produced		
Lead Zinc Ammonia (as N)	24.780 90.240 11,790.000	11.500 37.160 5,185.000	

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Table 10-20 Primary Tungsten Ion-Exchange Raffinate

Not Commingled With Other Process of Nonprocess Waters

	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of ammoniur tungstate produced		
Lead Zinc Ammonia (as N) (1)	24.780 90.240 11,790.000	11.500 37.160 5,185.000	

⁽¹⁾ The limitation for ammonia does not apply if the mother liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1,000 mg/l, this mother liquor or raffinate is treated by ammonia stripping, and this mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.

Table 10-21 Primary Tungsten Calcium Tungstate Precipitate Wash

	ordin z diigotato i rooipita	OO TOOLAA
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi tungstate produced	llion pounds) of calcium
Lead Zinc Ammonia (as N)	20.670 75.280 9,838.000	9.594 31.000 4,325.000

Table 10-22 Primary Tungsten Crystallization and Drying of Ammonium Paratungstate

	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of a rty paratungstate produced		
Lead	0.000	0.000	
Zinc	0.000	0.000	
Ammonia (as N)	0.000	0.000	

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Table 10-23
Primary Tungsten
Ammonium Paratungstate Conversion to Oxides
Wet Air Pollution Control

	wet Air Pollution Control	
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million oxide produced	pounds) of tungsten
Lead Zinc	0.773 2.817	0.359 1.160
Ammonia (as N)	368.200	161.900

Table 10-24
Primary Tungsten
Ammonium Paratungstate Conversion to Oxides
Water of Formation

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill oxide produced	lion pounds) of tungsten
Lead Zinc Ammonia (as N)	0.018 0.064 8.398	0.008 0.026 3.692

Table 10-25 Primary Tungsten Reduction to Tungsten Wet Air Pollution Control

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million metal produced	pounds) of tungsten
Lead Zinc Ammonia (as N)	0.862 3.142 410.600	0.406 1.294 180.500

Table 10-26 Primary Tungsten Reduction to Tungsten Water of Formation

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill metal produced	ion pounds) of tungsten
Lead	0.137	0.064
Zinc	0.499	0.205
Ammonia (as N)	65.190	28.660

Table 10-27 Primary Tungsten Tungsten Powder Acid Leach and Wash

Tanggren 1 0 Water Field Eleater and Water		
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill metal produced	ion pounds) of tungsten
Lead Zinc Ammonia (as N)	0.672 2.448 319.900	0.312 1.008 140.700

Table 10-28 Primary Tungsten Molybdenum Sulfide Precipitation Wet Air Pollution Control

	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide pre	million pounds) of cipitated	
Lead Zinc Ammonia (as N)	0.000 0.000 0.000	0.000 0.000 0.000	

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.104 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 10-29 Primary Tungsten Tungstic Acid Rinse

$\begin{tabular}{ c c c c c c c c } \hline & NSPS \\ \hline & Maximum for \\ any 1 day & Maximum for \\ any 1 day & monthly average \\ \hline \hline Pollutant or \\ pollutant property & mg/kg (pounds per million pounds) of tungsti \\ pollutant property & acid produced \\ \hline Lead & 11.490 & 5.333 \\ Zinc & 41.850 & 17.230 \\ Ammonia (as N) & 5,469.000 & 2,404.000 \\ Total suspended solids & 615.500 & 492.300 \\ pH & (1) & (1) \\ \hline \end{tabular}$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		NSPS	
pollutant property acid produced Lead 11.490 5.333 Zinc 41.850 17.230 Ammonia (as N) 5,469.000 2,404.000 Total suspended solids 615.500 492.300			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			million pounds) of tungstic
Ammonia (as N) 5,469.000 2,404.000 Total suspended solids 615.500 492.300	Lead	11.490	5.333
Total suspended solids 615.500 492.300	Zinc	41.850	17.230
	Ammonia (as N)	5,469.000	2,404.000
	Total suspended solids	615.500	492.300
			(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-30 Primary Tungsten Acid Leach Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per acid produced	million pounds) of tungstic
Lead	1.003	0.466
Zinc	3.653	1.504
Ammonia (as N)	477.400	209.900
Total suspended solids	53.720	42.970
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-31 Primary Tungsten Alkali Leach Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of sodium
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	s 0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 10-32 Primary Tungsten Alkali Leach Wash Condesate

- And Hill	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of sodium
Lead Zinc Ammonia (as N) Total suspended solids pH	5.372 19.570 2,557.000 287.800 (1)	$\begin{array}{c} 2.494 \\ 8.057 \\ 1,124.000 \\ 229.600 \\ (1) \end{array}$

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-33 Primary Tungsten
Ion-Exchange Raffinate
Commingled With Other Process or Nonprocess Waters

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill tungstate produced	ion pounds) of ammonium
Lead	24.780	11.500
Zinc	90.240	37.160
Ammonia (as N)	11,790.000	5,185.000
Total suspended solids	s 1,327.000	1,062.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-34 Primary Tungsten Ion-Exchange Raffinate

Not Commingled With Other Process or Nonprocess Waters

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli tungstate produced	ion pounds) of ammonium
Lead	24.780	11.500
Zinc	90.240	37.160
Ammonia (as N) (1)	11,790.000	5,185.000
Total suspended solids		1,062,000
pH	(2)	(2)

⁽¹⁾ The limitation for ammonia does not apply if the mother liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1,000 mg/l, this mother liquor or raffinate is treated by ammonia stripping, and this mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.
(2) Within the range of 7.0 to 10.0 at all times

Table 10-35 Primary Tungsten Calcium Tungstate Precipitate Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of calcium
Lead	20.670	9.594
Zinc	75.280	31.000
Ammonia (as N)	9,838.000	4,325.000
Total suspended solids	1,107.000	885.600
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-36 Primary Tungsten Crystallization and Drying of Ammonium Paratungstate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million paratungstate produced	n pounds) of ammonium
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

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Table 10-37 Primary Tungsten Ammonium Paratungstate Conversion to Oxides Wet Air Pollution Control

Woo in I ondoor c	0110101
NSPS	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per oxide produced	million pounds) of tungsten
0.773	0.359
2.817	1.160
368.200	161.900
s 41.430	33.150
(1)	(1)
	NSPS Maximum for any 1 day mg/kg (pounds per oxide produced 0.773 2.817 368.200 41.430

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-38
Primary Tungsten
Ammonium Paratungstate Conversion to Oxides
Water of Formation

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per oxide produced	million pounds) of tungsten
Lead	0.018	0.008
Zinc	0.064	0.026
Ammonia (as N)	8.398	3.692
Total suspended solids	0.945	0.756
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-39
Primary Tungsten
Reduction to Tungsten Wet Air Pollution Control

•	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per metal produced	million pounds) of tungsten
Lead	0.862	0.400
Zine	3.142	1.294
Ammonia (as N)	410.600	180.500
Total suspended solids	s 46.200	36.960
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-40
Primary Tungsten
Reduction to Tungsten Water of Formation

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per metal produced	million pounds) of tungsten
Lead	0.137	0.064
Zinc	0.499	0.205
Ammonia (as N)	65.190	28.660
Total suspended solids	7.335	5.868
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-41 Primary Tungsten Tungsten Powder Acid Leach and Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil metal produced	lion pounds) of tungsten
Lead	0.672	0.312
Zinc	2.448	1.008
Ammonia (as N)	319.900	140.700
Total suspended solids	36.000	28.800
pH	(1)	(1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

Table 10-42
Primary Tungsten
Molybdenum Sulfide Precipitation
Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide pro	million pounds) of ecipitated
Lead Zinc Ammonia (as N) Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 (1)

⁽¹⁾ Within the range of 7.0 to 10.0 at all times

NR 274.105 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new source subject to this sub-

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

chapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.103.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.106 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.103.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XI — Primary Columbium-Tantalum

NR 274.11 Applicability; description of the primary columbium-tantalum subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of columbium or tantalum by primary columbium-tantalum facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.112 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 11-1
Primary Columbium-Tantalum
Concentrate Digestion Wet Air Pollution Control

	BPT Eff	luent Limi	tatior	ıs		
	Maximum for any 1 day		Maximum for monthly average			
		(pounds ate digeste		million	pounds)	of
Lead Zinc Ammonia (as N) Fluoride Total suspended solids pH		2.612 9.080 829.000 217.700 255.000 (1)			1.244 3.794 364.500 124.400 121.300 (1)	

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

Table 11-2 Primary Columbium-Tantalum Solvent Extraction Raffinate

BPT Effluent Limitations							
	Maximum for any 1 day			Maximum for monthly average			
Pollutant or pollutant property	mg/kg concentr	(pounds ate digeste	per d	million	pounds)	of	
Lead		3.888			1.851		
Zinc		13.520			5.647		
Ammonia (as N)]	1,233.000			542.500		
Fluoride	324.000				185.100		
Total suspended solid	379.500				189.500		
pН		(1)			(1)		

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

Table 11-3
Primary Columbium-Tantalum
Solvent Extraction Wet Air Pollution Control

	BPT Ef	fluent Limi	tation	ns		
	Maximum for any 1 day			Maximum for monthly average		
Pollutant or pollutant property	mg/kg (pounds per concentrate digested			million	pounds)	of
Lead Zinc Ammonia (as N) Fluoride Total suspended solids	2	1.032 3.586 327.400 85.960 100.700			0.491 1.498 143.900 49.120 47.890	
pH	5	(1)			(1)	

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

Table 11-4 Primary Columbium-Tantalum Precipitation and Filtration

	BPT Effluent Limitation	าร		
	Maximum for any 1 day	Maximum for monthly average		
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of		
Lead	5.750	2.738		
Zinc	19.990	8.350		
Ammonia (as N)	1,825.000	802.200		
Fluoride	479.100	273.800		
Total suspended solids	s 561.300	267.000		
pH	(1)	(1)		

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

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Table 11-5 Primary Columbium-Tantalum Precipitation and Filtration Wet Air Pollution Control

	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride Total suspended solida pH	26.680 92.730 8,466.000 2,223.000 s 2,604.000 (1)	$12.700 \\ 38.740 \\ 3,722.000 \\ 1,270.000 \\ 1,239.000 \\ (1)$

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

Table 11-6 Primary Columbium-Tantalum Tantalum Salt Drying

	I WII WILLIAM NOW IN IN THE	
***************************************	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millior salt dried	pounds) of tantalum
Lead Zinc Ammonia (as N) Fluoride Total suspended solid pH	25.430 88.390 8,070.000 2,119.000 s 2,482.000 (1)	$12.110 \\ 36.930 \\ 3,548.000 \\ 1,211.000 \\ 1,181.000 \\ (1)$

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

Table 11-7 Primary Columbium-Tantalum Oxides Calcining Wet Air Pollution Control

	BPT Effluent Limitation	ıs
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per columbium-tantalum ox	million pounds) of de dried
Lead Zinc Ammonia (as N) Fluoride Total suspended solida pH	16.140 56.100 5,122.000 1,345.000 s 1,576.000 (1)	7.685 23.440 2,252.000 768.500 749.200 (1)

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

Table 11-8 Primary Columbium-Tantalum Reduction of Tantalum Salt to Metal

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million salt reduced	pounds) of tantalum
Lead Zinc Ammonia (as N) Fluoride Total suspended solids pH	69.750 242.500 22,140.000 5,813.000 6,809.000	33.220 101.300 9,732.000 3,322.000 3,239.000 (1)

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

Table 11-9
Primary Columbium-Tantalum
Reduction of Tantalum Salt to Metal
Wet Air Pollution Control

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million salt reduced	pounds) of tantalum
Lead Zinc Ammonia (as N) Fluoride Total suspended solid pH	0.858 2.983 272.400 71.510 s 83.770 (1)	0.409 1.246 119.700 40.860 39.840 (1)

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

Table 11-10 Primary Columbium-Tantalum Tantalum Powder Wash

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million powder washed	pounds) of tantalum
Lead	8.582	4.087
Zinc Ammonia (as N)	$29.830 \\ 2,724.400$	$12.470 \\ 1,198.000$
Fluoride	715.200	408.700
Total suspended solids pH	837.800 (1)	398.500 (1)

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

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Table 11-11
Primary Columbium-Tantalum
Consolidation and Casting Contact Cooling

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of columbium or tantalum cast or consolidated	
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.000
Total suspended solid:	s 0.000	0.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.113 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 11-12 Primary Columbium-Tantalum Concentrate Digestion Wet Air Pollution Control

	BAT Effluent Limitation	าร
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride	0.174 0.635 82.910 21.770	0.081 0.261 36.450 12.440

Table 11-13 Primary Columbium-Tantalum Solvent Extraction Raffinate

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride	2.592 9.442 1,233.000 324.000	1.203 3.888 542.500 185.100

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Table 11-14
Primary Columbium-Tantalum
Solvent Extraction Wet Air Pollution Control

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride	0.069 0.251 32.790 8.610	0.032 0.103 14.420 4.920

Table 11-15 Primary Columbium-Tantalum Precipitation and Filtration

	BAT Effluent Limitation	18
,	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc	3.833 13.960	1.780 5.750
Ammonia (as N) Fluoride	$\substack{1,825.000\\479.100}$	802.200 273.800

Table 11-16
Primary Columbium-Tantalum
Precipitation and Filtration Wet Air Pollution Control

BAT Effluent Limitations		ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride	1.778 6.478 846.600 222.300	0.826 2.668 372.200 127.000

Table 11-17
Primary Columbium-Tantalum
Tantalum Salt Drying

		5
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill salt dried	lion pounds) of tantalum
Lead Zinc Ammonia (as N) Fluoride	16.950 61.750 8,070.000 2,119.000	7.871 25.430 3,548.000 1,211.000

Table 11-18
Primary Columbium-Tantalum
Oxides Calcining Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per columbium-tantalum ox	million pounds) of ide dried
Lead Zinc Ammonia (as N) Fluoride	1.076 3.919 512.200 134.500	0.500 1.614 225.200 76.840

Table 11-19 Primary Columbium-Tantalum Reduction of Tantalum Salt to Metal

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million salt reduced	pounds) of tantalum
Lead Zinc Ammonia (as N) Fluoride	46.500 169.400 22,140.000 5,813.000	21.590 69.750 9,732.000 3,322.000

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Table 11-20
Primary Columbium-Tantalum
Reduction of Tantalum Salt to Metal
Wet Air Pollution Control

		•	
	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per milli salt reduced	on pounds) of tantalum	
Lead	0.572	0.266	
Zinc	2.084	0.858	
Fluoride	71.510	40.860	

Table 11-21
Primary Columbium-Tantalum
Tantalum Powder Wash

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill powder washed	lion pounds) of tantalum
Lead Zinc Ammonia (as N) Fluoride	5,721 20.840 2,724.400 715.200	2.656 8.582 1,198.000 408.700

Table 11-22
Primary Columbium-Tantalum
Consolidation and Casting Contact Cooling

	· ·	Ü
	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of colu or tantalum cast or consolidated	
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.114 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 11-23 Primary Columbium-Tantalum Concentrate Digestion Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride Total suspended solids pH	$0.174 \\ 0.635 \\ 82.910 \\ 21.770 \\ 8 \\ 9.330 \\ (1)$	0.081 0.261 36.450 12.440 7.464

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

Table 11-24 Primary Columbium-Tantalum Solvent Extraction Raffinate

~~! ***********************************						
		NSPS				
		imum for y 1 day	•		imum for lly average	
Pollutant or pollutant property	mg/kg (concentra	pounds te digeste	per ed	million	pounds)	of
Lead Zinc Ammonia (as N) Fluoride Total suspended solid pH	•	2.592 9.442 233.000 324.000 138.900 (1)			1.203 3.888 542.500 185.100 111.100 (1)	

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

Table 11-25
Primary Columbium-Tantalum
Solvent Extraction Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride Total suspended solids pH	$0.069 \\ 0.251 \\ 32.790 \\ 8.610 \\ 8.690 \\ (1)$	$egin{array}{c} 0.032 \\ 0.103 \\ 14.420 \\ 4.920 \\ 2.952 \\ (1) \\ \end{array}$

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

Table 11-26 Primary Columbium-Tantalum Precipitation and Filtration

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride Total suspended solids pH	$3.833 \\ 13.960 \\ 1,825.000 \\ 479.100 \\ s & 205.400 \\ (1)$	1.780 5.750 802.200 273.800 164.300 (1)

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

Table 11-27 Primary Columbium-Tantalum Precipitation and Filtration Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead	1.778	0.826
Zinc	6.478	2.668
Ammonia (as N)	846.600	372.200
Fluoride	222.300	127.000
Total suspended solids	95.270	76.210
pH	(1)	(1)

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

Table 11-28 Primary Columbium-Tantalum Tantalum Salt Drying

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million salt dried	pounds) of tantalum
Lead	16.950	7.871
Zine Ammonia (as N)	$\substack{61.750 \\ 8,070.000}$	$25.430 \\ 3.548.000$
Fluoride	2,119.000	1,211.000
Total suspended solids		726.500
pH	(1)	(1)

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

Table 11-29 Primary Columbium-Tantalum Oxides Calcining Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per columbium-tantalum ox	million pounds) of ide dried
Lead Zinc Ammonia (as N) Fluoride Total suspended solida pH	1.076 3.919 512.200 134.500 s 57.630 (1)	$egin{array}{c} 0.500 \\ 1.614 \\ 225.200 \\ 76.840 \\ 46.110 \\ (1) \\ \end{array}$

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

Table 11-30 Primary Columbium-Tantalum Reduction of Tantalum Salt to Metal

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill salt reduced	ion pounds) of tantalum
Lead	46.500	21.590
Zinc	169.400	69.750
Ammonia (as N)	22,140.000	9,732.000
Fluoride	5,813.000	3,322.000
Total suspended solids		1,993.000
pH	(1)	(1)

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

Table 11-31
Primary Columbium-Tantalum
Reduction of Tantalum Salt to Metal
Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per salt reduced	million pounds) of tantalum
Lead	, 0.572	0.266
Zinc	2.084	0.858
Ammonia (as N)	272.400	119.700
Fluoride	71.510	40.860
Total suspended solid	s 30.650	24.520
pН	(1)	(1)

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

Table 11-32 Primary Columbium-Tantalum Tantalum Powder Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio powder washed	n pounds) of tantalum
Lead	5.721	2.656
Zinc	20.840	8.582
Ammonia (as N)	2,724.000	1,198.000
Fluoride	715.200	408.700
Total suspended solids	306.500	245.200
pH	(1)	(1)

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

Table 11-33
Primary Columbium-Tantalum
Consolidation and casting Contact Cooling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of columbium or tantalum cast or consolidated	
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.115 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new [existing] source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.113.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.116 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.113.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XII — Secondary Silver

NR 274.12 Applicability; description of the secondary silver subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the produc-

tion of silver from secondary silver facilities processing photographic and nonphotograpic raw materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.122 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 12-1 Secondary Silver Film Stripping

	r iiii bu ipping	
	BPT Effluent Limitation	ins
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	ng/troy ounce of silver from film stripping	
Copper	95.670	50.350
Zinc	73.510	30.720
Ammonia (as N)	6,712.000	2,951.000
Total suspended solids	2,065.000	981.800
pH	(1)	(1)

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

Table 12-2
Secondary Silver
Film Stripping Wet Air Pollution Control and
Precipitation and Filtration of Film Stripping Solutions
Wet Air Pollution Control

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy once of silver filtration of film strippin	from precipitation and g solutions
Copper	1.843	0.970
Zinc	1.416	0.592
Ammonia (as N)	129.300	56.840
Total suspended solid	s 39.770	18.920
pH	(1)	(1)

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

254-106 NR 274

Table 12-3 Secondary Silver Precipitation and Filtration of Film Stripping Solutions

	3PT Effluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	ng/troy ounce of silver precipitated	
Copper	109.400	57.570
Zine	84.050	35.120
Ammonia (as N)	7,674.000	3,374.000
Total suspended solids	2,361.000	1,123.000
pH	(1)	(1)

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

Table 12-4 Secondary Silver Precipitation and Filtration of Photographic Solutions

Bl	PT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or magnetic pollutant property	mg/troy ounce of silver precipitated	
Copper	50.540	26.600
Zine	38.836	16.226
Ammonia (as N)	3,545.000	1,559.000
Total suspended solids	1,090.600	518.700
pH	(1)	(1)

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

Table 12-5 Secondary Silver Precipitation and Filtration of Photographic Solutions Wet Air Pollution Control

	BPT Effluent Limitations	3
7	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver filtration of photographic	
Copper Zinc Ammonia (as N) Total suspended solids pH	23.070 17.730 1,618.000 497.800 (1)	12.140 7.406 711.400 236.800 (1)

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

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Table 12-6 Secondary Silver Electrolytic Refining

	Dice of oil of the intiling	
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver from electrolytic refining	
Copper	1.444	0.760
Zinc	1.110	0.464
Ammonia (as N)	101.300	44.540
Total suspended solid	s 31.160	14.820
pH	(1)	(1)

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

Table 12-7 Secondary Silver Furnace Wet Air Pollution Control

Lui	nace we man i on a non c	20110101
	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver roasted, smelted, or dried	
Copper	1.273	0.670
Zinc	0.978	0.409
Ammonia (as N)	89.310	39.260
Total suspended solid	s 27.470	13.070
рH	(1)	(1)

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

Table 12-8 Secondary Silver Leaching

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver produced from leaching	
Copper Zinc Ammonia (as N) Total suspended solids pH	0.164 0.126 11.470 3.526 (1)	$egin{array}{c} 0.086 \ 0.053 \ 5.040 \ 1.677 \ (1) \end{array}$

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

Table 12-9
Secondary Silver
Leaching Wet Air Pollution Control and
Precipitation of Nonphotographic Solutions
Wet Air Pollution Control

	BPT Effluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	ng/troy ounce of silver produced from leaching or orecipitated	
Copper	8.417	4.430
Zinc	6.468	2.703
Ammonia (as N)	590.500	259.600
Total suspended solids	181.700	86.390
pH	(1)	(1)

