Chapter NR 274

NONFERROUS METALS MANUFACTURING

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Note: Chapter NR 274 as it existed on March 31, 1991 was repealed and a new chapter NR 274 was created effective April 1, 1991.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

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

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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

January 22, 1987 Primary Tungsten

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.

(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

September 20, 1988

Primary antimony Primary beryllium Primary and secondary germanium and gallium Secondary indium Secondary mercury Primary molybdenum and rhenium Secondary molybdenum and 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

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 Limitation	ns	
	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	2.0	1.0	
Total suspended solids pH	3.0 (1)	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	0.005	0.002
Antimony	0.263	0.117
Nickel	0.075	0.050
Aluminum	0.831	0.369
Fluoride	8.092	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 1,00 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

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 1,000,000 pounds) of anodes baked	
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	0.146 8.346 2.378 26.420 257.300	0.067 3.719 1.600 11.720 114.200

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

1000-01111	BAT Effluent Limitations		
	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

	Opid) Idiroi	
	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) of anode baked	
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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pounds) of anod ty baked	
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	$\begin{array}{ccc} 0.038 & 0.018 \\ 2.197 & 0.979 \\ 0.626 & 0.421 \\ 6.953 & 3.084 \\ 67.710 & 30.050 \end{array}$	

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	1,181 67.610 157,600	0,547 30,120 70,060
Nickel Aluminum Fluoride	19.270 214.000 2,084.000	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

	Timour Cumous Iropropo	~
	BAT Effluent Limitation	าร
	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 Nickel Aluminum Fluoride	0.028 1.618 0.461 5.120 49.860	0.013 0.721 0.310 2.271 22.130

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

•		
	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 electrolytic reduction
Benzo(a)pyrene Antimony Cyanide Nickel Aluminum Fluoride	0.028 10.060 3.771 1.928 6.537 703.900	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

	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 electrolytic reduction
Benzo(a)pyrene	0.028	0.013
Antimony	1.618	0.721
Cyanide	3.771	1.676
Nickel	0.461	0.310
Aluminum	5.120	2.271
Fluoride	49.860	22.130

Table 2-14
Primary Aluminum Smelting
Potroom 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	0.056 3,204 0.913 10.140 98.770	0.026 1.428 0.614 4.499 43.830

	BAT Effluent Limitation	ns
		Maximum for monthly average
Pollutant or pollutant property		1,000,000 pounds) of om electrolytic reduction
Benzó(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 Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
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

	co chim custing contact	<u></u>
	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 direct chill casting
Benzo(a)pyrene Antimony Nickel Aluminum Fluoride	(1) 2.565 0.731 8.120 79.080	(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

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per 1,000,000 pound aluminum produced from 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

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
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
рН	(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
pН	(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 1,0 baked	00,000 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
рН	(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
рН	(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	0.000	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
рН	(1)	(1)

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

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

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property Benzo(a)pyrene Antimony Nickel Aluminum Fluoride Oil and grease Total suspended solids pH	aluminum produced fr 0.000 0.000 0.000 0.000 0.000 0.000	1,000,000 pounds) of om electrolytic reduction 0,000 0,000 0,000 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
pH	(1)	(1)

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

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 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

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
pН	(1)	(1)

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

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
рН	(2)	(2)

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
pН	(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

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

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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		1,000,000 pounds) of om stationary casting or
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

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 1,0	00,000 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 cast	
Benzo(a)pyrene	0.007	0.003
Nickel	0.115	0.077
Fluoride	12.440	5.518

Table 2-36
Primary Aluminum Smelting
Anode Bake 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 anode erty baked	
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 Cyanide Nickel Fluoride	1.181 157.600 19.270 2,084.000	0.547 70.060 12.960 924.800

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 om 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

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

	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 2-44 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	$egin{array}{ccc} (1) & (1) & & & & & & & & & & & & & & & & & & &$	

⁽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:

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 pH	175 6.5 (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

	le i locessed by wet intenlods
E	PT Effluent Limitations
	Maximum average of daily values for 30 consecutive days
	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 demar	
рН	(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 scrap dried	
Lead Zinc Aluminum Ammonia(as N)	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

Table 3-4 Secondary Aluminum Smelting Scrap Screening and Milling

	BAT Effluent Limitatio	ns
	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 Zine 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	3,043	1.413
Zinc	11,090	4.565
Aluminum	66.410	29.450
Ammonia(as N)	1,449.000	636.900

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

	agging weeth remainer	
	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

BAT Effluent Limitations				
	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 Limitations		
	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
Zine	1.356	0.558
Aluminum	8.120	3.602
Ammonia(as N)	177,200	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 Limitations		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	0.019	0.009
Zine	0.068	0.028
Aluminum	0.409	0.182
Ammonia(as N)	8.931	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 Limitations		
	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

Table 3-11 Secondary Aluminum Smelting Stationary 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	0.000	0.000
Zinc	0.000	0.000
Aluminum	0.000	0.000
Ammonia(as N)	0.000	0.000

Table 3-12 Secondary Aluminum Smelting Shot Casting Contact Cooling

	2		
BAT Effluent Limitations			
Maximum for Maximum for any 1 day 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	

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 1, dried	000,000 pounds) of scrap
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

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
pН	(1)	(1)

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

Table 3-15 Secondary Aluminum Smelting Dross Washing

	Dioss irusiing	
	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
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

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	0.216	0.100
Zine	0.786	0.324
Aluminum	4.711	2.090
Ammonia(as N)	102.800	45.180
Total suspended solids	11.570	9.252
Oil and grease	7.710	7.710
pH	(1)	(1)

⁽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		
- 11	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

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 Zinc	0.372 1.356	0.173 0.558
Aluminum Ammonia(as N)	$8.120 \\ 177.200$	3.602 77.880
Total suspended solids Oil and grease	19.400 13.290	15.950 13.290
pH	(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

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
рН	(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	<u>-</u>
	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 Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 0.000 0.000

Table 3-25 Secondary Aluminum Smelting Dross Washing

PSES		
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 Zinc Ammonia(as N)	0.216 0.786 102.800	0.100 0.324 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	

 $[\]begin{tabular}{ll} \textbf{(1) At or before the commingling of delacquering scrubber liquor blowdown with other process or nonprocess waters. \end{tabular}$

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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	0.372	0.173
Zinc	1.356	0.558
Ammonia(as N)	177.200	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

Table 3-31 Secondary Aluminum Smelting Stationary 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	0.000	0.000
Zinc	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 dried	1,000,000 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

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

Table 3-35 Secondary Aluminum Smelting Dross Washing

	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per 1,000,000 pounds pollutant property washed		000,000 pounds) of dross
Lead	0,000	0.000
Zinc	0.000	0.000
Ammonia(as N)	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
mg/kg (pounds per aluminum demagged	1,000,000 pounds) of
0.216	0.100
0.786	$0.324 \\ 45.180$
	Maximum for any 1 day mg/kg (pounds per aluminum demagged 0.216

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

⁽I) 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

1100	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	<u> </u>
,,	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 Zinc Ammonia(as N)	0.000 0.000 0.000	0.000 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 Zinc Ammonia(as N)	0.000 0.000 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 ore 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.

254-40 NR 274

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:

Table 5-1 Primary Electrolytic Copper Refining

Filma	ry Electrolytic Copper	Yemmin
	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum of daily values for 30 consecutive days
Pollutant or pollutant property	kg/kkg (pounds pelectrolytically refined	oer 1,000 pounds) of d copper
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

	Casting Contact Coom	ıg
	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

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Table 5-4 Primary Electrolytic Copper Refining Spent Electrolyte

	Spent Dicettory 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 copper cathode production	
Arsenic Copper Nickel	0.068 0.063 0.027	0.031 0.030 0.018

Table 5-5 Primary Electrolytic Copper Refining 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 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	าร
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per 1,000,000 pounds) product recovered from electrolytic slime processing		1,000,000 pounds) of om electrolytic slimes
Arsenic	0.000	0.000
Copper	0.000	0.000
Nickel	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:

Table 5-7 Primary Electrolytic Copper Refining Casting Contact Cooling

	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 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

	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
Arsenic	0.000	0.000
Copper	0.000	0.000
Nickel	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

Table 5-9 Primary Electrolytic Copper Refining Spent Electrolyte

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per 1,000,000 pounds) of control pollutant property 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
рH	(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	
	NSPS	
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per product recovered fr processing	1,000,000 pounds) of rom electrolytic slimes
Arsenic	0.000	0.000
Copper	0.000	0.000
Nickel	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

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		
Arsenic	0,692	0.309
Copper	0.638	0.304
Nickel	0.274	0.184

Register, March, 1991, No. 423

254-46 NR 274

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

	Illiode dila Carilode IVII	
	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 ction
Arsenic Copper Nickel	0.000 0.000 0.000	0.000 0.000 0.000

Table 5-14 Primary Electrolytic Copper Refining Spent Electrolyte

	Spent Electrory te	
	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	0.068 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		
Arsenic Copper Nickel	0.000 0.000 0.000	0.000 0.000 0.000

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Table 5-16 Primary Electrolytic Copper Refining Byproduct Recovery

	13 broades received	
	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per product recovered fr processing	1,000,000 pounds) of om electrolytic slimes
Arsenic	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000

Subchapter VI — Secondary Copper

NR 274.96 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.