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

Table 12-10 Secondary Silver Precipitation and Filtration of Nonphotographic Solutions

	BPT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	ng/troy ounce of silver precipitated	
Copper	5.833	3.070
Zinc	4.482	1.873
Ammonia (as N)	409.300	179.900
Total suspended solids	125.900	59.870
pH	(1)	(1)

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

Table 12-11

Secondary Silver Floor and Equipment Washdown

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg pollutant property	mg/troy ounce of silver production	
Copper	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.123 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 12-12 Secondary Silver Film Stripping

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver from film stripping	
Copper Zinc Ammonia (as N)	64.450 51.360 6,712.000	30.720 21.150 2,951.000

Table 12-13 Secondary Silver

Film Stripping Wet Air Pollution Control and Precipitation and Filtration of Film Stripping Solutions Wet Air Pollution Control

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy once of silver filtration of film stripping	from precipitation and ng solutions
Copper Zinc Ammonia (as N)	1.242 0.990 129.300	0.592 0.408 56.840

Table 12-14 Secondary Silver Precipitation and Filtration of Film Stripping Solutions

BAT Effluent Limitations	
Maximum for any 1 day	Maximum for monthly average
mg/troy ounce of silver precipitated	
73.690	35.120
58.720	24.180
7,674.000	3,374.000
	Maximum for any 1 day mg/troy ounce of silver 73.690 58.720

Table 12-15 Secondary Silver Precipitation and Filtration of Photographic Solutions

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver precipitated	
Copper Zinc Ammonia (as N)	34.048 27.132 3,545.000	16.226 11.172 1,559.000

Table 12-16 Secondary Silver Precipitation and Filtration of Photographic Solutions Wet Air Pollution Control

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy once of silver filtration of photographic	
Copper Zinc Ammonia (as N)	15.540 12.380 1,618.000	7.706 5.099 711.400

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Table 12-17 Secondary Silver Electrolytic Refining

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver from electrolytic refining	
Copper	0.973	0.464
Zinc	0.775	0.319
Ammonia (as N)	101.300	44.540

Table 12-18 Secondary Silver Furnace Wet Air Pollution Control

	inacc weerin i onation	Control
	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver roasted, smelted, or dried	
Copper Zinc Ammonia (as N)	0.000 0.000 0.000	0.000 0.000 0.000

Table 12-19 Secondary Silver Leaching

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver produced from leaching	
Copper Zinc Ammonia (as N)	0.110 0.088 11.470	0.053 0.036 5.040

254-112 NR 274

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Table 12-20 Secondary Silver Leaching Wet Air Pollution Control and Precipitation of Nonphotographic Solutions Wet Air Pollution Control

BAT Effluent Limitations		
:	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver produced from leaching or precipitated	
Copper Zinc Ammonia (as N)	5.671 4.519 590.500	2.703 1.861 259.600

Table 12-21 Secondary Silver Precipitation and Filtration of Nonphotographic Solutions

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver precipitated	
Copper Zinc Ammonia (as N)	3.930 3.132 409.300	$\begin{array}{c} 1.873 \\ 1.290 \\ 179.900 \end{array}$

Table 12-22 Secondary Silver Floor and Equipment Washdown

T.	iooi and Equipment was	iuowii
	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
Copper	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.124 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 12-23 Secondary Silver Film Stripping

	0	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	from film stripping
Copper	64.450	30.720
Zinc	51.360	21.150
Ammonia (as N)	6,712.000	2,951.000
Total suspended solid	s 755.300	604.000
pH	(1)	(1)

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

Table 12-24 Secondary Silver Film Stripping Wet Air Pollution Control and Precipitation and Filtration of Film Stripping Solutions Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy once of silver filtration of film strippin	from precipitation and g solutions
Copper	1.242	0.592
Zinc	0.990	0.408
Ammonia (as N)	129.300	56.840
Total suspended solids	s 14.550	11.640
pH	(1)	(1)

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

Table 12-25 Secondary Silver Precipitation and Filtration of Film Stripping Solutions

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mollutant property	g/troy ounce of silver	precipitated
Copper	73.690	35.120
Zine	58.720	24.180
Ammonia (as N)	7.674.000	3,374.000
Total suspended solids	863.600	690.900
pH	(1)	(1)

254-114 NR 274

Table 12-26 Secondary Silver Precipitation and Filtration of Photographic Solutions

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	precipitated
Copper	34.048	16.226
Zinc	27.132	11.172
Ammonia (as N)	3,545.000	1,559.000
Total suspended solids	399.000	319.200
pH	(1)	(1)

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

Table 12-27 Secondary Silver Precipitation and Filtration of Photographic Solutions Wet Air Pollution Control

•	NSPS		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/troy ounce of silver filtration of photographic		of
Copper	15.540	7.406	
Zine	12.380	5.099	
Ammonia (as N)	1,618.000	711.400	
Total suspended solids		145.700	
pH	(1)	(1)	

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

Table 12-28 Secondary Silver Electrolytic Refining

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	from electrolytic refining
Copper	0.973	0.464
Zine	0.775	0.319
Ammonia (as N)	101.300	44.540
Total suspended solids	11.400	9.120
pH	(1)	(1)

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

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Table 12-29 Secondary Silver Furnace Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	roasted, smelted, or dried
Copper	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 12-30 Secondary Silver Leaching

	Ü	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	produced from leaching
Copper	0.110	0.053
Zinc	0.088	0.036
Ammonia (as N)	11.470	5.040
Total suspended solids	1.290	1.032
pH	(1)	(1)

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

Table 12-31 Secondary Silver Leaching Wet Air Pollution Control and Precipitation of Nonphotographic Solutions Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver precipitated	produced from leaching or
Copper	5.671	2.703
Zinc	4.519	1.861
Ammonia (as N)	590.500	259.600
Total suspended solid	s 66.450	53.160
pН	(1)	(1)

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

NR 274

Table 12-32 Secondary Silver Precipitation and Filtration of Nonphotographic Solutions

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	precipitated
Copper	3.930	1.873
Zinc	3.132	1.290
Ammonia (as N)	409.300	179.900
Total suspended solids	46.050	36.840
pH	(1)	(1)

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

Table 12-33 Secondary Silver Floor and Equipment Washdown

1 foot and Equipment Washdown		
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/troy ounce of silver production pollutant property		production
Copper	0.000	0.000
Zine	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.125 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new [existing] source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.123.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.126 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.123.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XIII — Secondary Lead

NR 274.13 Applicability; description of the secondary lead subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of lead by secondary lead facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.132 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 13-1 Secondary Lead Battery Cracking

	<u> </u>	
BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million produced	pounds) of lead scrap
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	$\begin{array}{c} 1.932 \\ 1.407 \\ 0.283 \\ 0.983 \\ 0.000 \\ 27.600 \\ (1) \end{array}$	$0.862 \\ 0.579 \\ 0.135 \\ 0.411 \\ 0.000 \\ 13.130 \\ (1)$

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

Table 13-2 Secondary Lead Blast, Reverberatory, or Rotary Furnace Wet Air Pollution Control

BPT Effluent Limitations				
	Maximum for any 1 day	Maximum for monthly average		
Pollutant or pollutant property	mg/kg (pounds per : produced from smelting	million pounds) of lead		
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	$7.491 \\ 5.455 \\ 1.096 \\ 3.811 \\ 0.000 \\ 107.000 \\ (1)$	3.341 2.245 0.522 1.592 0.000 50.900 (1)		

254-118 NR 274

Table 13-3 Secondary Lead Kettle Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from refining	million pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	1.129 0.094 0.019 0.066 0.000 1.845 (1)	0.058 0.039 0.009 0.027 0.000 0.878 (1)

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

Table 13-4 Secondary Lead Lead Paste Desulfurization

-	read I about Debuilding	01011
	BPT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per processed through de	million pounds) of lead sulfurization
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 0.000 (1)

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

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254-119 NR 274

Table 13-5 Secondary Lead Casting Contact Cooling

	capting contract cours	^ O
	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi	llion pounds) of lead cast
Antimony	0.634	0.283
Arsenic	0.462	0.190
Lead	0.093	0.044
Zinc	0.323	0.135
Ammonia (as N)	0.000	0.000
Total suspended solids	9.061	4.310
pН	(1)	(1)

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

Table 13-6 Secondary Lead Truck Wash

	BPT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of leading
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.060 0.044 0.009 0.031 0.000 0.861 (1)	$egin{array}{c} 0.027 \\ 0.018 \\ 0.004 \\ 0.013 \\ 0.000 \\ 0.410 \\ (1) \\ \end{array}$

254-120 NR 274

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Table 13-7 Secondary Lead Facility Washdown

	BPT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of leading
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 0.000 (1)

Table 13-8 Secondary Lead Battery Case Classification

1	factory Case Classification	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million produced	pounds) of lead scrap
Antimony	0.000	0.000
Arsenic	0.000	0.000
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

DEPARTMENT OF NATURAL RESOURCES

254-121 NR 274

Table 13-9 Secondary Lead Employee Handwash

]	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelting	million pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.077 0.056 0.011 0.039 0.000 1.107 (1)	0.035 0.023 0.005 0.016 0.000 0.527 (1)

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

Table 13-10 Secondary Lead Employee Respirator Wash

	1 7 - 7 2	
	BPT Effluent Limitati	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelt	million pounds) of lead ing
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.126 0.092 0.018 0.064 0.000 1.804	$egin{array}{c} 0.056 \\ 0.038 \\ 0.009 \\ 0.027 \\ 0.000 \\ 0.858 \\ (1) \end{array}$

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

Table 13-11 Secondary Lead Laundering of Uniforms

	<u> </u>	
	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced from smelting	nillion pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids	0.367 0.268 0.054 0.187 0.000 5.248	0.164 0.110 0.026 0.078 0.000 2.496
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.133 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 13-12 Secondary Lead Battery Cracking

	BAT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of lead scra produced	
Antimony	1.299	0.579
Arsenic	0.936	0.384
Lead	0.189	0.087
Zine	0.687	0.283
Ammonia (as N)	0.000	0.000

Table 13-13 Secondary Lead Blast, Reverberatory, or Rotary Furnace Wet Air Pollution Control

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	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi produced from smelting	llion pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N)	5.038 3.628 0.731 2.662 0.000	2.245 1.488 0.339 1.096 0.000

Table 13-14 Secondary Lead Kettle Wet Air Pollution Control

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced from refining	illion pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N)	0.087 0.063 0.013 0.046 0.000	0.039 0.026 0.006 0.019 0.000

Table 13-15 Secondary Lead Lead Paste Desulfurization

BAT Effluent Limitations		
·	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per processed through de	million pounds) of lead sulfurization
Antimony Arsenic Lead Zinc Ammonia (as N)	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000

Table 13-16 Secondary Lead Casting Contact Cooling

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio	on pounds) of lead cast
Antimony	0.042	0.019
Arsenic	0.031	0.013
Lead	0.006	0.003
Zinc	0.022	0.009
Ammonia (as N)	0.000	0.000

Table 13-17 Secondary Lead Truck Wash

	BAT Effluent Limitations	
,	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil produced from smelting	lion pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N)	0.041 0.029 0.006 0.021 0.000	0.018 0.012 0.003 0.009 0.000

Table 13-18 Secondary Lead Facility Washdown

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of leading
Antimony Arsenic Lead Zinc Ammonia (as N)	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000

Table 13-19 Secondary Lead Battery Case Classification

	Daviery Case Classificati	OII
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of lead scrap produced	
Antimony	0.000	0.000
Arsenic	0.000	0.000
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000

Table 13-20 Secondary Lead Employe Handwash

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N)	0.052 0.038 0.008 0.028 0.000	0.023 0.015 0.004 0.011 0.000

Table 13-21 Secondary Lead Employe Respirator Wash

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelting	million pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N)	0.085 0.061 0.012 0.045 0.000	0.038 0.025 0.006 0.018 0.000

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Table 13-22 Secondary Lead Laundering of Uniforms

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced from smelting	
Antimony Arsenic Lead Zinc Ammonia (as N)	0.247 0.178 0.036 0.131 0.000	0.110 0.073 0.017 0.054 0.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.134 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 13-23 Secondary Lead Battery Cracking

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio produced	on pounds) of lead scrap
Antimony	1.299	0.579
Arsenic	0.936	0.384
Lead	0.189	0.087
Zinc	0.687	0.283
Ammonia (as N)	0.000	0.000
Total suspended solids	10.100	8.076
pH	(1)	(1)

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

Table 13-24 Secondary Lead Blast, Reverberatory, or Rotary Furnace Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of leading
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	5.038 3.628 0.731 2.662 0.000 39.150 (1)	2.245 1.488 0.339 1.096 0.000 31.320

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

Table 13-25 Secondary Lead Kettle Wet Air Pollution Control

NSPS			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per produced from refinir	million pounds) of lead	
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 0.000 (1)	

Table 13-26 Secondary Lead Lead Paste Desulfurization

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per processed through de	million pounds) of lead sulfurization
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 0.000 (1)

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

Table 13-27 Secondary Lead Casting Contact Cooling

casing contact couring		
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil	lion pounds) of lead cast
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	$egin{array}{c} 0.042 \\ 0.031 \\ 0.006 \\ 0.022 \\ 0.000 \\ 0.330 \\ (1) \\ \end{array}$	0.019 0.013 0.003 0.009 0.000 0.264 (1)

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

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Table 13-28 Secondary Lead Truck Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of leading
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	$egin{array}{c} 0.041 \\ 0.029 \\ 0.006 \\ 0.021 \\ 0.000 \\ 0.315 \\ (1) \\ \end{array}$	0.018 0.012 0.003 0.009 0.000 0.252 (1)

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

Table 13-29 Secondary Lead Facility Washdown

	I delity washed wit	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelting	million pounds) of lead
Antimony Arsenic Lead Zinc Ammonia (as N)	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000
Total suspended solids pH	0.000 (1)	0.000 (1)

Table 13-30 Secondary Lead Battery Case Classification

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million produced	pounds) of lead scrap
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 (1)

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

Table 13-31 Secondary Lead Employee Handwash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelt	million pounds) of leading
Antimony	0.052	0.023
Arsenic	0.038	0.015
Lead	0.008	0.004
Zinc	0.028	0.011
Ammonia (as N)	0.000	0.000
Total suspended solids	0.405	0.324
pН	(1)	(1)

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

Table 13-32 Secondary Lead Employee Respirator Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of leading
Antimony Arsenic Lead Zinc Ammonia (as N) Total suspended solids pH	0.085 0.061 0.012 0.045 0.000 0.660 (1)	0.038 0.025 0.006 0.018 0.000 0.528 (1)

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

Table 13-33 Secondary Lead Laundering of Uniforms

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelti	million pounds) of leading
Antimony	0.247	0.110
Arsenic	0.178	0.073
Lead	0.036	0.017
Zinc	0.131	0.054
Ammonia (as N)	0.000	0.000
Total suspended solids	1.920	1.536
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.135 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new [existing] source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.133.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.136 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.133.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XIV — Primary Antimony

NR 274.14 Applicability; description of the primary antimony subcategory. This subchapter applies to the discharge of pollutants to waters of

the state and the introduction of pollutants into POTWs from the production of antimony at primary antimony facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.142 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 14-1 Primary Antimony Sodium Antimonate Autoclave Wastewater

	BPT Effluent Limitation	ıs
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of antimony contained in sodium antimonate product	
Antimony	44.840	20.000
Arsenic	32,650	14.530
Mercury	3.906	1.562
Total suspended solid	640.600	304.700
pH	(1)	(1)

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

Table 14-2 Primary Antimony Fouled Anolyte

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of antimony metal produced by electrowinning	
Antimony Arsenic Mercury	44.840 32.650 3.906	20.000 14.530 1.562
Total suspended solids pH	640.600 (1)	304.700 (1)

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

Table 14-3 Primary Antimony Cathode Antimony Wash Water

	conode minimion, wash v	1 4001
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of antimony metal produced by electrowinning	
Antimony Arsenic Mercury Total suspended solid pH	89.680 65.310 7.812 s 1,281.000 (1)	40.000 29.060 3.125 609.300 (1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.143 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 14-4
Primary Antimony
Sodium Antimonate Autoclave Wastewater

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of antimony contained in sodium antimonate product	
Antimony Arsenic Mercury	30.150 21.720 2.344	13.440 9.687 0.937

Table 14-5 Primary Antimony Fouled Anolyte

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of antimony metal produced by electrowinning	
Antimony Arsenic Mercury	30.150 21.720 2.344	13.440 9.687 0.937

Table 14-6 Primary Antimony Cathode Antimony Wash Water

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of antimony metal produced by electrowinning	
Antimony Arsenic Mercury	$\begin{array}{ccc} 60.310 & 26.870 \\ 43.430 & 19.370 \\ 4.687 & 1.875 \end{array}$	

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.144 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 14-7
Primary Antimony
Sodium Antimonate Autoclave Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio contained in sodium anti	on pounds) of antimony monate product
Antimony Arsenic Mercury Total suspended solids pH	30.150 21.720 2.344 s 234.400 (1)	13.440 9.687 0.937 187.500 (1)

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

Table 14-8 Primary Antimony Fouled Anolyte

	NSPS	· · · · · · · · · · · · · · · · · · ·
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil metal produced by elec	lion pounds) of antimony trowinning
Antimony Arsenic Mercury Total suspended solids	30.150 21.720 2.344 s 234.400	13.440 9.687 0.937 187.500
pH	(1)	· (1)

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Table 14-9 Primary Antimony Cathode Antimony Wash Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/kg (pounds per mil metal produced by elec	lion pounds) of antimony trowinning
Antimony	60.310	26.870
Arsenic	43.430	19.370
Mercury	4.687	1.875
Total suspended solids	468.700	375.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.146 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.143.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XV — Primary Beryllium

NR 274.15 Applicability; description of the primary beryllium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of beryllium from primary beryllium facilities processing beryllium ore concentrates or beryllium oxide raw materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.151 Cyanide. (1) Periodic analyses for cyanide are not required when both of the following conditions are met:

- (a) The first wastewater sample taken in the calendar year has been analyzed and found to contain less than 0.7% mg/l cyanide; and
- (b) The owner or operator certifies in writing to the department or control authority that cyanide is neither generated nor used in the manufacturing process.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.152 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 15-1 Primary Beryllium Solvent Extraction Raffinate from Bertrandite Ore

	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		illion pounds) of beryllium from bertrandite ore as
Beryllium	2,763.000	1,235.000
Chromium (total)	988.000	404.300
Copper	4,267.000	2,246.000
Cyanide (total)	651.300	269.500
Ammonia (as N)	299.400.000	131,600,000
Fluoride	78,610.000	131,600.000
Total suspended solids		43,800.000
pН	(1)	(1)

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

Table 15-2 Primary Beryllium Solvent Extraction Raffinate from Beryl Ore

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		lion pounds) of beryllium om beryl ore as beryllium
Beryllium	270.6	121.0
Chromium (total)	96.8	39.0
Copper	418.0	220.0
Cyanide (total)	63.0	26.4
Ammonia (as N)	29,330.0	12,890.0
Fluoride	7,700.0	4,378.0
Total suspended solid	s 9,020.0	4,290.0
pH	(1)	(1)

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

Table 15-3 Primary Beryllium Beryllium Carbonate Filtrate

	BPT Effluent Limitation	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millic carbonate produced as be	on pounds) of beryllium eryllium
Beryllium	263.800	118.000
Chromium (total)	94.380	38.610
Copper	407.600	214.500
Cyanide (total)	62.210	25.740
Ammonia (as N)	28,590.000	12,570.000
Fluoride	7,508.000	4,269.000
Total suspended solids	s 8,795.000	4,183.000
pH_	(1)	(1)

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

Table 15-4 Primary Beryllium Beryllium Hydroxide Filtrate

	-	
	BPT Effluent Limitation	ıs
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio hydroxide produced as b	
Beryllium	167.280	78.800
Chromium (total)	59.840	24.480
Copper	258.400	136.000
Cyanide (total)	39.440	16.320
Ammonia (as N)	18,128.800	7,969.600
Fluoride	4,760.000	2,706.400
Total suspended solids	s 5,576.000	2,652.000
pH	(1)	(1)

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

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Table 15-5
Primary Beryllium
Beryllium Oxide Calcining Furnace
Wet Air Pollution Control

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million oxide produced	pounds) of beryllium
Beryllium	324.000	126.000
Chromium (total)	116.000	47.470
Copper	501.000	263.000
Cyanide (total)	76.470	31.640
Ammonia (as N)	35,150.000	15,450.000
Fluoride	9,230.000	5,248.000
Total suspended solids	s 10,810.000	5,142.000
pH	(1)	(1)

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

Table 15-6 Primary Beryllium Beryllium Hydroxide Supernatant

Doly main 115 at onice Superingonic		
BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio hydroxide produced from beryllium	
Beryllium	282.9	126.5
Chromium (total)	101.2	41.4
Copper	437.0	230.0
Cyanide (total)	66.7	27.6
Ammonia (as N)	30,660.0	13,480.0
Fluoride	160,308.0	71,201.0
Total suspended solid	s 9,430.0	4,485.0
pH	(1)	(1)

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

Table 15-7 Primary Beryllium Process Water

	11000DD 114001	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pebbles produced	pounds) of beryllium
Beryllium	215.00	96.14
Chromium (total)	76.91	31.46
Copper	332.10	174.80
Cyanide (total)	50.69	20.98
Ammonia (as N)	23,300.00	10,240.00
Fluoride	6,118.00	3,479.00
Total suspended solids	7,167.00	3,409.00
pH	(1)	(1)

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

Table 15-8 Primary Beryllium Fluoride Furance Scrubber

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pebbles produced	pounds) of beryllium
Beryllium	0.000	0.000
Chromium (total)	0.000	0.000
Copper	0.000	0.000
Cyanide (total)	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

Table 15-9 Primary Beryllium Chip Treatment Wastewater

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millior scrap chips treated	pounds) of beryllium
Beryllium	9.533	4.263
Chromium (total)	3.410	1.395
Copper	14.730	7.750
Cyanide (total)	2.248	0.930
Ammonia (as N)	1,033.000	454.200
Fluoride	271.300	154.200
Total suspended solids	317.800	151.100
pH	(1)	(1).