Register, March, 1991, No. 423

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

]	BPT 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.

Register, March, 1991, No. 423

(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:

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

	BPT Effluent Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Poliutant or pollutant property	mg/kkg (pounds per production	billion pounds) of sinter
Lead Zinc Total suspended solids pH	594.000 525.000 3 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 Limitati	ons
	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	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 7-3 Primary Lead Blast Furnace Slag Granulation

	BPT Effluent Limitat	ions
	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	6,155.000	2,798.000
Zinc	5,446.000	2,276.000
Total suspended solids	s 153,000.000	72,740.000
pН	(1)	(1)

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

Table 7-4 Primary Lead Dross Reverberatory Slag Granulation

	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per speiss, or matte grant	· billion pounds) of slag, ilated
Lead Zinc Total suspended solid pH	9,499.000 8,405.000 s 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

]	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
pollutant property 1	mg/kkg (pounds per billion pounds) of dross reverberatory furnace pollutant property production	
Lead	15,920.000	7,235.000
	14,080.000	5,884.000
Aine		
Zinc Total suspended solids	395,500.000	188,100.000

⁽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 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 Total suspended solids pH	702.900 622.000 s 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

254-52 NR 274

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Table 7-7 Primary Lead Hard Lead Refining Slag Granulation

liaru	Lead Remning Stag Gra	mulacion
	BPT Effluent Limitation	ons
	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 Total suspended solid 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 7-8 Primary Lead Hard Lead Refining Air Pollution Control

BPT Effluent Limitation	ons
Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kkg (pounds per billion pounds) of pollutant property produced	
32.730.000	14,880,000
	12,100.000
	386,800.000
(1)	(1)
	Maximum for any 1 day mg/kkg (pounds per bil 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 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	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 7-10 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	5,445	2.475
Zinc	4.818	2.013
Total suspended solids	135.300	64.350
pН	(1)	(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 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	25,580 22,630 s 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:

Register, March, 1991, No. 423

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

	BAT 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	100.800 367.200	46.800 151.200

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

BAT Effluent Limitations	
imum for ily average	
ınds) of blast	
0.000 0.000	

Table 7-15 Primary Lead Blast Furnace Slag Granulation

	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 7-16 Primary Lead Dross Reverberatory Slag Granulation

Dios Reverberatory Biag Granulation		
	BAT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kkg (pounds per l speiss, or matte granula	billion pounds) of slag, ited
Lead Zinc	1,612.000 5,872.000	748.400 2,418.000

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254-55 NR 274

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

	BAT Effluent Limitations	
	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 Limitat	ions
	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		
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 billion pounds) of hard lead produced	
Lead	0.000	0.000
Zinc	0.000	0.000

Table 7-21 Primary Lead Facility Washdown

	BAT 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	0.000	0.000
Zine	0.000	0.000

Table 7-22 Primary Lead Employee Handwash

	Employee паниwas	[]
	BAT 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	0.924 3.366	0.425 1.386

Table 7-23 Primary Lead Respirator Wash

	BAT 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	1.484 - 5.406	0.689 2,226

Table 7-24 Primary Lead Laundering of Uniforms

	BAT 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	4.340 15.810	2.015 6.510

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

Register, March, 1991, No. 423

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 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 7-26 Primary Lead Blast Furnace Wet Air Pollution Control

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

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

Table 7-28
Primary Lead
Dross Reverberatory Slag Granulation

	tteverberatory blag or	
	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, ated
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 7-29 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	0.000	0.000
Zinc	0.000	0.000
Total suspended solids	0.000	0.000
рН	(1)	(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 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

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 bill produced	lion pounds) of hard lead
Lead	0.000	0.000
Zinc	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

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 bil produced	llion pounds) of hard lead
Lead Zinc Total suspended solid 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 7-33 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		0.000 0.000 0.000
pH	(1)	(1)

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

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 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	1,484	0.689
Zine	- 5.406	2.226
Total suspended solids	79.500	63,600
pН	(1)	(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 15,810 232,500 (1)	2,015 6,510 186,000 (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 274.075 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:

DEPARTMENT OF NATURAL RESOURCES

254-61 NR 274

Table 7-37 Primary Lead Sinter Plant Materials Handling Wet Air Pollution Control

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

PSES	
Maximum for any 1 day	Maximum for monthly average
mg/kkg (pounds per furnace lead bullion pi	billion pounds) of blast roduced
0.000 0.000	0.000 0.000
	PSES Maximum for any 1 day mg/kkg (pounds per furnace lead bullion processed to the contract of the contract

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 p	billion pounds) of blast roduced
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 speiss, or matte granu	billion pounds) of slag, lated
Lead Zinc	1,612.000 5,872.000	748.400 2,418.000

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

	PSES	
	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 7-43 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 produced	pounds) of hard lead
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

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Table 7-45 Primary Lead Facility Washdown

	PSES	1 0 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	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
Zinc	0.000	0.000

Table 7-46 Primary Lead Employee Handwash

	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.

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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 p	billion pounds) of blast roduced
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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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 speiss, or matte granu	billion pounds) of slag, lated
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
mg/kkg (pounds per furnace lead bullion pr	billion pounds) of blast roduced
0.000	0.000 0.000
	Maximum for any 1 day mg/kkg (pounds per furnace lead bullion p

Table 7-55 Primary Lead Hard Lead Refining Slag Granulation

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

Table 7-56 Primary Lead Hard Lead Refining Wet Air Pollution Control

Hard Le	ad Refining Wet Air Pollut	ion Control
	PSNS	
# The state of the	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	illion 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	illion pounds) of lead
Lead Zinc	0,924 3,366	0.429 1.386
	Table 7-59 Primary Lead Respirator Wash	
	PSNS	M
	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	1.484 5.406	0.689 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 Zine

	Primary Zinc				
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:

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	0.334 2.135	0.134 1.018		
Lead Zinc	$rac{0.467}{1.702}$	$0.217 \\ 0.701$		

Table 8-3 Primary Zinc Preleach of Zinc Concentrates

	BAT Effluent Limitation	8
	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

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 n processed through leach	nillion pounds) of zinc		
Cadmium	0.000	0.000		
Copper Lead	0,000 0,000	0.000 0.000		
Zinc	0.000	0.000		

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Table 8-5 Primary Zinc Electrolyte Bleed 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	0.086	0.035
Copper	0.553	0.264
Lead	0.121	0.056
Zine	0.441	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 catho 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 ca	
Cadmium Copper	0.051 0.329	0.021 0.157
Lead Zine	0.072 0.262	0.033 0.108

Table 8-8
Primary Zinc
Casting Contact Cooling

	Casting Contact Coom	8
	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	
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 cadmium produced	
Cadmium	1.234	0.494
Copper	7,899	3.765
Lead	1.728	0.802
Zinc	6.295	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 zine
Cadmium	0.334	0.134
Copper	2,135	1.018
Lead	0.467	0.217
Zinc	1.702	0.701
Total suspended solids	25,020	20,020
pH	(1)	(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
Zine	0.919	0.378
Total suspended solids	13.520	10.810
pН	(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

	<u> </u>	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio processed through leaching	n pounds) of zinc
Cadmium	0.000	0.000
Copper	0.000	0.000
Lead	0.000	0.000
Zinc	0.000	0.000
Total suspended solids	0.000	0.000
рН	(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 mil zinc produced	lion pounds) of cathode
Cadmium Copper Lead Zinc Total suspended solids pH	0.086 0.553 0.121 0.441 6.480 (1)	0.035 0.264 0.056 0.182 5.184 (1)

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

Table 8-14 Primary Zinc Cathode and Anode Wash Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of cath zinc produced		
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 mi	llion pounds) of zinc cast
Cadmium	0.051	0.021
Copper	0.329	0.157
Lead	0.072	0.033
Zinc	0.262	0.108
Total suspended solids	3,855	3.084
pH	(1)	(1)

(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 0.232	0.014 0.110
Copper Lead	0.051	0.024
Zinc Total suspended solids	$0.185 \\ 2.715$	$0.076 \\ 2.172$
рН	(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		
Cadmium	1.234	0.494
Copper	7.899	3.765
Lead	1.728	0.802
Zine	6.295	2,592
Total suspended solids	92.570	74.050
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 274.085 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 Zine	0.180 0.919	0.072 0.378