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

Table 15-10 Primary Beryllium Beryllium Pebble Plant Area Vent Wet Air Pollutant Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pebbles produced	pounds) of beryllium
Beryllium	0.000	0.000
Chromium (total)	0.000	0.000
Copper	0.000	0.000
Cyanide (total)	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	s 0.000	0.000
pН	(1)	(1)

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

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Table 15-11 Primary Beryllium Beryllium Ore Gangue Dewatering

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed	pounds) of beryl ore
Beryllium	1.283	.574
Chromium (total)	0.459	0.188
Copper	1.982	1.043
Cyanide (total)	0.302	0.125
Ammonia (as N)	139.032	61.120
Fluoride	36.505	20.756
Total suspended solids	s 42.763	20.339
pH	(1)	(1)

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

Table 15-12 Primary Beryllium Beryllium Ore Gangue Dewatering

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed	pounds) of beryl ore
Beryllium	3.279	1.466
Chromium (total)	1.173	0.480
Copper	5.064	2.665
Cyanide (total)	0.773	0.320
Ammonia (as N)	355.245	156.169
Fluoride	93.275	53.034
Total suspended solids	109.265	51.968
pН	(1)	(1)

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

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Table 15-13 Primary Beryllium Beryl Ore Processing

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed	pounds) of beryl ore
Beryllium	8.983	4.017
Chromium (total)	3.213	1.315
Copper	13.876	7.303
Cyanide (total)	2.118	0.876
Ammonia (as N)	973.490	427.956
Fluoride	255.605	145.330
Total suspended solids	299.423	142.409
pH	(1)	(1)

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

Table 15-14 Primary Beryllium Aluminum Iron Sludge Area Wastewater

	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		million pounds) of total produced as beryllium
Beryllium	575.640	257.400
Chromium (total)	205.920	84.240
Copper	889.200	468.000
Cyanide (total)	135.720	56.160
Ammonia (as N)	62,384.400	27,424.800
Fluoride	16,380.000	9,313.200
Total suspended solids	19,188.000	9,126.000
pH	(1)	(1)

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

Table 15-15 Primary Beryllium Bertrandite Ore Leaching Scrubber

0		
BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million ore processed	n pounds) of bertrandite
Beryllium	1.859	0.831
Chromium (total)	0.665	0.272
Copper	2.871	1.511
Cyanide (total)	0.438	0.181
Ammonia (as N)	201.416	88.545
Fluoride	52.885	30.069
Total suspended solid	s 61.951	29.465
pН	(1)	(1)

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

Table 15-16
Primary Beryllium
Bertrandite Ore Countercurrent and
Decantation Scrubber

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million ore processed	pounds) of bertrandite
Beryllium	0.124	0.056
Chromium (total)	0.044	0.018
Copper	0.192	0.101
Cyanide (total)	0.029	0.012
Ammonia (as N)	13.463	5.919
Fluoride `	3.535	2.010
Total suspended solid	s 4.141	1.970
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.153 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 15-17
Primary Beryllium
Solvent Extraction Raffinate from Bertrandite Ore

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium carbonate produced from bertrandite ore as beryllium	
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride	1,842.000 831.000 2,875.000 449.200 299,400.000 78,610.000	831.000 336.900 1,370.000 179.700 131,600.000 44,700.000

Table 15-18 Primary Beryllium Solvent Extraction Raffinate from Beryl Ore

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium carbonate produced from beryl ore as beryllium	
Beryllium Chromium (total) Copper	180.4 81.4 281.6	81.4 33.0 134.2
Cyanide (total) Ammonia (as N) Fluoride	44.8 29,330.0 7,700.0	17.6 12,890.0 4,378.0

Table 15-19 Primary Beryllium Beryllium Carbonate Filtrate

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium carbonate produced as beryllium	
Beryllium Chromium (total)	175.900 79.370	79.370 32.180
Copper Cyanide (total)	274.600 42.900	130.800 17.160
Ammonia (as N)	28,590.000	12,570.000
Fluoride	7,508.000	4,269.000

Table 15-20 Primary Beryllium Beryllium Hydroxide Filtrate

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium hydroxide produced as beryllium	
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride	111.520 50.320 174.080 27.200 18,128.800 4,760.000	$\begin{array}{c} 50.320 \\ 20.400 \\ 82.960 \\ 10.880 \\ 7,969.600 \\ 2,706.400 \end{array}$

Table 15-21 Primary Beryllium Beryllium Oxide Calcining Furnace Wet Air Pollution Control

		= = =
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium oxide produced	
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride	$216.20 \\ 97.57 \\ 337.50 \\ 52.74 \\ 35,150.00 \\ 9.230.00$	97.57 39.56 160.90 21.10 $15,450.00$ $5,248.00$

Table 15-22 Primary Beryllium Beryllium Hydroxide Supernatant

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium hydroxide produced from scrap and residues as beryllium	
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride	188.6 85.1 294.4 46.0 30,660.0 160,308.0	85.1 34.5 140.3 18.4 13,480.0 71,201.0

Table 15-23 Primary Beryllium Process Water

	1100000	
	BAT Effluent Limitation	18
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli pebbles produced	on pounds) of beryllium
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride	$143.30 \\ 64.68 \\ 223.70 \\ 34.96 \\ 23,300.00 \\ 6,118.00$	64.68 26.22 106.60 13.98 10,240.00 3,479.00

Table 15-24 Primary Beryllium Fluoride Furnace Scrubber

Fluoride Furnace Scrubber	
BAT Effluent Limitations	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pebbles produced	pounds) of beryllium
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
	BAT Effluent Limitations Maximum for any 1 day mg/kg (pounds per million pebbles produced 0.000 0.000 0.000 0.000 0.000 0.000

Table 15-25 Primary Beryllium Chip Treatment Wastewater

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million scrap chips treated	pounds) of beryllium
Beryllium	6.355	2.868
Chromium (total)	2.868	1.163
Copper	9.920	4.728
Cyanide (total)	1.550	0.620
Ammonia (as N)	1,033.000	454.200
Fluoride	271.300	154.200

Table 15-26 Primary Beryllium Beryllium Pebble Plant Area Vent Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pebbles produced	pounds) of beryllium
Beryllium	0.000	0.000
Chromium (total)	0.000	0.000
Copper	0.000	0.000
Cyanide (total)	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.)00

Table 15-27
Primary Beryllium
Beryllium Ore Gaugue Dewatering

	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million processed	pounds) of beryl ore	
Beryllium	0.855	0.386	
Chromium (total)	0.386	0.156	
Copper	1.335	0.636	
Cyanide (total)	0.209	0.083	
Ammonia (as N)	139.032	61.120	
Fluoride	36.505	20.756	

Table 15-28 Primary Beryllium Bertrandite Ore Gaugue Dewatering

Du	i manaric ore daugue Demain	
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed	pounds) of beryl ore
Beryllium	2.185	0.986
Chromium (total)	0.986	0.400
Copper	3.411	1.626
Cyanide (total)	0.533	0.213
Ammonia (as N)	355.245	156.169
Fluoride	93.275	53.034

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Table 15-29 Primary Beryllium Beryl Ore Processing

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio processed	n pounds) of beryl ore
Beryllium	5.988	2.702
Chromium (total)	2.702	1.095
Copper	9.348	4.455
Cyanide (total)	1.461	0.584
Ammonia (as N)	973.490	427.956
Fluoride	255.605	145.330

Table 15-30 Primary Beryllium Aluminum Iron Sludge Area Wastewater

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of total beryllium carbonate produced as beryllium	
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride	383.760 173.160 599.040 93.600 62,384.400 16,380.000	173.160 70.200 285.480 37.440 $27,424.800$ $9,313.200$

Table 15-31 Primary Beryllium Bertrandite Ore Leaching Scrubber

BAT Effluent Limitations	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per millio ore processed	on pounds) of bertrandite
1.239	0.559
0.599	0.227
1.934	0.922
0.302	0.121
201.416	88.545
52.885	30.069
	Maximum for any 1 day mg/kg (pounds per million ore processed 1.239 0.599 1.934 0.302 201.416

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Table 15-32 Primary Beryllium Bertrandite Ore Countercurrent and Decantation Scrubber

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of bertrandite ore processed	
Beryllium	0.083	0.037
Chromium (total)	0.037	0.015
Copper	0.129	0.062
Cyanide (total)	0.020	0.008
Ammonia (as N)	13.463	5.919
Fluoride	3.535	2.010

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.154 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 15-33 Primary Beryllium Solvent Extraction Raffinate from Bertrandite Ore

•	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		illion pounds) of beryllium from bertrandite ore as
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N)	$1,842.000 \ 831.000 \ 2,875.000 \ 449.200 \ 299,400.000$	831.000 336.900 1,370.000 179.700 131,600.000
Fluoride Total suspended solid pH	78,610.000	44,700.000 26,950.000 (1)

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

Table 15-34
Primary Beryllium
Solvent Extraction Raffinate from Beryl Ore

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi carbonate produced fro	llion pounds) of beryllium om beryl ore as beryllium
Beryllium	180.4	81.4
Chromium (total)	81.4	33.0
Copper	281.6	134.2
Cyanide (total)	44.8	17.6
Ammonia (as N)	29,330.0	12,890.0
Fluoride	7,700.0	4,378.0
Total suspended solid	s 3,300.0	2,640.0
pН	(1)	(1)

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

Table 15-35 Primary Beryllium Beryllium Carbonate Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium carbonate produced as beryllium	
Beryllium	175.900	79.370
Chromium (total)	79.370	32.180
Copper	274.600	130.800
Cyanide (total)	42.900	17.160
Ammonia (as N)	28,590.000	12,579.000
Fluoride	7,508,000	4,269.000
Total suspended solids	3,218.000	2,574.000
pH	(1)	(1)

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

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Table 15-36 Primary Beryllium Anode Bake Plant Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil hydroxide produced as	lion pounds) of beryllium beryllium
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride Total suspended solids pH	111.520 50.320 174.080 27.200 18,128.800 4,760.000 2,040.000 (1)	50.320 20.320 82.960 10.880 7,969.600 2,706.400 1,632.000 (1)

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

Table 15-37
Primary Beryllium
Beryllium Oxide Calcining Furnace
Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n oxide produced	nillion pounds) of beryllium
Beryllium	216.20	97.57
Chromium (total)	97.57	39.56
Copper	337.50	160.90
Cyanide (total)	52.74	21.10
Ammonia (as N)	35,150.00	15,450.00
Fluoride	9,230.00	5,248.00
Total suspended solid		3,164.00
pН	(1)	(1)

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

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Table 15-38 Primary Beryllium Beryllium Hydroxide Supernatant

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		lion pounds) of beryllium om scrap and residues as
Beryllium	188.6	85.1
Chromium (total)	85.1	34.5
Copper	294.4	140.3
Cyanide (total)	46.0	18.4
Ammonia (as N)	30,660.0	13,480.0
Fluoride	160,308.0	71,201.0
Total suspended solids	3,450.0	2,760.0
pH	(1)	(1)

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

Table 15-39 Primary Beryllium Process Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pebbles produced	n pounds) of beryllium
Beryllium	143.30	64.68
Chromium (total)	64.68	26.22
Copper	223.70	106.60
Cyanide (total)	34.96	13.98
Ammonia (as N)	23,300.00	10,240.00
Fluoride	$6,\!1180.00$	3,479.00
Total suspended solid	s 2,622.00	2,098.00
pH	(1)	(1)

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

Table 15-40 Primary Beryllium Fluoride Furnace Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pebbles produced	pounds) of beryllium
Beryllium	0.000	0.000
Chromium (total)	0.000	0.000
Copper	0.000	0.000
Cyanide (total)	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 15-41 Primary Beryllium Chip Treatment Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil scrap chips treated	lion pounds) of beryllium
Beryllium	6.355	2.868
Chromium (total)	2.868	1.163
Copper	9.920	4.728
Cyanide (total)	1.550	0.620
Ammonia (as N)	1,033.000	454.200
Fluoride	271.300	154.200
Total suspended solids	s 116.300	93.000
pH	(1)	(1)

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

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Table 15-42 Primary Beryllium Beryllium Pebble Plant Area Vent Wet Air Pollutant Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pebbles produced	pounds) of beryllium
Beryllium	0.000	0.000
Chromium (total)	0.000	0.000
Copper	0.000	0.000
Cyanide (total)	0.000	0.000
Ammonia (as N)	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 15-43 Primary Beryllium Beryllium Ore Gangue Dewatering

		0
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed	pounds) of beryl ore
Beryllium	0.855	0.386
Chromium (total)	0.386	0.156
Copper	1.335	0.636
Cyanide (total)	0.209	0.083
Ammonia (as N)	139.032	61.120
Fluoride	36.505	20.756
Total suspended solids	15.645	12.516
pH	(1)	(1)

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

Table 15-44
Primary Beryllium
Bertrandite Ore Gangue Dewatering

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	mg/kg (pounds per million processed	pounds) of beryl ore
Beryllium	2.185	0.986
Chromium (total)	0.986	0.400
Copper	3.411	1.626
Cyanide (total)	0.533	0.213
Ammonia (as N)	355.245	156.169
Fluoride	93.275	53.034
Total suspended solids		31.980
pH	(1)	(1)

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

Table 15-45 Primary Beryllium Beryl Ore Processing

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	NSPS	
• •	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed	pounds) of beryl ore
Beryllium	5.988	2.702
Chromium (total)	2.702	1.095
Copper	9.348	4.455
Cyanide (total)	1.461	0.584
Ammonia (as N)	973.490	427.956
Fluoride	255.605	145.330
Total suspended solids	s 109.545	87.636
pH	(1)	(1)

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

Table 15-46 Primary Beryllium Aluminum Iron Sludge Area Wastewater

	NSPS	
-	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill carbonate produced as	lion pounds) of beryllium beryllium
Beryllium	383.760	173.160
Chromium (total)	173.160	70.200
Copper	599.040	285.480
Cyanide (total)	93.600	37.440
Ammonia (as N)	62,384.400	27,424.800
Fluoride	16,380.000	9,313.000
Total suspended solid	s 7,020.000	5,616.000
pH	(1)	(1)

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

Table 15-47 Primary Beryllium Bertrandite Ore Leaching Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli ore processed	on pounds) of bertrandite
Beryllium	1.239	0.559
Chromium (total)	0.559	0.227
Copper	1.934	0.922
Cyanide (total)	0.302	0.121
Ammonia (as N)	201.416	88.545
Fluoride	52.885	30.069
Total suspended solids	22.665	18.132
pH	(1)	(1)

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

Table 15-48 Primary Beryllium Bertrandite Ore Countercurrent and Decantation Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million ore processed	pounds) of bertrandite
Beryllium	0.083	0.037
Chromium (total)	0.037	0.015
Copper	0.129	0.062
Cyanide (total)	0.020	0.008
Ammonia (as N)	13.463	5.919
Fluoride	3.535	2.010
Total suspended solids	s 1.515	1.212
pН	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.156 Pretreatment standards for new sources. Except as provided in NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.153.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XVIII — Primary and Secondary Germanium and Gallium

NR 274.18 Applicability; description of the primary and secondary germanium and gallium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of germanium or gallium by primary or secondary germanium or gallium facilities

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.182 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. s. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

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Table 18-1 Primary and Secondary Germamium and Gallium Still Liquor

	BPT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium chlorinated	million pounds) of
Arsenic Lead Zinc Fluoride Total suspended solids pH	131.700 26.460 91.980 2,205.000 2,583.000	58.590 12.600 38.430 1,254.000 1,229.000

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

Table 18-2 Primary and Secondary Germanium and Gallium Chlorinator Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium chlorinated	million pounds) of
Arsenic Lead Zinc Fluoride Total suspended solids pH	$27.530 \\ 5.531 \\ 19.230 \\ 461.000 \\ 540.000 \\ (1)$	$12.250 \\ 2.634 \\ 8.034 \\ 262.100 \\ 256.800 \\ (1)$

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

Table 18-3 Primary and Secondary Germanium and Gallium Germanium Hydrolysis Filtrate

-	BPT Effluent Limitation	8
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium hydrolyzed	million pounds) of
Arsenic	39.440	17.550
Lead	7.925	3.774
Zinc	27.550	11.510
Fluoride	660.500	375.500
Total suspended solids	773.700	368.000
pH	(1)	(1)

Table 18-4 Primary and Secondary Germanium and Gallium Acid Wash and Rinse Water

	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium washed	million pounds) of
Arsenic Lead Zinc Fluoride Total suspended solids pH	$325.500 \\ 65.400 \\ 227.400 \\ 5,450.000 \\ 6,385.000 \\ (1)$	$144.800 \\ 31.140 \\ 94.990 \\ 3,099.000 \\ 3,037.000 \\ (1)$

Table 18-5 Primary and Secondary Germanium and Gallium Gallium Hydrolysis Filtrate

	BPT Effluent Limita	tions
-	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per hydrolyzed	million pounds) of gallium
Arsenic Lead Zinc Fluoride Total suspended solids pH	70.450 14.160 49.220 $1,180.000$ $1,382.000$ (1)	$31.350 \\ 6.742 \\ 20.560 \\ 670.800 \\ 657.300 \\ (1)$

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

Table 18-6
Primary and Secondary Germanium and Gallium
Solvent Extraction Raffinate

	BPT Effluent Limitatio	ns .
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of gallium produced by solvent extraction	
Arsenic Lead	39.330 7.904	17.500 3.764
Zinc Fluoride	27.480 658.700	11.480 374.500
Total suspended solids pH	771.600 (1)	367.000 (1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

254-160 NR 274

NR 274.183 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. s. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 18-7
Primary and Secondary Germanium and Gallium
Still Liquor

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium chlorinated	million pounds) of
Arsenic	131.700	58.590
Lead	26.460	12.600
Zinc	91.980	38.430
Fluoride	2,205.000	1,254.000

Table 18-8 Primary and Secondary Germanium and Gallium Chlorinator Wet Air Pollution Control

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	BAT Effluent Limitations	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium chlorinated	million pounds) of
Arsenic Lead Zinc Fluoride	27.530 5.531 19.230 461.000	12.250 2.634 8.034 262.100

Table 18-9 Primary and Secondary Germanium and Gallium Germanium Hydrolysis Filtrate

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium hydrolyzed	million pounds) of
Arsenic Lead Zinc Fluoride	39.440 7.925 27.550 660.500	17.550 3.774 11.510 375.500

Table 18-10
Primary and Secondary Germanium and Gallium
Acid Wash and Rinse Water

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium washed	million pounds) of
Arsenic	325.500	144.800
Lead	65.400	31.140
Zine	227.400	94.990
Fluoride	5,450.000	3,099.000

Table 18-11 Primary and Secondary Germanium and Gallium Gallium Hydrolysis Filtrate

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m hydrolyzed	illion pounds) of gallium
Arsenic	70.450	31.350
Lead Zinc	14.160 49.220	6.742 20.560
Fluoride	1,180.000	670.800

Table 18-12 Primary and Secondary Germanium and Gallium Solvent Extraction Raffinate

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of gallium produced by solvent extraction	
Arsenic Lead Zinc Fluoride	39.330 7.904 27.480 658.700	17.500 3.764 11.480 374.500

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.184 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.185 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new source subject to this sub-

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chapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.186 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the standards set forth in s. NR 274.183.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XIX — Secondary Indium

NR 274.19 Applicability; description of the secondary indium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of indium at secondary indium facilities processing spent electrolyte solutions and scrap indium metal raw materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.194 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 19-1 Secondary Indium Displacement Supernatant

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per metal produced	million pounds) of indium
Cadmium	2.105	0.929
Lead	2.600	1.238
Zinc	9.037	3.776
Indium	2.724	1.114
Total suspended solids	253.800	120.700
pH	(1)	(1)

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

Table 19-2 Secondary Indium Spent Electrolyte

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per indium produced	million pounds) of cathode
Cadmium	12.170	5.370
Lead	15.040	7.160
Zinc	52.270	21.840
Indium	15.750	6.444
Total suspended solids	1,468.000	698.100
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.195 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

Table 19-3 Secondary Indium Displacement Supernatant

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi metal produced	llion pounds) of indium
Cadmium	2.105	0.929
Lead	2.600	1.238
Zinc	9.037	3.776
Indium	2.724	1.114

Table 19-4 Secondary Indium Spent Electrolyte

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m indium produced	illion pounds) of cathode
Cadmium	12.170	5.370
Lead	15.040	7.160
Zinc	52.270	21.840
Indium	15.750	6.444

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

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NR 274.196 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the standards set forth in s. NR 274.195.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XX — Secondary Mercury

NR 274.20 Applicability; description of the secondary mercury subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of mercury at secondary mercury facilities processing recycled mercuric oxide batteries and other scrap raw materials containing mercury.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.204 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 20-1 Secondary Mercury Spent Battery Electrolyte

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million produced from batteries	pounds) of mercury
Lead	0.030	0.014
Mercury	0.016	0.006
Total suspended solids	1.590	1.272
pH	(1)	(1)

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

Table 20-2 Secondary Mercury Acid Wash and Rinse Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million washed and rinsed	pounds) of mercury
Lead Mercury Total suspended solids pH	0.00056 0.00030 0.03000 (1)	0.00026 0.00012 0.02400 (1)

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

Table 20-3 Secondary Mercury Furnace Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed through furnace	
Lead Mercury Total suspended solids pH	0.000 0.000 0.000 (1)	0.000 0.000 0.000 (1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.206 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following standards:

Table 20-4 Secondary Mercury Spent Battery Electrolyte

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of mer pollutant property produced from batteries		n pounds) of mercury
Lead Mercury	0.030 0.016	0.014 0.006

Table 20-5 Secondary Mercury Acid Wash and Rinse Water

	ficia wash and runse was	
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of me pollutant property washed and rinsed		ion pounds) of mercury
Lead Mercury	0.00056 0.00030	0.00026 0.00012

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Table 20-6 Secondary Mercury Furnace Wet Air Pollution Control

	PSNS	*
Pollutant or pollutant property	Maximum for any 1 day mg/kg (pounds per million processed through furnace	Maximum for monthly average a pounds) of mercury
Lead Mercury	0.000 0.000	0.000 0.000

History: Cr. Register, March, 1991, No. 423; eff. 4-1-91.

Subchapter XXI — Primary Molybdenum and Rhenium

NR 274.21 Applicability; description of the primary molybdenum and rhenium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of molybdenum and rhenium at primary molybdenum and rhenium facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.212 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 25.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 21-1 Primary Molybdenum and Rhenium Molybdenum Sulfide Leachate

	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide lea	million pounds) of ched
Arsenic	0.968	0.431
Lead	0.195	0.093
Nickel	0.889	0.588
Selenium	0.570	0.255
Ammonia (as N)	61.720	27.130
Fluoride	16.210	9.214
Total suspended solids	18.980	9.029
pH	(1)	(1)

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

Table 21-2 Primary Molybdenum and Rhenium Roaster Sulfur Dioxide Scrubber

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide roa	million pounds) of asted
Arsenic	3.509	1.561
Lead	0.705	0.336
Nickel	3.224	2.133
Selenium	2.065	0.924
Ammonia (as N)	223.800	98.390
Fluoride `	58.770	33.410
Total suspended solids	68.840	32.740
pH	(1)	(1)

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

Table 21-3 Primary Molybdenum and Rhenium Molybdic Oxide Leachate

	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds pe molybdenum contai leachate	er million pounds) of ined in molybdic oxide
Arsenic	24.210	10.770
Lead	4.865	2.317
Nickel	22.240	14.710
Selenium	14.250	6.371
Ammonia (as N)	1,544.000	678.800
Fluoride	405.400	230.500
Total suspended solids	474.900	225.900
pH	(1)	(1)

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

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Table 21-4 Primary Molybdenum and Rhenium Hydrogen Reduction Furnace Scrubber

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum metal pov	million pounds) of oder produced
Arsenic	47.860	21.300
Lead	9.617	4.580
Nickel	43.970	29.080
Selenium	28.170	12.600
Ammonia (as N)	3,052.000	1,342.000
Fluoride	801.400	455.700
Total suspended solids	938.800	446.500
pH	(1)	(1)

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

Table 21-5
Primary Molybdenum and Rhenium
Depleted Rhenium Scrubbing Solution

Depleted Internation Services		
	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide roa	
Arsenic	1.497	0.666
Lead	0.301	0.143
Nickel	1.375	0.909
Selenium	0.881	0.394
Ammonia (as N)	95.440	41.960
Fluoride	25.060	14.250
Total suspended solids	29.360	13.960
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.213 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 21-6 Primary Molybdenum and Rhenium Molybdenum Sulfide Leachate

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide lea	
Arsenic Lead Nickel Selenium Ammonia (as N) Fluoride	0.644 0.130 0.255 0.380 61.720 16.210	0.287 0.060 0.171 0.171 27.130 9.214

Table 21-7 Primary Molybdenum and Rhenium Roaster Sulfur Dioxide Scrubber

	BAT Effluent Limitation	S .
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide roa	
Arsenic Lead Nickel Selenium Ammonia (as N) Fluoride	$\begin{array}{c} 2.334 \\ 0.470 \\ 0.924 \\ 1.377 \\ 223.800 \\ 58.770 \end{array}$	1.041 0.218 0.621 0.621 98.390 33.410

Table 21-8 Primary Molybdenum and Rhenium Molybdic Oxide Leachate

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		million pounds) of led in molybdic oxide
Arsenic	16.100	7.182
Lead	3.244	1.506
Nickel	6.371	4.286
Selenium	9.499	4.286
Ammonia (as N)	1,544.000	678.800
Fluoride	405.400	230.500

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Table 21-9 Primary Molybdenum and Rhenium Hydrogen Reduction Furnace Scrubber

BAT Effluent Limitations		
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum metal pov	million pounds) of wder produced
Arsenic	3.183	1.420
Lead	0.641	0.298
Nickel	1.260	0.847
Selenium	1.878	0.847
Ammonia (as N)	305.300	134.200
Fluoride	80.150	45.570

Table 21-10
Primary Molybdenum and Rhenium
Depleted Rhenium Scrubbing Solution

	BAT Effluent Limitation	\$
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide roa	
Arsenic Lead Nickel Selenium Ammonia (as N) Fluoride	0.995 0.201 0.394 0.587 95.440 25.060	0.444 0.093 0.265 0.265 41.960 14.250

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.214 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

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254-171 NR 274

Table 21-11 Primary Molybdenum and Rhenium Molybdenum Sulfide Leachate

	NSPS	-
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide lea	
Arsenic	0.644	0.287
Lead	0.130	0.060
Nickel	0.255	0.171
Selenium	0.380	0.171
Ammonia (as N)	61.720	27.130
Fluoride	16.210	9.214
Total suspended solids	6.945	5.556
pH	(1)	(1)

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

Table 21-12 Primary Molybdenum and Rhenium Roaster Sulfur Dioxide Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide roa	
Arsenic	2.334	1.041
Lead	0.470	0.218
Nickel	0.924	0.621
Selenium	1.377	0.621
Ammonia (as N)	223.800	98.390
Fluoride	58.770	33.410
Total suspended solids	25.190	20.150
pH	(1)	(1)

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

254-172 NR 274

Table 21-13 Primary Molybdenum and Rhenium Molybdic Oxide Leachate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		per million pounds) of cained in molybdic oxide
Arsenic	16.100	7.182
Lead	3.244	1.506
Nickel	6.371	4.286
Selenium	9.499	4.286
Ammonia (as N)	1.544.000	678.800
Fluoride	405.400	230.500
Total suspended solids	173.800	139.000
pH	(1)	(1)

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

Table 21-14
Primary Molybdenum and Rhenium
Hydrogen Reduction Furnace Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum metal pov	
Arsenic	3.183	1.420
Lead	0.641	0.298
Nickel	1.260	0.847
Selenium	1.878	0.847
Ammonia (as N)	305.300	134.200
Fluoride	80.150	45.570
Total suspended solids	34.350	27.480
pН	(1)	(1)

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

Table 21-15 Primary Molybdenum and Rhenium Depleted Rhenium Scrubbing Solution

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide roa	
Arsenic	0.995	0.444
Lead	0.201	0.093
Nickel	0.394	0.265
Selenium	0.587	0.265
Ammonia (as N)	95.440	41.960
Fluoride	25.060	14.250
Total suspended solids	10.740	8.592
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.216 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.213.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXIII — Primary Nickel and Cobalt

NR 274.23 Applicability; description of the primary nickel and cobalt subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of nickel and cobalt by primary nickel and cobalt facilities processing ore concentrate raw materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.232 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

254-174 NR 274

Table 23-1 Primary Nickel and Cobalt Raw Material Dust Control

_		
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of copper, nickel, and cobalt in in crushed raw material	
Copper Nickel Ammonia (as N) Cobalt Total suspended solids pH	0.146 0.148 10.260 0.016 3.157 (1)	$egin{array}{c} 0.077 \\ 0.098 \\ 4.512 \\ 0.007 \\ 1.502 \\ (1) \end{array}$

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

Table 23-2 Primary Nickel and Cobalt Nickel Wash Water

.]	BPT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per powder washed	million pounds) of nickel
Copper Nickel Ammonia (as N) Cobalt Total suspended solids pH	$egin{array}{c} 0.064 \\ 0.065 \\ 4.515 \\ 0.007 \\ 1.389 \\ (1) \end{array}$	0.034 0.043 1.985 0.003 0.660 (1)

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

Table 23-3 Primary Nickel and Cobalt Nickel Reduction Decant

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of nickel
Copper Nickel Ammonia (as N) Cobalt Total suspended solids	$\begin{array}{c} 24.120 \\ 24.370 \\ 1,692.000 \\ 2.666 \\ 520.500 \end{array}$	$\begin{array}{c} 12.700 \\ 16.120 \\ 743.900 \\ 1.143 \\ 247.600 \end{array}$
pH	(1)	(1)

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

Table 23-4 Primary Nickel and Cobalt Cobalt Reduction Decant

Cobait Reduction Decant		Calit
	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper Nickel Ammonia (as N) Cobalt Total suspended solids pH	40.660 41.080 2,852.000 4.494 877.300 (1)	$21.400 \\ 27.180 \\ 1,254.000 \\ 1.926 \\ 417.300 \\ (1)$

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.233 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 23-5 Primary Nickel and Cobalt Raw Material Dust Control

	10011 2110001201 2 0000 0 0110	
BAT Effluent Limitations		
Maximum for Maximum for any 1 day monthly average mg/kg (pounds per million pounds) of corpollutant property nickel, and cobalt in in crushed raw materi		
Copper Nickel Ammonia (as N) Cobalt	0.099 0.042 10.260 0.011	0.047 0.028 4.512 0.005

Table 23-6 Primary Nickel and Cobalt Nickel Wash Water

	BAT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per powder washed	million pounds) of nickel
Copper Nickel Ammonia (as N) Cobalt	0.043 0.019 4.515 0.005	0.021 0.013 1.985 0.002

254-176 NR 274

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Table 23-7 Primary Nickel and Cobalt Nickel Reduction Decant

Nickel Reduction Decar	Πt
BAT Effluent Limitation	ns
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per m produced	nillion pounds) of nickel
$16.250 \\ 6.982 \\ 1,692.000 \\ 1.777$	$7.744 \\ 4.697 \\ 743.900 \\ 0.889$
Table 23-8 Primary Nickel and Cob Cobalt Reduction Deca	
BAT Effluent Limitation	ns
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per m produced	illion pounds) of cobalt
27.390 11.770 2,852.000 2.996	13.050 7.917 1,254.000 1.498
	BAT Effluent Limitatio Maximum for any 1 day mg/kg (pounds per m produced 16.250 6.982 1,692.000 1.777 Table 23-8 Primary Nickel and Cob Cobalt Reduction Deca BAT Effluent Limitatio Maximum for any 1 day mg/kg (pounds per m produced 27.390 11.770 2,852.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.234 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 23-9 Primary Nickel and Cobalt Raw Material Dust Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi nickel, and cobalt in in	llion pounds) of copper, crushed raw material
Copper	0.099	0.047
Nickel	0.042	0.028
Ammonia (as N)	10.260	4.512
Cobalt	0.011	0.005
Total suspended solids	1.155	0.924
pH	(1)	(1)

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

Table 23-10 Primary Nickel and Cobalt Nickel Wash Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per powder washed	million pounds) of nickel
Copper Nickel Ammonia (as N) Cobalt Total suspended solids pH	$0.043 \\ 0.019 \\ 4.515 \\ 0.005 \\ 0.508 \\ (1)$	$egin{array}{c} 0.021 \ 0.013 \ 1.985 \ 0.002 \ 0.406 \ (1) \end{array}$

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

Table 23-11 Primary Nickel and Cobalt Nickel Reduction Decant

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of nickel
Copper	16.250	7.744
Nickel	6.982	4.697
Ammonia (as N)	1,692.000	743.900
Cobalt	1.777	0.889
Total suspended solids	190.400	152.300
pH	(1)	(1)

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

Table 23-12 Primary Nickel and Cobalt Cobalt Reduction Decant

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper Nickel Ammonia (as N) Cobalt Total suspended solids pH	$\begin{array}{c} 27.390 \\ 11.770 \\ 2,852.000 \\ 2.996 \\ 321.000 \\ (1) \end{array}$	$13.050 \\ 7.917 \\ 1,254.000 \\ 1.498 \\ 256.800 \\ (1)$

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.236 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.233.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXIV — Secondary Nickel

NR 274.24 Applicability; description of the secondary nickel subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of nickel by secondary nickel facilities which process slag, spent acids, or scrap metals raw materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.244 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 24-1 Secondary Nickel Slag Reclaim Tailings

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million into the reclaim process	n pounds) of slag input
Chromium Copper Nickel Total suspended solids pH	5.653 24.410 24.670 s 526.800 (1)	2.313 12.850 16.320 250.500 (1)

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

Table 24-2 Secondary Nickel Acid Reclaim Leaching Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per reclaim nickel produc	million pounds) of acid
Chromium	2.198	0.899
Copper	9.491	4.995
Nickel	9.590	6.344
Total suspended solids	204.800	97.400
pH .	(1)	(1)

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

Table 24-3 Secondary Nickel Acid Reclaim Leaching Belt Filter Backwash

NSPS	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per produced	million pounds) of nickel
0.528	0.216
2.278	1.199
2.302	1.523
49.160	23.380
(1)	(1)
	Maximum for any 1 day mg/kg (pounds per produced 0.528 2.278 2.302

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.245 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 24-4 Secondary Nickel Slag Reclaim Tailings

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of slag input into the reclaim process	
Chromium Copper Nickel	5.653 24.410 24.670	2.313 12.850 16.320

Table 24-5 Secondary Nickel Acid Reclaim Leaching Filtrate

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per reclaim nickel produc	million pounds) of acid
Chromium Copper Nickel	2.198 9.491 9.590	0.899 4.995 6.344

Table 24-6 Secondary Nickel Acid Reclaim Leaching Belt Filter Backwash

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of nickel
Chromium Copper Nickel	0.528 2.278 2.302	0.216 1.199 1.523

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.246 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the standards set forth in s. NR 274.245.

History: Cr. Register, January, 1990, No. 421, eff. 1-1-91.

Subchapter XXV — Primary Precious Metals and Mercury

NR 274.25 Applicability; description of the primary precious metals and mercury subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of gold, silver, or mercury by primary precious metals and mercury facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.252 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 25-1
Primary Precious Metals and Mercury
Smelter Wet Air Pollution Control

I	3PT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold and silver smelted	
Lead	0.546	0.260
Mercury	0.325	0.130
Silver	0.533	0.221
Zinc	1.898	0.793
Gold	0.130	
Oil and grease	26.000	15.600
Total suspended solids	53.300	25.350
pH	(1)	(1)

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

DEPARTMENT OF NATURAL RESOURCES

254-181 NR 274

Table 25-2 Primary Precious Metals and Mercury Silver Chloride Reduction Spent Solution

H	3PT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	reduced in solution
Lead	0.168	0.080
Mercury	0.100	0.040
Silver	0.164	0.068
Zinc	0.584	0.244
Gold	0.040	
Oil and grease	8.000	4.800
Total suspended solids	16.400	7.800
pH	(1)	(1)

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

Table 25-3 Primary Precious Metals and Mercury Electrolytic Cells Wet Air Pollution Control

I	3PT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold	refined electrolytically
Lead	83.160	39.600
Mercury	49.500	19.800
Silver	81.180	33.660
Zinc	289.100	120.800
Gold	19.800	
Oil and grease	3,960.000	2,376.000
Total suspended solids	8,118.000	3,861.000
pH	(1)	(1)

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

254-182 NR 274

Table 25-4
Primary Precious Metals and Mercury
Electrolyte Preparation Wet Air Pollution Control

	BPT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of electrolyte	silver in the produced
Lead	0.021	0.010
Mercury	0.013	0.005
Silver	0.021	0.009
Zinc	0.073	0.031
Gold	0.005	
Oil and grease	1.000	0.600
Total suspended solids	2.050	0.975
pH	(1)	(1)

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

Table 25-5 Primary Precious Metals and Mercury Calciner Wet Air Pollution Control

]	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m condensed	illion pounds) of mercury
Lead	78,200	37.240
Mercury	46.550	18.620
Silver	76.340	31.650
Zinc	271.900	113.600
Gold	18.600	
Oil and grease	3,724.000	2,234.000
Total suspended solids	7,634.000	3,631.000
pH	(1)	(1)

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

DEPARTMENT OF NATURAL RESOURCES

254-183 NR 274

Table 25-6 Primary Precious Metals and Mercury Calcine Quench Water

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million condensed	pounds) of mercury
Lead	7.392	3.520
Mercury	4.400	1.760
Silver	7.216	2.992
Zinc	25.700	10.740
Gold	1.760	
Oil and grease	352.000	211.200
Total suspended solids	721.600	343.200
pH	(1)	(1)

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

Table 25-7 Primary Precious Metals and Mercury Calciner Stack Gas Contact Cooling Water

	DDM 7300 1 T 1 11 11	
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi condensed	llion pounds) of mercury
Lead	1.743	0.830
Mercury	1.038	0.415
Silver	1.702	0.706
Zinc	6.059	2.532
Gold	0.415	
Oil and grease	83.000	49.800
Total suspended solids	170.200	80.930
pН	(1)	(1)

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

254-184 NR 274

WISCONSIN ADMINISTRATIVE CODE

Table 25-8 Primary Precious Metals and Mercury Condenser Blowdown

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi condensed	llion pounds) of mercury
Lead	5.796	2.760
Mercury	3.450	1.380
Silver	5.658	2.346
Zinc	20.150	8.418
Gold	1.380	
Oil and grease	276.000	165.600
Total suspended solids	565.800	269.100
pH	(1)	(1)

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

Table 25-9
Primary Precious Metals and Mercury
Mercury Cleaning Bath Water

1416	ercury Cleaning Dain Wat	er
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millic condensed	on pounds) of mercury
Lead	0.588	0.280
Mercury	0.350	0.140
Silver	0.574	0.238
Zinc	2.044	0.854
Gold	0.140	
Oil and grease	28.000	16.800
Total suspended solids	57.400	27.300
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.253 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

NR 274

Table 25-10 Primary Precious Metals and Mercury Smelter Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold and silver smelted	
Lead Mercury Silver Zinc Gold	0.364 0.195 0.377 1.326 0.130	0.169 0.078 0.156 0.546

Table 25-11 Primary Precious Metals and Mercury Silver Chloride Reduction Spent Solution

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver reduced in solution	
Lead Mercury Silver Zinc Gold	0.112 0.060 0.116 0.408 0.040	0.052 0.024 0.048 0.168

Table 25-12 Primary Precious Metals and Mercury Electrolytic Cells Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold refined electrolytically	
Lead	5.544	2.574
Mercury	2.970	1.188
Silver	5.742	2.376
Zinc	20.200	8.316
Gold	1.980	

254-186 NR 274

WISCONSIN ADMINISTRATIVE CODE

Table 25-13 Primary Precious Metals and Mercury Electrolyte Preparation Wet Air Pollution Control

	BAT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of electrolyte	silver in the produced
Lead	0.014	0.007
Mercury	0.008	0.003
Silver	0.015	0.006
Zinc	0.051	0.021
Gold	0.005	

Table 25-14 Primary Precious Metals and Mercury Calciner Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
Lead Mercury Silver Zinc Gold	6.160 3.300 6.380 22.440 2.200	2.860 1.320 2.640 9.240

Table 25-15 Primary Precious Metals and Mercury Calcine Quench Water

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of mer pollutant property condensed		lion pounds) of mercury
Lead Mercury Silver Zinc Gold	4.928 2.640 5.104 17.950 1.760	2.288 1.056 2.112 7.392

Table 25-16
Primary Precious Metals and Mercury
Calciner Stack Gas Contact Cooling Water

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil condensed	llion pounds) of mercury
Lead Mercury Silver Zinc Gold	1.162 0.623 1.204 4.233 0.415	0.540 0.249 0.498 1.743

Table 25-17
Primary Precious Metals and Mercury
Condenser Blowdown

	Condender Diowactin	
	BAT Effluent Limitations	\$
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli condensed	on pounds) of mercury
Lead Mercury Silver Zinc Gold	3.864 2.070 4.002 14.080 1.380	1.794 0.828 1.656 5.796

Table 25-18 Primary Precious Metals and Mercury Mercury Cleaning Bath Water

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil condensed	llion pounds) of mercury
Lead	0.392	0.182
Mercury	0.210	0.084
Silver	0.406	0.168
Zinc	1.428	0.588
Gold	0.140	

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.254 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

254-188 NR 274

Table 25-19 Primary Precious Metals and Mercury Smelter Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold	and silver smelted
Lead	0.364	0.169
Mercury	0.195	0.078
Silver	0.377	0.156
Zinc	1.326	0.546
Gold	0.130	
Oil and grease	13.000	13.000
Total suspended solids	19.500	15.600
pH	(1)	(1)

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

Table 25-20 Primary Precious Metals and Mercury Silver Chloride Reduction Spent Solution

	NSPS	-
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver	reduced in solution
Lead	0.112	0.052
Mercury	0.060	0.024
Silver	0.116	0.048
Zinc	0.408	0.168
Gold	0.040	
Oil and grease	4.000	4.000
Total suspended solids	6.000	4.800
pH	(1)	(1)

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

Table 25-21 Primary Precious Metals and Mercury Electrolytic Cells Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold	refined electrolytically
Lead	5.544	2.574
Mercury	2.970	1.188
Silver	5.742	2.376
Zinc	20.200	8.316
Gold	1.980	
Oil and grease	198.000	198.000
Total suspended solids	297.000	237.600
pH	(1)	(1)

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

Table 25-22 Primary Precious Metals and Mercury Electrolyte Preparation Wet Air Pollution Control

	NSPS	•
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of electrolyte	silver in the produced
Lead	0.014	0.007
Mercury	0.008	0.003
Silver	0.015	0.006
Zine	0.051	0.021
Gold	0.005	
Oil and grease	0.500	0.500
Total suspended solids	0.750	0.600
pH	(1)	(1)

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

254-190 NR 274

Table 25-23 Primary Precious Metals and Mercury Calciner Wet Air Pollution Control

	NSPS	-
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per toondensed	million pounds) of mercury
Lead	6.160	2.860
Mercury	3.300	1.320
Silver	6.380	2.640
Zine	22.440	9.240
Gold	2.200	
Oil and grease	220.000	220.000
Total suspended solids	330.000	264.000
pH	(1)	(1)

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

Table 25-24 Primary Precious Metals and Mercury Calcine Quench Water

	· · ·	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per condensed	million pounds) of mercury
Lead	4.928	2.288
Mercury	2.640	1.056
Silver	5.104	2.112
Zinc	17.950	7.392
Gold	1.760	
Oil and grease	176.000	176.000
Total suspended solids	264.000	211.200
pH	(1)	(1)

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

Table 25-25 Primary Precious Metals and Mercury Calciner Stack Gas Contact Cooling Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m condensed	illion pounds) of mercury
Lead	1.162	0.540
Mercury	0.623	0.249
Silver	1.204	0.498
Zinc	4.233	1.743
Gold	0.415	,
Oil and grease	41.500	41.500
Total suspended solids	62.250	49.800
pН	(1)	(1)

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

Table 25-26 Primary Precious Metals and Mercury Condenser Blowdown

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n condensed	nillion pounds) of mercury
Lead	3.864	1.794
Mercury	2.070	0.828
Silver	4.002	1.656
Zinc	14.080	5.796
Gold	1.380	
Oil and grease	138.000	138.000
Total suspended solids	207.000	165.600
pH	(1)	(1)

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

Table 25-27 Primary Precious Metals and Mercury Mercury Cleaning Bath Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millic condensed	on pounds) of mercury
Lead	0.392	0.182
Mercury	0.210	0.084
Silver	0.406	0.168
Zine	1.428	0.588
Gold	0.140	
Oil and grease	14.000	14.000
Total suspended solids	21.000	16.800
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.256 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.253.