Table 8-20 Primary Zinc Leaching Wet Air Pollution Control

		-0
	PSES	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per processed through lead	million pounds) of zinc ching
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 cathode zinc produced	
Cadmium	0.086	0.035
Zinc	0.441	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	mg/kg (pounds per million pounds) of catho zinc produced	
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 mg/kg (pounds per pollutant property		illion pounds) of zinc cast
Cadmium Zine	0.051 0.262	0.021 0.108

Table 8-24 Primary Zinc Casting Contact Cooling

	PSES	H. 10. 100.40
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zinc cast	
Cadmium Zine	0.036 0.185	0.014 0.076

Table 8-25 Primary Zinc Cadmium Plant Wastewater

PSES	11111
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of cadmiur produced	
1.234 6.295	0,494 2,592
	Maximum for any 1 day mg/kg (pounds per mil produced 1.234

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

•		***** <u> </u>
	BPT Effluent Limitati	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per sulfuric acid capacity	million 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

	Trecommun Broat Troid x 14111	nu
BPT Effluent Limitations		
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m sulfuric acid capacity	illion 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

) Topo	
	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)

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 mi sulfuric acid capacity	llion pounds) of 100%
Cadmium Zine	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

⁽¹⁾ For molybdenum acid plants only (2) Within the range of 6.0 to 9.0 at all times

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

	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	17.230	8.205
Zinc	59.900	25.030
Ammonia (as N)	5,469.000	2,404.000
Total suspended solid	s 1,682.000	800.000
pΗ	(1)	(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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Poliutant or pollutant property	mg/kg (pounds per mil acid produced	lion pounds) of tungstic
Lead	15.040	7.162
Zinc	52.280	21.840
Ammonia (as N)	4,773.000	2,098.000
Total suspended solids	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

Table 10-4 Primary Tungsten Alkali Leach Wash Condesate

BPT Effluent Limitations			
Maximum for Maximum for any 1 day monthly average			
Pollutant or pollutant property	mg/kg (pounds per tungstate produced	million pounds) of sodium	
Lead Zinc Ammonia (as N) Total suspended solid:	8.057 28,011 2,557,000 786,200	3.837 11.700 1,124.000 374.100	
pH	(1)	(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 ammonium tungstate produced	
Lead Zinc Ammonia (as N) Total suspended solids pH	37.160 129.200 11,790.000 3,627.000 (1)	17.700 53.970 5,185.000 1,726.800 (1)

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

Table 10-6 Primary Tungsten
Ion-Exchange Raffinate
Not 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 ammoni tungstate produced	
Lead	37,160	17,700
Zinc	129,200	53.970
Ammonia (as N)(1)	11,790,000	5,185.000
Total suspended solids		1,726.800
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/j, 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 Limitations		
	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
Zinc	107.800	45.020
Ammonia (as N)	9,838,000	4,325,000
Total suspended solids	3,036.000	1,439.000
pН	(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 pounds) of ammoniur paratungstate produced	
Lead	0.000	0.000
Zinc	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solid	s 0.000	0.000
pН	(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 Zinc Ammonia (as N) Total suspended solids pH	11.600 40.320 3,681.000 1,132.000 (1)	5,300 16,380 1,618,000 538,500 (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

	Water of Logniques	
	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 solid	s 2.583	1.229
pН	(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 Limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/kg (pounds per millio metal produced	n pounds) of tungsten
Lead	12.940	6.161
Zinc	44.970	18.790
Ammonia (as N)	4,106.000	1,805.000
Ammonia (as N) Total suspended solids	1,263.000	600,700
pН	(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 million metal produced	pounds) of tungsten
Lead	0.205	0.098
Zine	0.714	0.298
Ammonia (as N)	65.190	28,660
Total suspended solids	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

	BPT Effluent Limitations	
*	Maximum for any 1 day	Maximum for monthly average
	mg/kg (pounds per million metal produced	pounds) of tungsten
Lead	1.008	0.480
Zine	3.504	1.464
Ammonia (as N)	319.900	140.700
Total suspended solids	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

	TOO IIII I CHADON CONG	···
	BPT Effluent Limitation	18
	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) Total suspended solid pH	0.000 0.000 0.000 0.000 s 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

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 Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill acid produced	ion 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 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	1,003	0.466
Zinc	3.653	1.504
Ammonia (as N)	477.400	209.900

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Table 10-17 Primary Tungsten Alkali Leach Wash

		-
	BAT Effluent Limitati	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n tungstate produced	nillion 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

BAT 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 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

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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 ammonium tungstate produced 24.780 11.500 90.240 37.160 11,790.000 5,185.000	
Lead Zinc Ammonia (as N) (1)		