Subchapter XXVI — Secondary Precious Metals

NR 274.26 Applicability; description of the secondary precious metals subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of precious metals at secondary precious metals facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.261 Specialized definition. "Combined metals" means the total of gold, platinum, and palladium.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.262 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 26-1 Primary Precious Metals and Mercury Furnace Wet Air Pollution Control

	BPT Effluent Limita	ations
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver, incinerated of	precious metals, including or smelted
Copper	136.400	71.800
Cyanide	20.820	8.616
Zinc	104.800	43.800
Ammonia (as N)	9,571.000	4,207.000
Combined metals	21.54	,
Total suspended solids	2,944.000	1,400.000
pH	(1)	(1)

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

Table 26-2 Primary Precious Metals and Mercury Raw Material Granulation

-	BPT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of granulated raw mate	precious metal in the
Copper Cyanide Zinc Ammonia (as N) Combined metals	12.050 1.839 9.256 845.100 1.902	6.340 0.761 3.867 371.500
Total suspended solids pH	$\begin{array}{c} 259.900 \\ (1) \end{array}$	123.600 (1)

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

Table 26-3 Primary Precious Metals and Mercury Spent Plating Solutions

	oponio i monio contactorio	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/liter of spent plating material	solution used as a raw
Copper	1.900	1.000
Cyanide	0.290	0.120
Zinc	1.460	0.610
Ammonia (as N)	133.300	58.600
Combined metals	0.300	
Total suspended solids	41.000	19.500
pН	(1)	(1)

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

254-194 NR 274

Table 26-4 Secondary Precious Metals Spent Cyanide Stripping Solutions

	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gol stripping	d produced by cyanide
Copper Cyanide Zinc Ammonia (as N) Combined metals	7.030 1.073 5.402 493.200 1.110	3.700 0.444 2.257 216.800
Total suspended solids pH	151.700 (1)	72.150 (1)

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

Table 26-5 Secondary Precious Metals Refinery Wet Air Pollution Control

TVCIII	cry wer im I office	11 00110101
	BPT Effluent Limita	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver, produced in t	precious metals, including the refinery
Copper	39.900	21.000
Cyanide	6.090	2.520
Zine	30.660	12.810
Ammonia (as N)	2,799.000	1,231.000
Combined metals	6.300	·
Total suspended solids	861.000	409.500
pH	(1)	(1)

⁽¹⁾ This allowance applies to either acid or alkaline wet air pollution control scrubbers. If both acid and alkaline wet air pollution control scrubbers are present in a particular facility, the same allowance applies to each.
(2) Within the range of 7.5 to 10.0 at all times

Table 26-6 Secondary Precious Metals Gold Solvent Extraction Raffinate and Wash Water

BPT Effluent Limitations				
	Maximum for any 1 day		Maximum for monthly average	
Pollutant or pollutant property	mg/troy ounce of extraction	gold	produced 1	by solvent
Copper	1.197		0.6	30
Cyanide	0.183		0.0	76
Zinc	0.920		0.3	84
Ammonia (as N)	83.980		36.9	20
Combined metals	0.189			
Total suspended solids	25.830		12.2	90
pH	(1)		(1)

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

Table 26-7 Secondary Precious Metals Gold Spent Electrolyte

	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold	produced by electrolysis
Copper	0.017	0.009
Cyanide	0.003	0.001
Zinc	0.103	0.005
Ammonia (as N)	0.160	0.510
Combined metals	0.003	
Total suspended solids	0.357	0.170
pH	(1)	(1)

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

Table 26-8 Secondary Precious Metals Gold Precipitation and Filtration

BF	T Effluent Limitation	ns	
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/troy ounce of gold precipitate		
Copper Cyanide Zinc Ammonia (as N) Combined metals	8.360 1.276 6.424 586.500 1.320	4.400 0.528 2.684 257.800	
Total suspended solids pH	180.400 (1)	85.800 (1)	

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

Table 26-9 Secondary Precious Metals Platinum Precipitation and Filtration

	BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property			
Copper	9.880	5.200	
Cyanide	1.508	0.624	
Zine	7.592	3.172	
Ammonia (as N)	693.200	304.700	
Combined metals	1.560		
Total suspended solids	213.200	101.400	
pH	(1)	(1)	

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

Table 26-10 Secondary Precious Metals Palladium Precipitation and Filtration

	BPT Effluent Limitatio	ons	
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/troy ounce of palladium precipitated		
Copper	11.400	6.000	
Cyanide	1.740	0.720	
Zinc	8.760	3.660	
Ammonia (as N)	799.800	351.600	
Combined metals	1.800		
Total suspended solids	246.000	117.000	
pH	(1)	(1)	

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

Table 26-11
Secondary Precious Metals
Other Platimum Group Metals Precipitation and Filtration

	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of other platinum group n precipitated	
Copper	9.880	5.200
Cyanide	1.508	0.624
Zinc	7.592	3.172
Ammonia (as N)	693.200	304.700
Combined metals	1.560	
Total suspended solids	213.200	101.400
pH	(1)	(1)

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

Table 26-12 Secondary Precious Metals Spent Solution for PGC Salt Production

	BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/troy ounce of gold product	d contained in PGC	
Copper	1.710	0.900	
Cyanide	0.261	0.108	
Zinc	1.314	0.549	
Ammonia (as N)	120.000	52.740	
Combined metals	0.270		
Total suspended solids	36.900	17.550	
pH	(1)	(1)	

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

Table 26-13 Secondary Precious Metals Equipment and Floor Wash

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver, produced in	precious metals, including the refinery
Copper Cyanide Zinc Ammonia (as N) Combined metals Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 0.000 (1)

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

Table 26-14 Secondary Precious Metals Preliminary Treatment

	I I OIIIIIIIIIIII J II I OOO OAAA	
•	BPT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of produced through th	precious metals, metals iis operation
Copper	95.000	50.000
Cyanide	14.500	6.000
Zinc	73.000	30.500
Ammonia (as N)	6,665,000	2,930,000
Combined metals	15.000	,
Total suspended solids	2,050.000	975.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.263 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 26-15
Primary Precious Metals and Mercury
Furnace Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of p silver, incinerated or	precious metals, including smelted
Copper Cyanide Zinc	5.760 0.900 4.590	2.745 0.360 1.890
Combined metals Ammonia (as N)	1.350 599.900	263.700

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Table 26-16
Primary Precious Metals and Mercury
Raw Material Granulation

BAT Effluent Limitations		
- Works at Atlanta	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of granulated raw mate	precious metal in the
Copper Cyanide Zinc	0.819 0.128 0.653	0.390 0.051 0.269
Combined metals Ammonia (as N)	$0.192 \\ 85.310$	37.500

Table 26-17 Primary Precious Metals and Mercury Spent Plating Solutions

	-1	
BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/liter of spent platin material	g solution used as a raw
Copper	1.280	0.610
Cyanide Zinc	$0.200 \\ 1.020$	$0.080 \\ 0.420$
Combined metals Ammonia (as N)	0.300 133.300	58.600

Table 26-18 Secondary Precious Metals Spent Cyanide Stripping Solutions

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of go stripping	ld produced by cyanide
Copper	4.736	2.257
Cyanide	0.740	0.296
Zinc	3.774	1.554
Combined metals Ammonia (as N)	1.110 493.200	216.800

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BAT Effluent Limitation	ons
Maximum for any 1 day	Maximum for monthly average
mg/troy ounce of pr silver, produced in th	recious metals, including e refinery
1.280 0.200 1.020 0.300 133 300	0.610 0.080 0.420 58.600
	Maximum for any 1 day mg/troy ounce of positiver, produced in the 1.280 0.200 1.020

⁽¹⁾ This allowance applies to either acid or alkaline wet air pollution control scrubbers. If both acid and alkaline wet air pollution control scrubbers are present in a particular facility, the same allowance applies to each.

Table 26-20 Secondary Precious Metals Gold Solvent Extraction Raffinate and Wash Water

	BAT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold extraction	produced by solvent
Copper	0.806	0.384
Cyanide	0.126	0.050
Zinc	0.643	0.265
Combined metals	0.189	
Ammonia (as N)	83.980	36.920

Table 26-21 Secondary Precious Metals Gold Spent Electrolyte

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold produced by electrolysis	
Copper	0.0111	0.0053
Cyanide	0.0017	0.0007
Zinc	0.0089	0.0037
Combined metals	0.0030	
Ammonia (as N)	1.1600	0.5100

Table 26-22 Secondary Precious Metals Gold Precipitation and Filtration

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold precipitated	
Copper	5.632	2.684
Cyanide	0.880	0.352
Zinc	4.488	1.848
Combined metals	1.320	
Ammonia (as N)	586.500	257.800

Table 26-23 Secondary Precious Metals Platinum Precipitation and Filtration

	BAT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of plan	tinum precipitated
Copper	6.656	3.172
Cyanide	1.040	0.416
Zinc	5.304	2.184
Combined metals	1.560	
Ammonia (as N)	693.200	304.700

Table 26-24 Secondary Precious Metals Palladium Precipitation and Filtration

BAT Effluent Limitations		
·	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of palladium precipitated	
Copper	7.680	3.660
Cyanide	1.200	0.480
Zinc	6.120	2.520
Combined metals	1.800	
Ammonia (as N)	799.800	351.600

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WISCONSIN ADMINISTRATIVE CODE

Table 26-25 Secondary Precious Metals Other Platimum Group Metals Precipitation and Filtration

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of other precipitated	platinum group metals
Copper	6.656	3.172
Cyanide	1.040	0.416
Zinc	5.304	2.184
Combined metals	1.560	
Ammonia (as N)	693.200	304.700

Table 26-26 Secondary Precious Metals Spent Solution for PGC Salt Production

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of goloproduct	d contained in PGC
Copper Cyanide	1.152 0.180	0.549 0.072
Zinc Combined metals	$0.918 \\ 0.270$	0.376
Ammonia (as N)	120.000	52.740

Table 26-27 Secondary Precious Metals Equipment and Floor Wash

Equipment and Floor Wash		
	BAT Effluent Limitation	8
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of pred silver, produced in the n	cious metals, including refinery
Copper Cyanide Zinc Combined metals	0.000 0.000 0.000 0.000	0.000 0.000 0.000
Ammonia (as N)	0.000	0.000

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Table 26-28 Secondary Precious Metals Preliminary Treatment

	<u> </u>	
	BAT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of total precious metals produced through this operation	
Copper	64.000	30.500
Cyanide	10.000	4.000
Zinc	51.000	21.000
Combined metals	15.000	
Ammonia (as N)	6,665.000	2,930.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.264 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 26-29 Secondary Precious Metals Furnace Wet Air Pollution Control

	NSPS	
-	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver, incinerated of	precious metals, including or smelted
Copper	5.760	2.745
Cyanide	0.900	0.360
Zinc	4.590	1.890
Combined metals	1.350	
Ammonia (as N)	599.900	263.700
Total suspended solids	67.500	54.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-30 Secondary Precious Metals Raw Material Granulation

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of granulated raw mate	precious metal in the rial
Copper	0.819	0.390
Cyanide	0.128	0.051
Zinc	0.653	0.269
Combined metals	0.192	
Ammonia (as N)	85.310	37.500
Total suspended solids	9.600	7.680
pH	.(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-31 Secondary Precious Metals Spent Plating Solutions

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/liter of spent plating material	solution used as a raw
Copper	1.280	0.610
Cyanide	0.200	0.080
Zinc	1.020	0.420
Combined metals	0.300	
Ammonia (as N)	133.300	58.600
Total suspended solids	15.000	12.000
pH	(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-32 Secondary Precious Metals Spent Cyanide Stripping Solutions

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of go stripping	old produced by cyanide
Copper Cyanide	$4.736 \\ 0.740$	2.257 0.296
Zinc Combined metals Ammonia (as N)	$3.774 \\ 1.110 \\ 493.200$	1.554 216.800
Total suspended solids pH	55.500 (1)	44.400 (1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-33 Sécondary Precious Metals Refinery Wet Air Pollution Control(1)

	•	, ,
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver, produced in	precious metals, including the refinery
Copper	1.280	0.610
Cyanide	0.200	0.080
Zine	1.020	0.420
Combined metals	0.300	
Ammonia (as N)	133.300	58.600
Total suspended solids	15.000	12.000
pН	(1)	(1)

⁽¹⁾ This allowance applies to either acid or alkaline wet air pollution control scrubbers. If both acid and alkaline wet air pollution control scrubbers are present in a particular facility, the same allowance applies to each.
(2) Within the range of 7.5 to 10 at all times

Table 26-34 Secondary Precious Metals Gold Solvent Extraction Raffinate and Wash Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of go extraction	old produced by solvent
Copper	0.806	0.384
Cyanide	0.126	0.050
Zinc	0.643	0.265
Combined metals	0.189	
Ammonia (as N)	83.980	36.920
Total suspended solids	9.450	7.560
pH	(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-35 Secondary Precious Metals Gold Spent Electrolyte

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold	produced by electrolysis
Copper	0.011	0.005
Cyanide	0.002	0.001
Zinc	0.009	0.004
Combined metals	0.003	
Ammonia (as N)	1.160	0.510
Total suspended solids	0.131	0.104
pH	(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-36 Secondary Precious Metals Gold Precipitation and Filtration

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold	precipitated
Copper	5.632	2.684
Cyanide	0.880	0.352
Zinc	4.488	1.848
Combined metals	1.320	
Ammonia (as N)	586.500	257.800
Total suspended solids	66.000	52.800
pH	(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-37 Secondary Precious Metals Platinum Precipitation and Filtration

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of plat	inum precipitated
Copper	6.656	3.172
Cyanide	1.040	0.416
Zinc	5.304	2.184
Combined metals	1.560	
Ammonia (as N)	693,200	304.700
Total suspended solids	78.000	62.400
pH	(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-38 Secondary Precious Metals

Palladi	um Precipitation and F	iltration
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/troy ounce of palladium precipitated pollutant property		
Copper	7.680	3.660
Cyanide	1.200	0.480
Zinc	6.120	2.520
Combined metals	1.800	
Ammonia (as N)	799.800	351.600
Total suspended solids	90.000	72.000
pH	(1)	(1)

(1) Within the range of 7.5 to 10 at all times

Table 26-39
Secondary Precious Metals
Other Platinum Group Metals Precipitation and Filtration

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of other precipitated	platinum group metals
Copper	6.656	3.172
Cyanide	1.040	0.416
Zinc	5.304	2.184
Combined metals	1.560	
Ammonia (as N)	693.200	304.700
Total suspended solids	78.000	62.400
pН	(1)	(1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-40 Secondary Precious Metals Spent Solution for PGC Salt Production

		NSPS					
		imum fo y 1 day			Maximur monthly a		
Pollutant or pollutant property	mg/troy product	ounce	of	gold	contained	in	PGC
Copper		1.152			0.54	9	
Cyanide		0.180			0.07	2	
Zinc		0.918			0.378	8	
Combined metals		0.270					
Ammonia (as N)	12	20.000			52.74	0	
Total suspended solids	1	3.500			10.80	0	
pH		(1)			(1)		

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 2-41 Secondary Precious Metals Equipment and Floor Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver, produced in	precious metals, including the refinery
Copper	0.000	0.000
Cyanide	0.000	0.000
Zinc	0.000	0.000
Combined metals	0.000	
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	. (1)

⁽¹⁾ Within the range of 7.5 to 10 at all times

Table 26-42 Secondary Precious Metals Preliminary Treatment

NSPS	
Maximum for any 1 day	Maximum for monthly average
mg/troy ounce of produced through the	total precious metals is operation
64.000	50.000
10.000	6.000
51.000	30.500
6,665.000	2,930.000
15.000	•
750.000	600.000
(1)	(1)
	Maximum for any 1 day mg/troy ounce of produced through th 64.000 10.000 51.000 6,665.000 15.000

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.265 Pretreatment standards for existing 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 limitations set forth in s. NR 274.263.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.266 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.263.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXVII — Primary Rare Earth Metals

NR 274.27 Applicability; description of the primary rare earth metals subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the

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production of rare earth metals and mischmetal by primary rare earth metals facilities which process rare earth metal oxides, chlorides, and fluorides.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.271 Specialized definitions. The following definitions apply to the terms used in this subchapter:

- (1) "Rare Earth Metals" means the elements scandium, yttrium, and lanthanum to lutetium, inclusive.
- (2) "Mischmetal" means a rare earth metal alloy comprised of the natural mixture of rare earths to 94% to 99% with the remainder of the alloy including traces of other elements and 1% to 2% iron.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.274 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 27-1
Primary Rare Earth Metals
Dryer Vent Water Quench and Scrubber

NSPS				
	Maximum for any 1 day	Maximum for monthly average		
Pollutant or pollutant property	mg/kg (pounds per mischmetal produced chlorides			
Hexachlorobenzene Chromium Lead Nickel Total suspended solids pH	0.042 1.544 1.168 2.295 62.600 (1)	0.042 0.626 0.542 1.544 50.080 (1)		

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

Table 27-2
Primary Rare Earth Metals
Dryer Vent Caustic Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mischmetal produced chlorides	million pounds) of from wet rare earth
Hexachlorobenzene Chromium Lead Nickel	0.007 0.272 0.206 0.404	0.007 0.110 0.095 0.272
Total suspended solids pH	$11.010 \ (1)$	8.808 (1)

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

Table 27-3 Primary Rare Earth Metals Electrolytic Cell Water Quench and Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi mischmetal produced	llion pounds) of total
Hexachlorobenzene Chromium Lead Nickel Total suspended solids pH	0.094 3.474 2.629 5.165 140.900 (1)	0.094 1.409 1.221 3.474 112.700 (1)

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

Table 27-4 Primary Rare Earth Metals Electrolytic Cell Caustic Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi mischmetal produced	llion pounds) of total
Hexachlorobenzene Chromium Lead Nickel Total suspended solids pH	$egin{array}{c} 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ 0.000 \\ (1) \end{array}$	0.000 0.000 0.000 0.000 0.000 (1)

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

Table 27-5 Primary Rare Earth Metals Sodium Hypochlorite Filter Backwash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mischmetal produced	million pounds) of total
Hexachlorobenzene Chromium	0.004 0.134	0.004 0.054
Lead Nickel	$0.101 \\ 0.199 \\ 5.420$	0.047 0.134
Total suspended solids pH	5.430 (1)	4.334 (1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

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NR 274.275 Pretreatment standards for existing 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 PSES:

Table 27-6 Primary Rare Earth Metals Dryer Vent Water Quench and Scrubber

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mischmetal produced chlorides	million pounds) of from wet rare earth
Hexachlorobenzene Chromium Lead Nickel	0.042 1.544 1.168 2.295	0.042 0.626 0.542 1.544

Table 27-7
Primary Rare Earth Metals
Dryer Vent Caustic Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mischmetal produced chlorides	million pounds) of from wet rare earth
Hexachlorobenzene	0.007	0.007
Chromium	0.272	0.110
Lead	0.206	0.095
Nickel	0.404	0.272

Table 27-8
Primary Rare Earth Metals
Electrolytic Cell Water Quench and Scrubber

PSES		
ATT. 1 AT	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m mischmetal produced	illion pounds) of total
Hexachlorobenzene Chromium Lead Nickel	0.094 3.474 2.629 5.165	0.094 1.409 1.221 3.474

Table 27-9
Primary Rare Earth Metals
Electrolytic Cell Caustic Wet Air Pollution Control

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi mischmetal produced	llion pounds) of total
Hexachlorobenzene Chromium Lead Nickel	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

Table 27-10 Primary Rare Earth Metals Sodium Hypochlorite Filter Backwash

	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mischmetal produced	million pounds) of total
Hexachlorobenzene	0.004	0.004
Chromium Lead	$0.134 \\ 0.101$	$0.054 \\ 0.047$
Nickel	0.199	0.134

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.276 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the standards set forth in s. NR 274.275.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXVIII — Secondary Tantalum

NR 274.28 Applicability; description of the secondary tantalum subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of tantalum at secondary tantalum facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.282 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

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Table 28-1 Secondary Tantalum Tantalum Alloy Leach and Rinse