⁽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

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mitungstate produced	illion pounds) of calcium
Lead	20,670	9,594
Zinc	75,280	31,000
Ammonia (as N)	9,838.000	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 ammonity paratungstate produced 0,000 0.000 0.000 0.000 0.000 0.000	
Lead Zinc Ammonia (as N)		

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

	THE THE E CHANGE COMMON	
	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 Ammonia (as N)	0,773 2,817 368,200	0.359 1.160 161.900

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 million oxide produced	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 pounds) of tungsten metal produced	
Lead Zinc Ammonia (as N)	0.862 3.142 410.600	0.406 1,294 180.500

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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		
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

	BAT Effluent Limitatio	ns
	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
Zine	2.448	1.008
Ammonia (as N)	319.900	140.700

Table 10-28 Primary Tungsten Molybdenum Sulfide Precipitation 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 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:

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Table 10-29 Primary Tungsten Tungstic Acid Rinse

	I dilento mora ivi	imic
•	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	11.490	5,333
Zinc	41.850	17.230
Ammonia (as N)	5,469.000	2,404.000
Total suspended solid	s 615,500	492.300
pН	(1)	(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
pН	(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
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 7.0 to 10.0 at all times

Table 10-32 Primary Tungsten Alkali Leach Wash Condesate

	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)	2.494 8.057 1,124.000 229.600 (1)

⁽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 mi tungstate produced	illion 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	1,327.000	1,062.000
pН	(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
	mg/kg (pounds per million pounds) of ammoniun tungstate produced	
Lead	24.780	11,500
Zinc .	90,240	37,160
Ammonia (as N) (1)	11,790,000	5,185,000
Total suspended solids	1,327.000	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 Zinc Ammonia (as N) Total suspended solids pH	20.670 75.280 9,838.000 1,107.000 (1)	9.594 31.000 4,325.000 885.600 (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
	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

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

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million oxide produced	
Lead Zinc Ammonia (as N) Total suspended solids pH	0.773 2.817 368.200 s 41.430 (1)	0.359 1.160 161.900 33.150 (1)

⁽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
mg/kg (pounds per mi oxide produced	illion pounds) of tungsten
0.018	0.008
0.064	0,026
8.398	3,692
s 0.945	0.756
(1)	(1)
	Maximum for any 1 day mg/kg (pounds per movide produced 0.018 0.064 8.398 8.0.945

⁽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
	mg/kg (pounds per : metal produced	million pounds) of tungsten
Lead	0.862	0.400
Zinc	3,142	1.294
Ammonia (as N)	410.600	180.500
Total suspended solids	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 millio metal produced	on 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
рH	(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				
		aximum for any 1 day	•		imum for ily average	
Pollutant or pollutant property	mg/kg molybd	(pounds enum sulfid	per e prec	million cipitated	pounds)	of
Lead		0.000			0.000	
Zine		0.000			0.000	
Ammonia (as N)		0.000			0.000	
Total suspended solids	š	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 274.105 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 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 Ef	fluent Limit	tation	ıs		
Pollutant or pollutant property	Maximum for any 1 day		Maximum for monthly average			
	mg/kg concent	(pounds rate digeste	per d	million	pounds)	of
Lead		2.612			1.244	
Zinc		9.080			3.794	
Ammonia (as N)		829.000			364.500	
Fluoride		217.700			124.400	
Total suspended solids		255.000			121.300	
pH		(1)			(1)	

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

Table 11-2 Primary Columbium-Tantalum Solvent Extraction Raffinate

	JOIT CHO I	JAGI ACGIOII	LVABILL	acc		
	BPT E	fluent Limi	tation	าร		
	Maximum for any 1 day		Maximum for monthly average			
Pollutant or pollutant property	mg/kg concent	(pounds rate digeste	per ed	million	pounds)	of
Lead Zinc Ammonia (as N) Fluoride Total suspended solid pH	s	3.888 13.520 1,233.000 324.000 379.500 (1)			1.851 5.647 542.500 185.100 189.500 (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 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 solids pH	1.032 3.586 327.400 85.960 100.700 (1)	0.491 1.498 143.900 49.120 47.890 (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	18
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	mg/kg (pounds per concentrate digested	million pounds) of
Lead Zinc Ammonia (as N) Fluoride Total suspended solid: pH	5,750 19,990 1,825,000 479,100 s 561,300 (1)	2.738 8.350 802.200 273.800 267.000 (1)