	•	
	BPT Effluent Limitation	ıs
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill powder produced	ion pounds) of tantalum
Copper	438.100	230.600
Lead	96.850	46.120
Nickel	442.800	292.900
Zinc	336.700	140.700
Tantalum	103.800	
Total suspended solids	9,455.000	4,497.000
pH	(1)	(1)

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

Table 28-2 Secondary Tantalum Capacitor Leach and Rinse

	BPT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio powder produced from l	on pounds) of tantalum eaching
Copper	38.380	20.200
Lead	8.484	4.040
Nickel	38.780	25.650
Zinc	29.490	12.320
Tantalum	9.090	
Total suspended solids	828.200	393.900
pH	(1)	(1)

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

Table 28-3 Secondary Tantalum Tantalum Sludge Leach and Rinse

	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per equivalent pure tantalu	million pounds) of m powder produced
Copper Lead Nickel	390.100 86.230 394.200	205.300 41.060 260.700
Zinc Tantalum Total suspended solids	$299.700 \\ 92.390 \\ 8,417.000 \\ (1)$	125.200 4,003.000
pH	(1)	(1)

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

Table 28-4 Secondary Tantalum Tantalum Powder Acid Wash and Rinse

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil powder produced	lion pounds) of tantalum
Copper	0.665	0.350
Lead	0.147	0.070
Nickel	0.672	0.445
Zinc	0.511	0.214
Tantalum	0.158	
Total suspended solids	14.350	6.825
pH	(1)	(1)

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

Table 28-5 Secondary Tantalum Leaching Wet Air Pollution Control

	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per equivalent pure tantalu	million pounds) of m powder produced
Copper	9.272	4.880
Lead	2.050	0.976
Nickel	9.370	6.198
Zinc	7.125	2.977
Tantalum	2.196	
Total suspended solids	200.100	95.160
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.283 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 28-6 Secondary Tantalum

T	antalum Alloy Leach and Rii	nse
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million powder produced	n pounds) of tantalum
Copper Lead Nickel Zinc Tantalum	295.200 64.570 126.800 235.200 103.800	140.700 29.980 85.320 96.850
	Table 28-7 Secondary Tantalum Capacitor Leach and Rinse	
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million powder produced from lea	
Copper Lead Nickel Zinc Tantalum	25.860 5.656 11.110 20.600 9.090	12.320 2.626 7.474 8.484
	Table 28-8	

Secondary Tantalum Tantalum Sludge Leach and Rinse

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per equivalent pure tantalı	million pounds) of um powder produced
Copper Lead Nickel Zinc Tantalum	262.800 57.480 112.900 209.400 92.390	125.200 26.690 75.960 86.230

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Table 28-9 Secondary Tantalum Tantalum Powder Acid Wash and Rinse

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill powder produced	lion pounds) of tantalum
Copper	0.448	0.214
Lead	0.098	0.046
Nickel	0.193	0.130
Zinc	0.357	0.147
Tantalum	0.158	

Table 28-10 Secondary Tantalum Leaching Wet Air Pollution Control

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per equivalent pure tantalu	million pounds) of m powder produced
Copper Lead Nickel Zinc Tantalum	6.246 1.366 2.684 4.978 2.196	2.977 0.634 1.806 2.050

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.284 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 28-11 Secondary Tantalum Tantalum Alloy Leach and Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n powder produced	nillion pounds) of tantalum
Copper	295.200	140.700
Lead	64.570	29.980
Nickel	126.800	85.320
Zinc	235.200	96.850
Tantalum	103.800	
Total suspended solids	3.459.000	2,767.000
pH	(1)	(1)

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

Table 28-12 Secondary Tantalum Capacitor Leach and Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi powder produced from	illion pounds) of tantalum n leaching
Copper	25.860	12.320
Lead	5.656	2.626
Nickel	11.110	7.474
Zinc	20.600	8.484
Tantalum	9.090	
Total suspended solids	303.000	242.400
pH	(1)	(1)

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

Table 28-13 Secondary Tantalum Tantalum Sludge Leach and Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per equivalent pure tantalu	million pounds) of am powder produced
Copper Lead Nickel Zinc Tantalum	262.800 57.480 112.900 209.400 92.390	125.200 26.690 75.960 86.230
Total suspended solids pH	3,080.000 (1)	2,464.000 (1)

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

Table 28-14 Secondary Tantalum Tantalum Powder Acid Wash and Rinse

Z WATON COLL I OTT GOT I TO THE COLL I WILL		
NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil powder produced	lion pounds) of tantalum
Copper	0.448	0.214
Lead	0.098	0.046
Nickel	0.193	0.130
Zinc	0.357	0.147
Tantalum	0.158	
Total suspended solids	5.250	4.200
pH	(1)	(1)

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

Table 28-15 Secondary Tantalum Leaching Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per equivalent pure tantalu	million pounds) of m powder produced
Copper	6.246	2.977
Lead	1.366	0.634
Nickel	2.684	1.806
Zine	4.978	2.050
Tantalum	2.196	
Total suspended solids	73.200	58.560
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.286 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.283.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXIX — Secondary Tin

NR 274.29 Applicability; description of the secondary tin subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of tin at secondary tin facilities which utilize either pyrometalurgical or hydrometalurgical processes to recover tin from secondary materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.292 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 29-1 Secondary Tin Tin Smelter Sulfur Dioxide Scrubber

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tapped tin metal pro-	million pounds) of crude duced
Arsenic Lead	19.220 3.863	8.554 1.840
Iron Tin	11.040 3.495	5.611 2.024
Total suspended solids pH	377.100 (1)	179.400 (1)

Table 29-2 Secondary Tin Dealuminizing Rinse

1	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per dealuminized scrap prod	million pounds) of duced
Lead Cyanide Fluoride Tin Total suspended solids	0.015 0.010 1.225 0.013 1.435	0.007 0.004 0.700 0.008 0.683
pH	(1)	(1)

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

Table 29-3 Secondary Tin Tin Mud Acid Neutralization Filtrate

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds pe neutralized dewatered	er million pounds) of d tin mud produced
Lead Cyanide Fluoride Tin Total suspended solids pH	$\begin{array}{c} 2.120 \\ 1.464 \\ 176.600 \\ 1.918 \\ 206.900 \\ (1) \end{array}$	1.009 0.606 100.400 1.110 98.420 (1)

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Table 29-4 Secondary Tin Tin Hydroxide Wash

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per hydroxide washed	million pounds) of tin
Lead Cyanide Fluoride Tin Total suspended solids pH	5.020 3.466 418.400 4.542 490.100 (1)	$\begin{array}{c} 2.391 \\ 1.434 \\ 237.900 \\ 2.630 \\ 233.100 \\ (1) \end{array}$

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

Table 29-5 Secondary Tin Spent Electrowinning Solution From New Scrap

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per r tin produced	million pounds) of cathode
Lead Cyanide Fluoride Tin Total suspended solids pH	7.056 4.872 588.000 6.384 688.800 (1)	$egin{array}{c} 3.360 \\ 2.016 \\ 334.300 \\ 3.696 \\ 327.600 \\ (1) \\ \end{array}$

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

Table 29-6 Secondary Tin Spent Electrowinning Solution From Municipal Solid Waste

	BPT Effluent Limitation	ns .
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of municipal solid waste scrap used as a raw material	
Lead	0.050	0.024
Cyanide	0.035	0.014
Fluoride	4.165	2.368
Tin	0.045	0.026
Total suspended solids	4.879	2.321
pH	(1)	(1)

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

Table 29-7 Secondary Tin Tin Hydroxide Supernatant From Scrap

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio recovered from scrap	n pounds) of tin metal
Lead Cyanide Fluoride Tin Total suspended solids pH	$23.370 \\ 16.140 \\ 1,947.000 \\ 21.140 \\ 2,281.000 \\ (1)$	$11.130 \\ 6.677 \\ 1,107.000 \\ 12.240 \\ 1,085.000 \\ (1)$

Table 29-8 Secondary Tin Tin Hydroxide Supernatant From Plating Solutions and Sludges

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil recovered from plating	lion pounds) of tin metal solutions and sludges
Lead Cyanide Fluoride Tin Total suspended solids pH	48.30 33.35 4,025.00 43.70 4,715.00 (1)	23.00 13.80 $2,289.00$ 25.30 $2,243.00$ (1)

Table 29-9 Secondary Tin Tin Hydroxide Filtrate

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tapped tin metal pro	million pounds) of crude oduced
Lead Cyanide Fluoride Tin Total suspended solids pH	10.520 7.263 876.500 9.517 1,027.000 (1)	5.009 3.005 498.400 5.510 488.400 (1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.293 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 29-10 Secondary Tin Tin Smelter Sulfur Dioxide Scrubber

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tapped tin metal prod	million pounds) of crude duced
Arsenic	12.790	5.703
Lead	2.575	1.196
Iron	11.040	5.611
Tin	3.495	2.024

Table 29-11 Secondary Tin Dealuminizing Rinse

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per dealuminized scrap prod	million pounds) of duced
Lead	0.010	0.005
Cyanide	0.007	0.003
Fluoride	1.225	0.697
Tin	0.013	0.008

Table 29-12 Secondary Tin Tin Mud Acid Neutralization Filtrate

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of neutralized dewatered tin mud produced	
Lead	1.413	0.656
Cyanide	1.009	0.404
Fluoride	176.600	100.400
Tin	1.918	1.110

Table 29-13 Secondary Tin Tin Hydroxide Wash

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per hydroxide washed	million pounds) of tin
Lead Cyanide Fluoride Tin	3.347 2.391 418.400 4.542	1.554 0.956 237.900 2.630

Table 29-14 Secondary Tin Spent Electrowinning Solution From New Scrap

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	0, 8 1	
Lead Cyanide Fluoride Tin	4.704 3.360 588.000 6.384	2.184 1.344 334.300 3.696

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Table 29-15 Secondary Tin Spent Electrowinning Solution From Municipal Solid Waste

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of municipal solid waste scrap used as a raw material	
Lead	0.033	0.015
Cyanide	0.024	0.010
Fluoride	4.165	2.368
Tin	0.045	0.026

Table 29-16 Secondary Tin Tin Hydroxide Supernatant From Scrap

	BAT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tin metal recovered from scrap	
Lead Cyanide Fluoride Tin	15.580 11.130 1,947.000 21.140	7.233 4.451 1,107.000 21.140

Table 29-17 Secondary Tin Tin Hydroxide Supernatant From Plating Solutions and Sludges

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tin metal recovered from plating solutions and sludges	
Lead Cyanide Fluoride Tin	32.20 23.00 4,025.00 43.70	14.95 9.20 2,289.00 25.30

Table 29-18 Secondary Tin Tin Hydroxide Filtrate

	I III II J di Oxide I II di dec	
	BAT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi tapped tin metal produc	llion pounds) of crude ced
Lead Cyanide Fluoride Tin	7.012 5.009 876.500 9.517	3.256 2.004 498.400 5.510

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.294 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 29-19 Secondary Tin Tin Smelter Sulfur Dioxide Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tapped tin metal pro	million pounds) of crude oduced
Arsenic Lead	12.790 2.575	5.703 1.196
Iron Tin	11.040 3.495	5.611 2.024
Total suspended solids	138.000	110.400
pH	(1)	(1)

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

Table 29-20 Secondary Tin Dealuminizing Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per dealuminized scrap prod	
Lead Cyanide Fluoride Tin Total suspended solids pH	0.010 0.007 1.225 0.013 0.525 (1)	0.005 0.003 0.697 0.008 0.420 (1)

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

254-226 NR 274

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Table 29-21 Secondary Tin Tin Mud Acid Neutralization Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds neutralized dewate	per million pounds) of red tin mud produced
Lead Cyanide Fluoride Tin Total suspended solids pH	1.413 1.009 176.600 1.918 75.710 (1)	$egin{array}{c} 0.656 \\ 0.404 \\ 100.400 \\ 1.110 \\ 60.560 \\ (1) \end{array}$

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

Table 29-22 Secondary Tin Tin Hydroxide Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per hydroxide washed	million pounds) of tin
Lead Cyanide Fluoride Tin Total suspended solids pH	3.347 2.391 418.400 4.542 179.300 (1)	$\begin{array}{c} 1.554 \\ 0.956 \\ 237.900 \\ 2.630 \\ 143.400 \\ (1) \end{array}$

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

Table 29-23 Secondary Tin Spent Electrowinning Solution From New Scrap

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tin produced	r million pounds) of cathode
Lead	4.704	2.184
Cyanide	3.360	1.344
Fluoride	588.000	334.300
Tin	6.384	3.696
Total suspended solids	252.000	201.600
pH	(1)	(1)

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

Table 29-24 Secondary Tin Spent Electrowinning Solution From Municipal Solid Waste

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli solid waste scrap used a	on pounds) of municipal as a raw material
Lead Cyanide Fluoride Tin Total suspended solids pH	0.033 0.024 4.165 0.045 1.785 (1)	$egin{array}{c} 0.015 \\ 0.010 \\ 2.368 \\ 0.026 \\ 1.428 \\ (1) \\ \end{array}$

Table 29-25 Secondary Tin Tin Hydroxide Supernatant From Scrap

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli recovered from scrap	on pounds) of tin metal
Lead Cyanide Fluoride Tin	15.580 11.130 1,947.000 21.140	7.233 4.451 1,107.000 21.240
Total suspended solids pH	834.600 (1)	$667.700 \ (1)$

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

Table 29-26 Secondary Tin Tin Hydroxide Supernatant From Plating Solutions and Sludges

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		llion pounds) of tin metal g solutions and sludges
Lead Cyanide Fluoride Tin Total suspended solids pH	$32.20 \\ 23.00 \\ 4.025.00 \\ 43.70 \\ 1.725.00 \\ (1)$	14.95 9.20 2,289.00 25.30 1,380.00 (1)

Table 29-27 Secondary Tin Tin Hydroxide Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per tapped tin metal pro	million pounds) of crude oduced
Lead Cyanide Fluoride Tin Total suspended solids pH	7.012 5.009 876.500 9.517 375.700 (1)	$egin{array}{c} 3.256 \\ 2.004 \\ 498.400 \\ 5.510 \\ 300.500 \\ (1) \end{array}$

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.295 Pretreatment standards for existing 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 limitations set forth in s. NR 274.293.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.296 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.293.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXX — Primary and Secondary Titanium

NR 274.30 Applicability; description of the primary and secondary titanium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of titanium or cobalt at secondary titanium and cobalt facilities which process titanium or titanium carbide scrap raw materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.302 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 30-1 Primary and Secondary Titanium Chlorination Off-gas Wet Air Pollution Control

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million tetrachloride produced	pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.412 0.393 1.797 0.880 18.720 38.380 (1)	0.168 0.187 1.187 0.384 11.230 18.250 (1)

Table 30-2 Primary and Secondary Titanium Chlorination Area-vent Wet Air Pollution Control

-	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio tetrachloride produced	n pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.458 0.437 1.997 0.978 20.800 42.640	0.187 0.208 1.321 0.426 12.480 20.280 (1)

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

Table 30-3
Primary and Secondary Titanium
Titanium Tetrachloride Handling Wet Air Pollution Control

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million tetrachloride handled	pounds) of titanium
Chromium	0.082	0.034
Lead	0.079	0.037
Nickel	0.359	0.237
Titanium	0.176	0.077
Oil and grease	3.740	2.244
Total suspended solids	7.667	3.647
pH	(1)	(1)

254-230 NR 274

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Table 30-4
Primary and Secondary Titanium
Reduction Area Wet Air Pollution Control

	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil produced	lion pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	18.170 17.350 79.300 38.820 826.100 1,693.000	7.435 8.261 52.450 16.930 495.600 805.400

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

Table 30-5 Primary and Secondary Titanium Melt Cell Wet Air Pollution Control

	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per r produced	nillion pounds) of titanium
Chromium Lead	9.352 8.927	3.826 4.251
Nickel Titanium	$40.810 \\ 19.980$	$26.990 \\ 8.714$
Oil and grease Total suspended solids	$425.100 \\ 871.400$	$\begin{array}{c} 255.000 \\ 414.500 \end{array}$
pН	(1)	(1)

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

Table 30-6 Primary and Secondary Titanium Chlorine Liquefaction Wet Air Pollution Control

	BPT Effluent Limita	ations
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of titanium
Chromium	130.900	53.560
Lead	125.000	59.510
Nickel	571.300	377.900
Titanium	279.700	122.000
Oil and grease	5,951.000	3,571.000
Total suspended solids	12,200.000	5,702.000
pН	(1)	(1)

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

Table 30-7 Primary and Secondary Titanium Sodium Reduction Container Reconditioning Wash Water

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million produced	n pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.564 0.538 2.461 1.205 25.640 52.560 (1)	0.231 0.256 1.628 0.526 15.380 25.000

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

Table 30-8
Primary and Secondary Titanium
Chip Crushing Wet Air Pollutant Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio produced	n pounds) of titanium
Chromium	10.090	4.126
Lead	9.627	4.584
Nickel	44.010	29.110
Titanium	21.550	9.398
Oil and grease	458.400	275.100
Total suspended solids	939.800	447.000
pH	(1)	(1)

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

Table 30-9
Primary and Secondary Titanium
Acid Leachate and Rinse Water

Acr	u Leachate and Ithise	Walti
	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi produced	llion pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids	$\begin{array}{c} 5.210 \\ 4.973 \\ 22.730 \\ 11.130 \\ 236.800 \\ 485.400 \end{array}$	$\begin{array}{c} 2.131 \\ 2.368 \\ 15.040 \\ 4.854 \\ 142.100 \\ 230.900 \end{array}$
pH	(1)	(1)

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

Table 30-10
Primary and Secondary Titanium
Sponge Crushing and Screening Wet Air Pollution Control

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million produced	n pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	$\begin{array}{c} 2.847 \\ 2.717 \\ 12.420 \\ 6.082 \\ 129.400 \\ 265.300 \\ (1) \end{array}$	$egin{array}{c} 1.165 \\ 1.294 \\ 8.217 \\ 2.653 \\ 77.640 \\ 126.200 \\ (1) \\ \end{array}$

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

Table 30-11 Primary and Secondary Titanium Acid Pickle and Wash Water

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pickled	pounds) of titanium
Chromium	0.027	0.011
Lead	0.026	0.012
Nickel	0.117	0.077
Titanium	0.057	0.025
Oil and grease	1.220	0.732
Total suspended solids	2.501	1.190
pH	(1)	(1)

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

Table 30-12 Primary and Secondary Titanium Scrap Milling Wet Air Pollution Control

	0	
	BPT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli milled	on pounds) of titanium
Chromium	0.995	0.407
Lead Nickel	$0.950 \\ 4.341$	$0.452 \\ 2.871$
Titanium	2.125	0.927
Oil and grease Total suspended solids	45.220 92.700	$27.130 \\ 44.090$
pH	(1)	(1)

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

Table 30-13 Primary and Secondary Titanium Scrap Detergent Wash Water

]	BPT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per washed	million pounds) of scrap
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	7.948 7.587 34.680 16.980 361.300 740.600	3.252 3.613 22.940 7.406 216.800 352.300 (1)

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

Table 30-14 Primary and Secondary Titanium Casting Crucible Wash Water

BPT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million cast	pounds) of titanium	
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	$egin{array}{c} 0.210 \\ 0.200 \\ 0.916 \\ 0.448 \\ 9.540 \\ 19.560 \\ (1) \end{array}$	0.086 0.095 0.606 0.196 5.724 9.302 (1)	

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

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Table 30-15 Primary and Secondary Titanium Casting Contract Cooling Water

	BPT Effluent Limita	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per : cast	million pounds) of titanium
Chromium	321.100	131.400
Lead	306.500	145.900
Nickel	1,401.000	926.800
Titanium	685.900	299.200
Oil and grease	14,590.000	8,757.000
Total suspended solids	29,920.000	14,230.000
<u>p</u> H	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.303 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 30-16
Primary and Secondary Titanium
Chlorination Off-gas Wet Air Pollution Control

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium tetrachloride produced	
Chromium	0.346	0.140
Lead	0.262	0.122
Nickel	0.515	0.346
Titanium	0.496	0.216

Table 30-17
Primary and Secondary Titanium
Chlorination Area-vent Wet Air Pollution Control

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium tetrachloride produced	
Chromium	0.385	0.156
Lead	0.291	0.135
Nickel	0.572	0.385
Titanium	0.551	0.239

Table 30-18
Primary and Secondary Titanium
Titanium Tetrachloride Handling Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium tetrachloride handled	
Chromium Lead Nickel Titanium	0.069 0.052 0.103 0.099	0.028 0.024 0.069 0.043

Table 30-19
Primary and Secondary Titanium
Reduction Area Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium produced	
Chromium Lead Nickel Titanium	1.528 1.156 2.272 2.189	0.620 0.537 1.528 0.950

Table 30-20 Primary and Secondary Titanium Melt Cell Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium produced	
Chromium	0.787	0.319
Lead	0.595	0.276
Nickel	1.169	0.787
Titanium	1.127	0.489

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Table 30-21
Primary and Secondary Titanium
Chlorine Liquifaction Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium produced	
Chromium	11.010	4.463
Lead	8.332	3. 868
Nickel	16.370	11.010
Titanium	15.770	6.844

Table 30-22 Primary and Secondary Titanium Sodium Reduction Container Reconditioning Wash Water

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titaniun produced	
Chromium Lead Nickel Titanium	0.474 0.359 0.705 0.679	0.192 0.167 0.474 0.295

Table 30-23 Primary and Secondary Titanium Chip Crushing Wet Air Pollutant Control

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium produced	
Chromium Lead Nickel Titanium	0.848 0.642 1.261 1.215	0.344 0.298 0.848 0.527

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Table 30-24 Primary and Secondary Titanium Acid Leachate and Rinse Water

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium produced	
Chromium	4.381	1.776
Lead	3.315	1.539
Nickel	6.512	4.381
Titanium	6.275	2.723

Table 30-25
Primary and Secondary Titanium
Sponge Crushing and Screening Wet Air Pollution Control

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium produced	
Chromium Lead Nickel Titanium	0.239 0.181 0.356 0.343	0.097 0.084 0.239 0.149

Table 30-26 Primary and Secondary Titanium Acid Pickle and Wash Water

BAT_Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil pickled	lion pounds) of titanium
Chromium Lead Nickel Titanium	0.023 0.017 0.034 0.032	0.009 0.008 0.023 0.014

254-238 NR 274

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Table 30-27 Primary and Secondary Titanium Scrap Milling Wet Air Pollution Control

	BAT Effluent Limitation	าร
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titaniur milled	
Chromium	0.084	0.034
Lead	0.064	0.030
Nickel	0.125	0.084
Titanium	0.120	0.052

Table 30-28 Primary and Secondary Titanium Scrap Detergent Wash Water

	DATE TIME TO THE PART OF THE P	•
	BAT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per washed	million pounds) of scrap
Chromium Lead Nickel Titanium	6.684 5.058 9.935 9.574	2.710 2.348 6.684 4.155

Table 30-29 Primary and Secondary Titanium Casting Crucible Wash Water

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium cast	
Chromium Lead Nickel Titanium	0.176 0.134 0.262 0.253	0.072 0.062 0.176 0.110

Table 30-30 Primary and Secondary Titanium Casting Contract Cooling Water

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	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium ty cast	
Chromium Lead Nickel Titanium	27.000 20.430 40.140 38.680	10.950 9.486 27.000 16.780

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.304 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 30-31
Primary and Secondary Titanium
Chlorination Off-gas Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli- tetrachloride produced	on pounds) of titanium
Chromium	0.346	0.140
Lead	0.262	0.122
Nickel	0.515	0.346
Titanium	0.496	0.215
Oil and grease	9.360	9.360
Total suspended solids	14.040	11.230
pН	(1)	(1)

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

Table 30-32 Primary and Secondary Titanium Chlorination Area-vent Wet Air Pollution Control

NSPS		
,	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio tetrachloride produced	n pounds) of titanium
Chromium	0.385	0.156
Lead	0.291	0.135
Nickel	0.572	0.385
Titanium	0.551	0.239
Oil and grease	10.400	10.400
Total suspended solids	15.600	12.480
pH	(1)	(1)

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Table 30-33
Primary and Secondary Titanium
Titanium Tetrachloride Handling Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli tetrachloride handled	on pounds) of titanium
Chromium	0.069	0.028
Lead	0.052	0.024
Nickel	0.103	0.069
Titanium	0.099	0.043
Oil and grease	1.870	1.870
Total suspended solids	2.805	2.244
pH	(1)	(1)

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

Table 30-34 Primary and Secondary Titanium Reduction Area Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill produced	ion pounds) of titanium
Chromium	1.528	0.620
Lead	1.156	0.537
Nickel	2.272	1.528
Titanium	2.198	0.950
Oil and grease	41.300	41.600
Total suspended solids	61.950	49.560
pН	(1)	(1)

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

Table 30-35 Primary and Secondary Titanium Melt Cell Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million produced	pounds) of titanium
Chromium	0.787	0.319
Lead	0.595	0.276
Nickel	1.169	0.276
Titanium	1.127	0.489
Oil and grease	21.260	21.260
Total suspended solids	31.890	25.510
pН	(1)	(1)

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

Table 30-36
Primary and Secondary Titanium
Chlorine Liquefaction Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil produced	llion pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 0.000 (1)

Table 30-37
Primary and Secondary Titanium
Sodium Reduction Container Reconditioning Wash Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n produced	nillion pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.474 0.359 0.705 0.679 12.820 19.230 (1)	$egin{array}{c} 0.192 \\ 0.167 \\ 0.474 \\ 0.295 \\ 12.820 \\ 15.380 \\ (1) \\ \end{array}$

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

Table 30-38 Primary and Secondary Titanium Chip Crushing Wet Air Pollutant Control

NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per r produced	million pounds) of titanium
Chromium	0.000	0.000
Lead Nickel	0.000 0.000	$0.000 \\ 0.000$
Titanium	0.000	0.000
Oil and grease	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

Table 30-39 Primary and Secondary Titanium Acid Leachate and Rinse Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi produced	llion pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	4.381 3.351 6.512 6.275 118.400 177.600 (1)	1.776 1.539 4.381 2.723 118.400 142.100

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

Table 30-40
Primary and Secondary Titanium
Sponge Crushing and Screening Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of titanium
Chromium	0.000	0.000
Lead	0.000	0.000
Nickel	0.000	0.000
Titanium	0.000	0.000
Oil and grease	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 30-41 Primary and Secondary Titanium Acid Pickle and Wash Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill pickled	ion pounds) of titanium
Chromium	0.023	0.009
Lead	0.017	0.008
Nickel	0.034	0.023
Titanium	0.032	0.014
Oil and grease	0.610	0.610
Total suspended solids	0.915	0.732
pH	(1)	(1)

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

Table 30-42 Primary and Secondary Titanium Scrap Milling Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil milled	lion pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 0.000 (1)

Table 30-43 Primary and Secondary Titanium Scrap Detergent Wash Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per washed	million pounds) of scrap
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	$\begin{array}{c} 6.684 \\ 5.058 \\ 9.935 \\ 9.574 \\ 180.600 \\ 271.000 \\ (1) \end{array}$	$\begin{array}{c} 2.710 \\ 2.348 \\ 6.684 \\ 4.155 \\ 180.600 \\ 216.000 \\ (1) \end{array}$

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

Table 30-44 Primary and Secondary Titanium Casting Crucible Wash Water

NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli cast	on pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.176 0.134 0.262 0.253 4.770 7.155 (1)	0.072 0.062 0.176 0.110 4.770 5.724 (1)

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

Table 30-45 Primary and Secondary Titanium Casting Contract Cooling Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil cast	lion pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	27.000 20.430 40.140 38.680 729.700 $1,095.000$ (1)	$10.950 \\ 9.486 \\ 27.000 \\ 16.780 \\ 729.700 \\ 875.700 \\ (1)$

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.305 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 limitations set forth in s.NR 274.303.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.306 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s.NR 274.303.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXXI — Secondary Tungsten and Cobalt

NR 274.31 Applicability; description of the secondary tungsten and cobalt subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of tungsten or cobalt at secondary tungsten and cobalt facilities which process tungsten or tungsten carbide scrap raw materials.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.312 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 31-1 Secondary Tungsten and Cobalt Tungsten Detergent Wash and Rinse

	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m scrap washed	illion pounds) of tungsten
Copper	0.371	0.195
Nickel	0.374	0.248
Ammonia (as N)	25.990	11.430
Cobalt	0.768	0.337
Tungsten	1.357	0.542
Oil and grease	3.900	2.340
Total suspended solids	7.995	3.803
pН	(1)	(1)

Table 31-2 Secondary Tungsten and Cobalt Tungsten Leaching Acid

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio produced	n pounds) of tungsten
Copper	4.885	2.571
Nickel	4.937	3.365
Ammonia (as N)	342.700	150.700
Cobalt	10.130	4.448
Tungsten	17.890	7.147
Oil and grease	51.420	30.850
Total suspended solids	105.400	50.140
pH	(1)	(1)

254-246 NR 274

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Table 31-3 Secondary Tungsten and Cobalt Tungsten Post Leaching Wash and Rinse

-	BPT Effluent Limitatio	ns	
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property			
Copper	9.772	5.143	
Nickel	9.875	6.532	
Ammonia (as N)	685.600	301.400	
Cobalt	20.263	8.897	
Tungsten	35.800	14.300	
Oil and grease	102.900	61.720	
Total suspended solids	210.900	100.300	
pH	(1)	(1)	

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

Table 31-4 Secondary Tungsten and Cobalt Synthetic Scheelite Filtrate

	BPT Effluent Limita	itions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per scheelite produced	million pounds) of synthetic
Copper	31.660	16.660
Nickel	31.990	21.160
Ammonia (as N)	2,221.000	976.300
Cobalt	65.644	28.824
Tungsten	116.000	46.320
Oil and grease	333.200	200.000
Total suspended solids	683.000	324.900
pH	(1)	(1)

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

Table 31-5 Secondary Tungsten and Cobalt Tungsten Carbide Leaching Wet Air Pollution Control

_	_	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millic cardide scrap leached	n pounds) of tungsten
Copper	3.327	1.751
Nickel	3.362	2.224
Ammonia (as N)	233.400	102.600
Cobalt	6.899	3.039
Tungsten	12.190	4.868
Oil and grease	35.020	21.010
Total suspended solids	71.790	34.150
pН	(1)	(1)

Table 31-6 Secondary Tungsten and Cobalt Tungsten Carbide Wash Water

2 44483444 4 44444 4 44444		
BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million carbide produced	n pounds) of tungsten
Copper	15.830	8.333
Nickel	16.000	10.580
Ammonia (as N)	1,111.000	488.300
Cobalt	32.832	14.146
Tungsten	58.000	23.170
Oil and grease	166.700	100.000
Total suspended solids	341.700	162.500
pН	(1)	(1)

254-248 NR 274

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Table 31-7 Secondary Tungsten and Cobalt Cobalt Sludge Leaching Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced from cobalt s	illion pounds) of cobalt lludge
Copper	67.990	35.780
Nickel	68.700	45.440
Ammonia (as N)	4,770.000	2,097.000
Cobalt	140.977	61.901
Tungsten	249.000	99.470
Oil and grease	715.600	429.400
Total suspended solids	1,467.000	697.700
pH	(1)	(1)

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

Table 31-8 Secondary Tungsten and Cobalt Crystallization Decant

	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	79.140	41.650
Nickel	79.970	52.900
Ammonia (as N)	5,552.000	2,441.000
Cobalt	164.101	72.055
Tungsten	289.900	115.800
Oil and grease	833.000	499.800
Total suspended solids	1,708.000	812.200
pH	(1)	(1)

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

Table 31-9 Secondary Tungsten and Cobalt Acid Wash Decant

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	36.220	19.060
Nickel	36.600	24.210
Ammonia (as N)	2,541.000	1,117.000
Cobalt	75.104	32.977
Tungsten	132,700	52.990
Oil and grease	381.300	228.800
Total suspended solids	781.600	371.700
pН	(1)	(1)

Table 31-10 Secondary Tungsten and Cobalt Cobalt Hydroxide Filtrate

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	107.600	56.650
Nickel	108.800	71.940
Ammonia (as N)	7,551.000	3,320.000
Cobalt	223.189	97.999
Tungsten	394.300	157.500
Oil and grease	1,133.000	679.800
Total suspended solids	2,323.000	1,105.000
pH	(1)	(1)

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

Table 31-11 Secondary Tungsten and Cobalt Cobalt Hydroxide Filter Cake Wash

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	207.200	109.100
Nickel	209.400	138.500
Ammonia (as N)	14,530.000	6,389.000
Cobalt	429.598	188.631
Tungsten	758.900	303.100
Oil and grease	2,181.000	1,309.000
Total suspended solids	4,471.000	2,126.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.313 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 31-12 Secondary Tungsten and Cobalt Tungsten Detergent Wash and Rinse

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tungsten scrap washed	
Copper Nickel Ammonia (as N) Cobalt Tungsten	0.250 0.107 25.990 0.538 0.679	0.119 0.072 11.430 0.236 0.302

Table 31-13 Secondary Tungsten and Cobalt Tungsten Leaching Acid

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tungsten produced	
Copper Nickel Ammonia (as N) Cobalt Tungsten	3.291 1.414 342.700 7.096 8.947	1.569 0.951 150.700 3.111 3.985

Table 31-14 Secondary Tungsten and Cobalt Tungsten Post Leaching Wash and Rinse

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill produced	lion pounds) of tungsten
Copper Nickel Ammonia (as N) Cobalt Tungsten	6.583 2.829 685.600 14.194 17.900	3.137 1.903 301.400 6.223 7.972

Table 31-15 Secondary Tungsten and Cobalt Synthetic Scheelite Filtrate

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill scheelite produced	ion pounds) of synthetic
Copper Nickel Ammonia (as N) Cobalt Tungsten	$\begin{array}{c} 21.330 \\ 9.164 \\ 2,221.000 \\ 45.984 \\ 57.980 \end{array}$	10.170 6.165 976.300 20.160 25.820

Table 31-16 Secondary Tungsten and Cobalt Tungsten Carbide Leaching Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli carbide scrap leached	ion pounds) of tungsten
Copper Nickel Ammonia (as N) Cobalt Tungsten	2.241 0.963 233.400 4.833 6.093	1.068 0.648 102.600 2.119 2.714

Table 31-17 Secondary Tungsten and Cobalt Tungsten Carbide Wash Water

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tungsten carbide produced	
Copper Nickel Ammonia (as N) Cobalt Tungsten	$10.670 \\ 4.583 \\ 1,111.000 \\ 22.999 \\ 29.000$	5.083 3.083 488.300 10.083 12.920

Table 31-18 Secondary Tungsten and Cobalt Cobalt Sludge Leaching Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of cobalt produced from cobalt sludge	
Copper	45.800	21.830
Nickel	19.680	13.240
Ammonia (as N)	4,770.000	2,097,000
Cobalt `	98.756	43.295
Tungsten	124.500	55.460

Table 31-19 Secondary Tungsten and Cobalt Crystallization Decant

	Of ystamzation Deca	
	BAT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper Nickel Ammonia (as N) Cobalt Tungsten	53.310 22.910 5,552.000 114.954 144.900	25.410 15.410 2,441.000 50.397 64.560

Table 31-20 Secondary Tungsten and Cobalt Acid Wash Decant

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper Nickel Ammonia (as N) Cobalt Tungsten	24.400 10.490 2,541.000 52.611 66.340	11.630 7.053 1,117.000 23.065 29.550

Table 31-21 Secondary Tungsten and Cobalt Cobalt Hydroxide Filtrate

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n produced	nillion pounds) of cobalt
Copper	72.510	34.560
Nickel	31.160	20.960
Ammonia (as N)	7,551.000	3,320.000
Cobalt	156.346	68.543
Tungsten	197.100	87.800

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Table 31-22 Secondary Tungsten and Cobalt Cobalt Hydroxide Filter Cake Wash

	BAT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	139.600	66.510
Nickel	59.970	40.340
Ammonia (as N)	14,530.000	6,389.000
Cobalt	300.094	131.094
Tungsten	379.400	169.000

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.314 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 31-23 Secondary Tungsten and Cobalt Tungsten Detergent Wash and Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m scrap washed	illion pounds) of tungsten
Copper	0.250	0.119
Nickel	0.107	0.072
Ammonia (as N)	25.990	11.430
Cobalt	0.538	0.236
Tungsten	0.679	0.302
Oil and grease	1.950	1.950
Total suspended solids	2.925	2.340
pH	(1)	(1)

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

Table 31-24 Secondary Tungsten and Cobalt Tungsten Leaching Acid

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced	illion pounds) of tungsten
Copper	3.291	1.569
Nickel	1.414	0.951
Ammonia (as N)	342.700	150.700
Cobalt	7.096	3.111
Tungsten	8.947	3.985
Oil and grease	25.710	25.710
Total suspended solids	38.570	30.850
pH	(1)	(1)

Table 31-25 Secondary Tungsten and Cobalt Tungsten Post Leaching Wash and Rinse

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi produced	llion pounds) of tungsten
Copper	6.583	3.137
Nickel	2.829	1.903
Ammonia (as N)	685.600	301.400
Cobalt	14.194	6.223
Tungsten	17.900	7.972
Oil and grease	51.430	51.430
Total suspended solids	77.150	61.720
pН	(1)	(1)

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

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Table 31-26 Secondary Tungsten and Cobalt Synthetic Scheelite Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil scheelite produced	llion pounds) of synthetic
Copper	21.330	10.170
Nickel	9.164	6.165
Ammonia (as N)	2,221.000	976.300
Cobalt	45.984	20.160
Tungsten	57.980	25.820
Oil and grease	166.600	166.600
Total suspended solids	249.900	199.900
pH	(1)	(1)

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

Table 31-27 Secondary Tungsten and Cobalt Tungsten Carbide Leaching Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli carbide scrap leached	on pounds) of tungsten
Copper	2.241	1.068
Nickel	0.963	0.648
Ammonia (as N)	233.400	102.600
Cobalt	4.833	2.119
Tungsten	6.093	2.714
Oil and grease	17.510	17.510
Total suspended solids	26.270	21.010
pН	(1)	(1)

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

Table 31-28 Secondary Tungsten and Cobalt Tungsten Carbide Wash Water

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m carbide produced	nillion pounds) of tungsten
Copper	10.670	5.083
Nickel	4.583	3.083
Ammonia (as N)	1,111.000	488.300
Cobalt	22,999	10.083
Tungsten	29.000	12.920
Oil and grease	83.330	83.330
Total suspended solids	125.000	100.349
pН	(1)	(1)

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

Table 31-29 Secondary Tungsten and Cobalt Cobalt Sludge Leaching Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n produced from cobalt	nillion pounds) of cobalt sludge
Copper	45.800	21.830
Nickel	19.680	13.240
Ammonia (as N)	4,770.000	2,097.000
Cobalt	98.756	43.295
Tungsten	124.500	55.460
Oil and grease	357.800	357.800
Total suspended solids	536.700	429.400
pH	(1)	(1)

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

Table 31-30 Secondary Tungsten and Cobalt Crystallization Decant

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	53.310	25.410
Nickel	22.910	15.410
Ammonia (as N)	5,552.000	2,441.000
Cobalt	114.954	50.397
Tungsten	144.900	64.560
Oil and grease	416.500	416.500
Total suspended solids	624.800	499.800
pH	(1)	(1)

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

Table 31-31 Secondary Tungsten and Cobalt Acid Wash Decant

•	Acid Wash Decan	.0
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	24.400	11.630
Nickel	10.490	7.053
Ammonia (as N)	2,541.000	1,117.000
Cobalt	52.611	23.065
Tungsten	66.340	29.550
Oil and grease	190.600	190.600
Total suspended solids	285.900	228.700
pH	(1)	(1)

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

Table 31-32 Secondary Tungsten and Cobalt Cobalt Hydroxide Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	72.510	34.560
Nickel	31.160	20.960
Ammonia (as N)	7,551.000	3,320.000
Cobalt	156.346	68.543
Tungsten	197.100	87.800
Oil and grease	566.500	566.500
Total suspended solids	849.700	679.800
pН	(1)	(1)

Table 31-33 Secondary Tungsten and Cobalt Cobalt Hydroxide Filter Cake Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of cobalt
Copper	139.600	66.510
Nickel	59.970	40.340
Ammonia (as N)	14,530.000	6,389.000
Cobalt	300.094	131.932
Tungsten	379.400	169.000
Oil and grease	1,090.000	1.090.000
Total suspended solids	1,636.000	1,308.000
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.315 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 limitations set forth in s. NR 274.313.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.316 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.313.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXXII — Secondary Uranium

NR 274.32 Applicability; description of the secondary uranium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of uranium, including depleted uranium, by secondary uranium facilities.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.322 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 32-1 Secondary Uranium Refinery Sump Filtrate

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed in the refinery	pounds) of uranium
Chromium	32.270	13.200
Copper Nickel	$139.300 \\ 140.800$	73.340 93.140
Fluoride	2,567.000	1,459.000
Total suspended solids	3,007.000	1,430.000
pH	(1)	(1)

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

Table 32-2 Secondary Uranium Slag Leach Reslurry

	Slag Leach Reslurry	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed in the refinery	n pounds) of uranium
Chromium	2.009	0.822
Copper	8.675	4.566
Nickel	8.767	5.799
Fluoride	159.800	90.860
Total suspended solids	187.200	89.040
pH	(1)	(1)

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

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Table 32-3 Secondary Uranium Solvent Extraction Raffinate Filtrate

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed in the refinery	n pounds) of uranium
Chromium	2.802	1.146
Copper	12.100	6.369
Nickel	12.230	8.089
Fluoride	222.900	126.700
Total suspended solids	261.100	124.200
pH	(1)	(1)

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

Table 32-4 Secondary Uranium Digestion Wet Air Pollution Control

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	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed in the refinery	n pounds) of uranium
Chromium Copper Nickel Fluoride Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 (1)

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

Table 32-5 Secondary Uranium Evaporation and Denitration Wet Air Pollution Control

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio trioxide produced	n pounds) of uranium
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pН	(1)	(1)

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

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Table 32-6 Secondary Uranium Hypofluorination Alkaline Scrubber

	BPT Effluent Limitations	
·	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio tetrafluoride produced	n pounds) of uranium
Chromium	0.009	0.004
Copper	0.038	0.020
Nickel	0.038	0.025
Fluoride	0.070	0.398
Total suspended solids	0.820	0.390
pH	(1)	(1)

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

Table 32-7 Secondary Uranium Hypofluorination Water Scrubber

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio tetrafluoride produced	on pounds) of uranium
Chromium Copper Nickel Fluoride Total suspended solids pH	0.000 0.000 0.000 0.000 0.000 (1)	0.000 0.000 0.000 0.000 0.000 (1)

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

Table 32-8 Secondary Uranium Magnesium Reduction and Casting Floor Wash

	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uranium produced by magnesium reduction	
Chromium Copper Nickel Fluoride Total suspended solids pH	0.013 0.057 0.058 1.056 1.234 (1)	0.005 0.030 0.038 0.599 0.587 (1)

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

Table 32-9 Secondary Uranium Laundry Wastewater

	manary " about " ator	
	BPT Effluent Limitation	ıs
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill produced by magnesium	lion pounds) of uranium n reduction
Chromium	0.084	0.035
Copper	0.365	0.192
Nickel	0.369	0.244
Fluoride	6.720	3.821
Total suspended solids	7.872	3.744
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.323 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 32-10 Secondary Uranium Refinery Sump Filtrate

		•
	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi processed in the refine	llion pounds) of uranium
Chromium Copper Nickel Fluoride	27.14 93.88 40.34 2,567.00	11.00 44.74 27.14 1,459.00