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

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

	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds p concentrate digested	er million pounds) of
Lead Zinc Ammonia (as N) Fluoride Total suspended solids pH	26.680 92.730 8,466.000 2,223.000 3 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

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
	mg/kg (pounds per million salt dried	pounds) of tantalum
Lead	25.430	12,110
Zine	88,390	36,930
Ammonia (as N)	8,070.000	3,548.000
Fluoride `	2,119.000	1,211,000
Total suspended solids		1,181,000
рН	(1)	(1)

Table 11-7 Primary Columbium-Tantalum Oxides Calcining 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 columbium-tantalum ox	million pounds) of ide dried
Lead Zinc Ammonia (as N) Fluoride Total suspended solids 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 Limitation	ns
	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	69.750	33.220
Zinc	242.500	101.300
Ammonia (as N)	22.140.000	9,732,000
Fluoride	5,813.000	3,322.000
Total suspended solid		3,239.000
pН	(1)	(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	0.858	0.409
Zinc	2.983	1.246
Ammonia (as N)	272.400	119.700
Fluoride	71.510	40.860
Total suspended solid	s 83,770	39.840
pH	(1)	(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	29.830	12.470
Ammonia (as N)	2,724,400	1,198.000
Fluoride	715.200	408.700
Total suspended solids		398.500
рН	(1)	(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	ons
	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
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 274.113 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	0.174	0.081
Zine	0.635	0,261
Ammonia (as N)	82.910	36.450
Fluoride	21,770	12,440

Table 11-13 Primary Columbium-Tantalum Solvent Extraction Raffinate

	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 Ammonia (as N) Fluoride	2.592 9.442 1,233.000 324.000	1,203 3,888 542,500 185,100

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

	DAGRACTION TOCCTIN TONG	
	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	0.069 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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per concentrate digested	million pounds) of
Lead	3,833	1.780
Zinc	13.960	5.750
Ammonia (as N)	1,825.000	802.200
Fluoride	479.100	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

	ranomani pare 1713 in	5
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tantalum salt dried	
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 Limitation	าร
	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 3,919 512,200 184,500	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 mil salt reduced	lion pounds) of tantalum	
Lead Zine Ammonia (as N)	46.500 169.400 22,140.000	21.590 69.750 9,732.000	
Fluoride	5,813.000	3,322.000	

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

	Wet his I distance Colles	OI.
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tanta salt reduced	
Lead	0.572	0.266
Zinc	2.084	0.858
Fluoride	71.510	40.860

Table 11-21 Primary Columbium-Tantalum Tantalum Powder Wash

	Tantalulli Towner was	511
	BAT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tan powder washed	
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

	BAT Effluent Limitation	ons
	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

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				
		aximum for any 1 day	r		imum for lly average	
	mg/kg concent	(pounds rate digest		million	pounds)	of
Lead Zinc Ammonia (as N) Fluoride Total suspended solids pH		0.174 0.635 82.910 21.770 9.330 (1)			0.081 0.261 36.450 12.440 7.464 (1)	

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

Table 11-24 Primary Columbium-Tantalum Solvent Extraction Raffinate

	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)	2,592 9,442 1,233.000	1,203 3,888 542,500
Fluoride Total suspended solids pH	324.000 3 138.900 (1)	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	0,069	0.032
Zinc	0.251	0.103
Ammonia (as N)	32.790	14.420
Fluoride	8,610	4.920
Total suspended solid	s 3.690	2,952
pН	(1)	(1)

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

Table 11-26 Primary Columbium-Tantalum Precipitation and Filtration

	recipitation and Phila	PIO11
	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 solid 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 concent	(pounds rate digeste	per ed	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 solid	S	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 salt dried	million pounds) of tantalum
Lead	16.950	7,871
Zinc	61.750	25.430
Ammonia (as N)	8,070,000	3,548.000
Fluoride	2,119.000	1,211.000
Total suspended solid		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	1.076	0.500
Zinc	3.919	1.614
Ammonia (as N)	512.200	225.200
Fluoride	134,500	76.840
Total suspended solids	57.630	46.110
pH	(1)	(1)

⁽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
	ng/kg (pounds per m alt reduced	illion 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	2,491.000	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 million salt reduced	pounds) of tantalum
Lead	0.572	0.266
Zinc Ammonia (as N)	2.084 272.400	0.858 119.700
Fluoride	71.510	40.860
Total suspended solids pH	30.650 (1)	24.520 (1)