Table 32-11 Secondary Uranium Slag Leach Reslurry

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio processed in the refinery	on pounds) of uranium
Chromium Copper Nickel	1.689 5.844 2.511	0.685 2.785 1.689
Fluoride	159.800	90.860

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Table 32-12 Secondary Uranium Solvent Extraction Raffinate Filtrate

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uranium processed in the refinery	
Chromium Copper	2.357 8.152	0.955 3.885
Nickel Fluoride	3.503 222.900	2.357 126.700

Table 32-13 Secondary Uranium Digestion Wet Air Pollution Control

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	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
Chromium Copper Nickel Fluoride	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

Table 32-14 Secondary Uranium Evaporation and Denitration Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uranium trioxide produced	
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000

Table 32-15 Secondary Uranium Hypofluorination Alkaline Scrubber

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio tetrafluoride produced	on pounds) of uranium
Chromium Copper Nickel Fluoride	0.007 0.026 0.011 0.700	0.003 0.012 0.025 0.398

Table 32-16 Secondary Uranium Hypofluorination Water Scrubber

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio tetrafluoride produced	on pounds) of uranium
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000

Table 32-17 Secondary Uranium Magnesium Reduction and Casting Floor Wash

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uranium produced by magnesium reduction	
Chromium	0.011	0.005
Copper	0.039	0.018
Nickel	0.017	0.011
Fluoride	1.054	0.599

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Table 32-18 Secondary Uranium Laundry Wastewater

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uranium produced by magnesium reduction	
Chromium	0.036	0.014
Copper	0.123	0.059
Nickel	0.053	0.036
Fluoride	3.360	1.910

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.324 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 32-19 Secondary Uranium Refinery Sump Filtrate

	remier y samp i morate	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millior processed in the refinery	pounds) of uranium
Chromium Copper Nickel Fluoride Total suspended solids pH	27.14 93.88 40.34 $2,567.00$ $1,100.00$ (1)	11.00 44.74 27.14 1,459.00 880.10 (1)

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

Table 32-20 Secondary Uranium Slag Leach Reslurry

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio processed in the refinery	n pounds) of uranium
Chromium Copper	1.689 5.844	0.685 2.785
Nickel	2.511	1.689
Fluoride Total suspended solids	$159.800 \\ 68.490$	$90.860 \\ 54.790$
pH	(1)	(1)

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

Table 32-21 Secondary Uranium Solvent Extraction Raffinate Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million processed in the refinery	pounds) of uranium
Chromium	2.357	0.955
Copper	8.152	3.885
Nickel	3.503	2.357
Fluoride	222.900	126.700
Total suspended solids	95.540	76.430
pH	(1)	(1)

Table 32-22 Secondary Uranium Digestion Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio processed in the refinery	n pounds) of uranium
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 32-23 Secondary Uranium Evaporation and Denitration Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio trioxide produced	on pounds) of uranium
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

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Table 32-24 Secondary Uranium Hypofluorination Alkaline Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million tetrafluoride produced	pounds) of uranium
Chromium	0.007	0.003
Copper	0.026	0.012
Nickel	0.011	0.025
Fluoride	0.700	0.398
Total suspended solids	0.300	0.240
pH	(1)	(1)

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

Table 32-25 Secondary Uranium Hypofluorination Water Scrubber

	NSPS	-
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio tetrafluoride produced	n pounds) of uranium
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 32-26 Secondary Uranium Magnesium Reduction and Casting Floor Wash

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill produced by magnesium	
Chromium Copper Nickel Fluoride Total suspended solids pH	0.011 0.039 0.017 1.054 0.452 (1)	0.005 0.018 0.011 0.599 0.361 (1)

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

Table 32-27 Secondary Uranium Laundry Wastewater

	<u> </u>	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill produced by magnesium	
Chromium	0.036	0.014
Copper	0.123	0.059
Nickel	0.053	0.036
Fluoride	3.360	1.910
Total suspended solids	1.440	1.152
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.326 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.323.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

Subchapter XXXIII — Primary Zirconium and Hafnium

NR 274.33 Applicability; description of the primary zirconium and hafnium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the production of zirconium or hafnium at primary zirconium and hafnium facilities except for facilities which only produce zirconium or zirconium/nickel alloys by magnesium reduction of zirconium dioxide.

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.332 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 33-1 Primary Zirconium and Hafnium Sand Drying Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millior dioxide and hafnium diox	
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	0.250 0.165 0.239 1.091 75.710 23.290 (1)	0.102 0.068 0.114 0.721 33.280 11.080 (1)

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

Table 33-2
Primary Zirconium and Hafnium
Sand Chlorination Off-Gas Wet Air Pollution Control

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	19.130 12.610 18.260 83.460 5,795.000 1,782.000 (1)	7.825 5.216 8.694 55.210 $2,547.000$ 847.700 (1)

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

Table 33-3
Primary Zirconium and Hafnium
Sand Chlorination Area-Vent Wet Air Pollution Control

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	3.751 2.472 3.580 16.370 $1,136.000$ 349.500 (1)	$egin{array}{c} 1.534 \\ 1.023 \\ 1.705 \\ 10.830 \\ 449.500 \\ 166.200 \\ (1) \\ \end{array}$

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

Table 33-4
Primary Zirconium and Hafnium
Silicon Tetrachloride Purification Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	$3.299 \ 2.174 \ 3.149 \ 14.400 \ 999.500 \ 307.400 \ (1)$	$\begin{array}{c} 1.350 \\ 0.900 \\ 1.500 \\ 9.522 \\ 439.400 \\ 146.200 \\ (1) \end{array}$

Table 33-5
Primary Zirconium and Hafnium
Feed Make Up Wet Air Pollution Control

BPT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per millior dioxide and hafnium diox	n pounds) of zirconium ide produced	
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	$\begin{array}{c} 2.501 \\ 1.648 \\ 2.387 \\ 10.910 \\ 757.500 \\ 233.000 \\ (1) \end{array}$	$\begin{array}{c} 1.023 \\ 0.682 \\ 1.137 \\ 7.217 \\ 333.000 \\ 110.800 \\ (1) \end{array}$	

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

Table 33-6
Primary Zirconium and Hafnium
Iron extraction Steam Stripper Bottoms

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio dioxide and hafnium diox	n pounds) of zirconium xide produced
Chromium	0.987	0.404
Cyanide	0.651	0.269
Lead	0.942	0.449
Nickel	4.308	2.850
Ammonia (as N)	299.100	131.500
Total suspended solids	92.000	43.760
pH	(1)	(1)

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



Table 33-7 Primary Zirconium and Hafnium Zirconium Filtrate

	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	17.070	6.982
Cyanide	11.250	4.655
Lead	16.290	7.758
Nickel	74.480	49.260
Ammonia (as N)	5,171.000	2,273.000
Total suspended solids	1,590.000	756.400
pH	(1)	(1)

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

Table 33-8 Primary Zirconium and Hafnium Hafnium Filtrate

	Hallian I moracc	
,	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	0.000	0.000
Cyanide	0.000	0.000
Lead	0.000	0.000
Nickel	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 33-9
Primary Zirconium and Hafnium
Calcining Caustic Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	3.959	1.619
Cyanide	2.609	1.080
Lead	3.799	1.799
Nickel	17.270	11.430
Ammonia (as N)	1.199.000	527.200
Total suspended solids	368.900	175.400
pH	(1)	(1)

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

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Table 33-10
Primary Zirconium and Hafnium
Pure Chlorination Wet Air Pollution Control

	BPT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio dioxide and hafnium dio	
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	16.860 11.110 16.090 73.570 5,108.000 1,571.000 (1)	6.897 4.598 7.663 48.660 2,245.000 747.200 (1)

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

Table 33-11
Primary Zirconium and Hafnium
Reduction Area Vent Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	1.622	0.663
Cyanide	1.069	0.442
Lead	1.548	0.737
Nickel	7.077	4.681
Ammonia (as N)	491.300	216.000
Total suspended solids	151.100	71.880
pH	(1)	(1)

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

Table 33-12 Primary Zirconium and Hafnium Magnesium Recovery Off-Gas Wet Air Pollution Control

<u> </u>	•	
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium d	ion pounds) of zirconium ioxide produced
Chromium	9.123	3.732
Cyanide Lead	$6.013 \\ 8.708$	$2.488 \\ 4.147$
Nickel	39.810	26.330
Ammonia (as N)	2,764.000 850.100	1,215.000 404.300
Total suspended solids pH	(1)	404.300 (1)

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

Table 33-13
Primary Zirconium and Hafnium
Magnesium Recovery Area-Vent Wet Air Pollution Control

Č	•	
	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio dioxide and hafnium dio	on pounds) of zirconium oxide produced
Chromium	5.068	2.073
Cyanide	3.340	1.382
Lead	4.838	2.304
Nickel	22.110	14.630
Ammonia (as N)	1,535.000	675.000
Total suspended solids	472.200	224.600
pH	(1)_	(1)

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

Table 33-14
Primary Zirconium and Hafnium
Zirconium Chip Crushing Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	0.000	0.000
Cyanide	0.000	0.000
Lead	0.000	0.000
Nickel	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 33-15
Primary Zirconium and Hafnium
Acid Leachate From Zirconium Metal Production

Acid Leacha	ce From Zircomum Me	tal Froduction
	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	12.970	5.304
Cyanide	8.545	3.536
Lead	12.380	5.893
Nickel	56.570	37.420
Ammonia (as N)	3,928.000	1,727.000
Total suspended solids	1,208.000	574.600
pH	(1)	(1)

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

Table 33-16
Primary Zirconium and Hafnium
Acid Leachate From Zirconium Alloy Production

		-
BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium di	ion pounds) of zirconium oxide produced
Chromium	6.939	2.839
Cyanide	4.574	1.893
Lead	6.624	3.154
Nickel	30.280	20.030
Ammonia (as N)	2,102.000	924.200
Total suspended solids	646.600	307.600
pH	(1)	(1)

Table 33-17
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Metal Production

Deaching 10mbe Waters 110m 2m comuni Wetter 110ddevion		
	BPT Effluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium o	llion pounds) of zirconium lioxide produced
Chromium	25.930	10.610
Cyanide	17.090	7.072
Lead	24.750	11.790
Nickel	113.200	74.840
Ammonia (as N)	7,856.000	3,453.000
Total suspended solids	2,416.000	1,149.000
pH	(1)	(1)

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

Table 33-18
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Alloy Production

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	0.347	0.142
Cyanide	0.299	0.095
Lead	0.331	0.158
Nickel	1.515	1.002
Ammonia (as N)	105.200	46.240
Total suspended solids	32.350	15.390
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.333 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 point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 33-19
Primary Zirconium and Hafnium
Sand Drying Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	0.210	0.085
Cyanide	0.114	0.045
Lead	0.159	0.074
Nickel	0.312	0.210
Ammonia (as N)	75.710	33.280

Table 33-20 Primary Zirconium and Hafnium Sand Chlorination Off-Gas Wet Air Pollution Control

	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel	16.080 8.694 12.170 23.910	6.521 3.478 5.651 16.080
Ammonia (as N)	5,795.000	2,547.000

Table 33-21 Primary Zirconium and Hafnium Sand Chlorination Area-Vent Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	3.154 1.705 2.387 4.688 1,136.000	1.279 0.682 1.108 3.154 499.500

Table 33-22 Primary Zirconium and Hafnium Silicon Tetrachloride Purification Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{cccc} 2.774 & 1.125 \\ 1.500 & 0.600 \\ 2.099 & 0.975 \\ 4.124 & 2.774 \\ 999.500 & 439.400 \end{array}$	

Table 33-23 Primary Zirconium and Hafnium Feed Make Up Wet Air Pollution Control

BAT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced		
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{cccc} 2.103 & 0.852 \\ 1.137 & 0.455 \\ 1.591 & 0.739 \\ 3.126 & 2.103 \\ 757.500 & 333.000 \end{array}$		

Table 33-24 Primary Zirconium and Hafnium Iron extraction Steam Stripper Bottoms

	BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced		
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{ccc} 0.830 & 0.337 \\ 0.449 & 0.180 \\ 0.628 & 0.292 \\ 1.234 & 0.830 \\ 299.100 & 131.500 \end{array}$		

Table 33-25 Primary Zirconium and Hafnium Zirconium Filtrate

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{ccc} 14.350 & 5.819 \\ 7.758 & 3.103 \\ 10.860 & 5.043 \\ 21.330 & 14.350 \\ 5.171.000 & 2.273.000 \end{array}$	

Table 33-26 Primary Zirconium and Hafnium Hafnium Filtrate

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
Ammonia (as N)	0.000	0.000

Table 33-27 Primary Zirconium and Hafnium Calcining Caustic Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{cccc} 3.329 & 1.350 \\ 1.799 & 0.720 \\ 2.519 & 1.170 \\ 14.948 & 3.329 \\ 1,199.000 & 527.200 \end{array}$	

Table 33-28 Primary Zirconium and Hafnium Pure Chlorination Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{cccc} 14.180 & 5.748 \\ 7.663 & 3.065 \\ 10.730 & 4.981 \\ 21.070 & 14.180 \\ 5,108.000 & 2,245.000 \end{array}$	

Table 33-29
Primary Zirconium and Hafnium
Reduction Area Vent Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	1.364 0.737 1.032 2.027 491.300	0.553 0.295 0.479 1.364 216.000

Table 33-30
Primary Zirconium and Hafnium
Magnesium Recovery Off-Gas Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{cccc} 7.671 & 3.110 \\ 4.147 & 1.659 \\ 5.805 & 2.695 \\ 11.400 & 7.671 \\ 2,764.000 & 1,215.000 \end{array}$	

Table 33-31
Primary Zirconium and Hafnium
Magnesium Recovery Area-Vent Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	$\begin{array}{cccc} 4.262 & 1.728 \\ 2.304 & 0.921 \\ 3.225 & 1.497 \\ 26.335 & 4.262 \\ 1.535.000 & 675.000 \end{array}$	

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Table 33-32
Primary Zirconium and Hafnium
Zirconium Chip Crushing Wet Air Pollution Control

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000

Table 33-33
Primary Zirconium and Hafnium
Acid Leachate From Zirconium Metal Production

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	10.900 5.893 8.250 16.210 3.928.000	4.420 2.357 3.831 10.900 1.674.000

Table 33-34 Primary Zirconium and Hafnium Acid Leachate From Zirconium Alloy Production

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	5.835	2.366
Cyanide	3.154	1.262
Lead	4.416	2.050
Nickel	8.674	5.835
Ammonia (as N)	2,102.000	895.000

Table 33-35
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Metal Production

	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	21.810 11.790 16.500 32.410 7,856.000	8.840 4.715 7.661 21.810 3,453.000

Table 33-36
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Alloy Production

BAT Effluent Limitations		
,	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium Cyanide Lead Nickel Ammonia (as N)	0.292 0.158 0.221 1.434 105.200	0.118 0.063 0.103 0.292 46.240

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.334 New source performance standards. Any new source subject to this subchapter shall achieve the following standards:

Table 33-37 Primary Zirconium and Hafnium Sand Drying Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium d	ion pounds) of zirconium ioxide produced
Chromium	0.210	0.085
Cyanide	0.114	0.045
Lead	0.159	0.074
Nickel	0.312	0.210
Ammonia (as N)	75.710	33.280
Total suspended solids	8.520	6.816
pH	(1)	(1)

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

Table 33-38
Primary Zirconium and Hafnium
Sand Chlorination Off-Gas Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium d	lion pounds) of zirconium ioxide produced
Chromium	16.080	6.521
Cyanide	8.694	3.478
Lead	12.170	5.651
Nickel	23.910	16.080
Ammonia (as N)	5,795.000	2,547.000
Total suspended solids	652.100	521.000
pH	(1)	(1)

Table 33-39
Primary Zirconium and Hafnium
Sand Chlorination Area-Vent Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium o	lion pounds) of zirconium lioxide produced
Chromium	3.154	1.279
Cyanide Lead	$1.705 \\ 2.387$	0.682 1.108
Nickel	4.688	3.154
Ammonia (as N)	1,136.000	499.500
Total suspended solids	127.900	102.300
pH	(1)	(1)

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

Table 33-40
Primary Zirconium and Hafnium
Silicon Tetrachloride Purification Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium d	lion pounds) of zirconium ioxide produced
Chromium Cyanide Lead Nickel Ammonia (as N)	2.774 1.500 2.099 4.124 999.500	$\begin{array}{c} 1.125 \\ 0.600 \\ 0.975 \\ 2.774 \\ 439.400 \end{array}$
Total suspended solids pH	112.500 (1)	89.980 (1)

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

Table 33-41 Primary Zirconium and Hafnium Feed Make Up Wet Air Pollution Control

:	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium d	lion pounds) of zirconium ioxide produced
Chromium	2.103	0.852
Cyanide	1.137	0.455
Lead	1.591	0.739
Nickel	3.126	2.103
Ammonia (as N)	757.500	333.000
Total suspended solids	85.250	68.200
pH	(1)	(1)

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

Table 33-42 Primary Zirconium and Hafnium Iron extraction Steam Stripper Bottoms

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium d	lion pounds) of zirconium ioxide produced
Chromium	0.830	0.337
Cyanide	0.449	0.180
Lead	0.628	0.292
Nickel	1.234	0.830
Ammonia (as N)	299.100	131.500
Total suspended solids	33.660	26.930
pH	(1)	(1)

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

Table 33-43 Primary Zirconium and Hafnium Zirconium Filtrate

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi dioxide and hafnium	illion pounds) of zirconium dioxide produced
Chromium	14.350	5.819
Cyanide	7.758	3.103
Lead	10.860	5.043
Nickel	21.330	14.350
Ammonia (as N)	5,171.000	2,273.000
Total suspended solids	581.900	465.500
pH	(1)	(1)

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

Table 33-44
Primary Zirconium and Hafnium
Hafnium Filtrate

	LLGLILLGIII L IIVIGOC	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium di	ion pounds) of zirconium oxide produced
Chromium	0.000	0.000
Cyanide	0.000	0.000
Lead	0.000	0.000
Nickel	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

Table 33-45
Primary Zirconium and Hafnium
Calcining Caustic Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium di	ion pounds) of zirconium ioxide produced
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	3.329 1.799 2.519 4.948 1,199.000 135.000 (1)	1.350 0.720 1.170 3.329 527.200 108.000 (1)

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

Table 33-46
Primary Zirconium and Hafnium
Pure Chlorination Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium d	lion pounds) of zirconium lioxide produced
Chromium Cyanide	14.180 7.663	5.748 3.065
Lead Nickel	$10.730 \\ 21.070$	$4.981 \\ 14.180$
Ammonia (as N) Total suspended solids	5,108.000 574.800	$2,245.000 \\ 459.800$
pH	(1)	(1)

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

Table 33-47
Primary Zirconium and Hafnium
Reduction Area Vent Wet Air Pollution Control

\\	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium d	ion pounds) of zirconium ioxide produced
Chromium	1.364	0.553
Cyanide	0.737	0.295
Lead	1.032	0.479
Nickel	2.027	1.364
Ammonia (as N)	491.300	216.000
Total suspended solids	55.290	44.230
pH	(1)	(1)

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

Table 33-48
Primary Zirconium and Hafnium
Magnesium Recovery Off-Gas Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium o	llion pounds) of zirconium lioxide produced
Chromium	7.671	3.110
Cyanide	4.147	1.659
Lead	5.805	2.695
Nickel	11.400	7.671
Ammonia (as N)	2,764.000	1,215.000
Total suspended solids	404.300	248.800
pH	. (1)	(1)

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

Table 33-49
Primary Zirconium and Hafnium
Magnesium Recovery Area-Vent Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium d	ion pounds) of zirconium ioxide produced
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids pH	4.262 2.304 3.225 6.335 1,535.000 172.800 (1)	1.728 0.921 1.497 4.262 675.000 138.200 (1)

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

Table 33-50 Primary Zirconium and Hafnium Zirconium Chip Crushing Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli dioxide and hafnium di	on pounds) of zirconium oxide produced
Chromium	0.000	0.000
Cyanide	0.000	0.000
Lead	0.000	0.000
Nickel	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

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

Table 33-51 Primary Zirconium and Hafnium Acid Leachate From Zirconium Metal Production

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium d	lion pounds) of zirconium lioxide produced
Chromium	10.900	4.420
Cyanide	5.893	2.357
Lead	8.250	3.831
Nickel	16.210	10.900
Ammonia (as N)	3,928.000	1,674.000
Total suspended solids	442.000	353.600
pН	(1)	(1)

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

Table 33-52 Primary Zirconium and Hafnium Acid Leachate From Zirconium Alloy Production

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium d	lion pounds) of zirconium lioxide produced
Chromium Cyanide Lead Nickel Ammonia (as N) Total suspended solids	5.835 3.154 4.416 8.674 2,102.000 236.600	2.366 1.262 2.050 5.835 895.800 189.300
pН	(1)	(1)

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

Table 33-53
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Metal Production

NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil dioxide and hafnium o	lion pounds) of zirconium lioxide produced
Chromium	21.810	8.840
Cyanide	11.790	4.715
Lead	16.500	7.661
Nickel	32.410	21.810
Ammonia (as N)	7,856.000	3,453.000
Total suspended solids	884.000	707.200
pH	(1)	(1)

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

Table 33-54
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Alloy Production

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill dioxide and hafnium d	ion pounds) of zirconium ioxide produced
Chromium	0.292	0.118
Cyanide	0.158	0.063
Lead	0.221	0.103
Nickel	1.434	0.292
Ammonia (as N)	105.200	46.240
Total suspended solids	11.840	9.468
pH	(1)	(1)

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

History: Cr. Register, March, 1991, No. 423, eff. 4-1-91.

NR 274.336 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the limitations set forth in s. NR 274.333.

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. 403.3
s. NR 211.13	40 C.F.R. s. 403.7
s. NR 211.14	40 C.F.R. s. 403.13
ch. NR 219	40 C.F.R. Part 136
ch. NR 256	40 C.F.R. Part 464
ch. NR 274	40 C.F.R. Part 421