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

Table 11-32 Primary Columbium-Tantalum Tantalum Powder Wash

xantanin i orraci Trasii			
	NSPS		
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per powder washed	million 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 solid	s 306,500	245.200	
pН	(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 Ammonia (as N)	0.000 0.000	0.000 0.000
Fluoride	0.000	0.000
Total suspended solids pH	0.000 (1)	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 274.115 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

Bl	PT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mpollutant property	mg/troy ounce of silver from film stripping	
Copper	95.670	50.350
Zinc	73.510	30.720
	6,712,000	2,951.000
Ammonia (as N)	0,114,000	2,001,000
Ammonia (as N) Total suspended solids	2,065.000	981.800

(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 Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy once of silver from precipita y filtration of film stripping 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
pН	(1)	(1)

254-106 NR 274

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

B	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mpollutant property	mg/troy ounce of silver precipitated	
Copper	109,400	57,570
Zinc	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

I	3PT E ffluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or 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
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver from precipitation filtration of photographic solutions	
Copper	23.070	12.140
Zinc	17.730	7.406
Ammonia (as N)	1,618.000	711.400
Total suspended solid		236,800
рĤ	(1)	(1)

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

Table 12-6 Secondary Silver Electrolytic Refining

incomony the recenting		
	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver from electrolytic refinin	
Copper	1,444	0.760
Zine	1.110	0.464
Ammonia (as N)	101,300	44.540
Total suspended solid:	s 31,160	14.820
pΗ	(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

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mpollutant property	mg/troy ounce of silver roasted, smelted, or dri	
Copper	1.273	0.670
Zinc	0.978	0.409
Ammonia (as N)	89,310	39,260
Total suspended solids	27.470	13,070
pH	(1)	(1)

Table 12-8 Secondary Silver Leaching

Medening		
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	ng/troy ounce of silver produced from leaching	
Copper	0.164	0.086
Zinc	0.126	0.053
Ammonia (as N)	11.470	5.040
Total suspended solids	3.526	1.677
pН	(1)	(1)

⁽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

	Wet 7th I distance control	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver produced from leaching precipitated	
Copper	8.417	4.430
Zinc	6.468	2.703
Ammonia (as N)	590.500	259,600
Total suspended solid	s 181.700	86.390
pН	(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 Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/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		59.870
рН	(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 pollutant property	mg/troy ounce of silver 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 274.123 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	64.450	30.720
Zinc	51.360	21.150
Ammonia (as N)	6,712.000	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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy once of silver from precipitation and filtration of film stripping solutions	
Copper Zinc Ammonia (as N)	1.242 0.990 129.300	0.592 0.408 56.840

Register, March, 1991, No. 423

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

BAT Effluent Limitation	ens
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 Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver precipitated	
Copper Zine	34.048 27.132	$\begin{array}{c} 16.226 \\ 11.172 \end{array}$
Ammonia (as N)	3,545.000	1,559.000

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

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

Table 12-18 Secondary Silver 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 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

THE THE SHOP SHAPE	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver produced from leaching	
pondomic property		

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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 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	1.873 1.290 179.900

Table 12-22 Secondary Silver Floor and Equipment Washdown

	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of silver production	
Copper	0.000	0.000
Zine	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

	T IIII SAUDAMP	
	NSPS	
_	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
Copper	64.450	30.720
Zinc	51.360	21.150
Ammonia (as N)	6.712.000	2,951.000
Total suspended solid		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 stripping	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	14.550	11.640
рН	(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 n pollutant property	ng/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)

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

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

	NSPS	
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/troy ounce of silver precipitated pollutant property		precipitated
Copper	34.048	16,226
71	27.132	11.172
Zinc	41.104	11.1(4
Ammonia (as N)	3,545.000	
		1,559.000 319.200

⁽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	from precipitation of solutions
Copper	15.540	7.406
Zinc	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	1000
	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
Total suspended solids	11,400	9.120
pH	(1)	(1)

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

Table 12-29 Secondary Silver Furnace Wet Air Pollution Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mp	g/troy ounce of silver	roasted, smelted, or dried
Copper	0.000	0.000
Zine	0.000	0.000
Ammonia (as N)	0.000	0.000
Total suspended solids	0.000	0.000
рН	(1)	(1)

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

Table 12-30 Secondary Silver Leaching

	Trottoming	
	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
pН	(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
	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 solids		53.160
рН	(1)	(1)

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

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/troy ounce of silver precipitated pollutant property		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

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or 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 274.125 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. 428, 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.

Register, March, 1991, No. 423

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

]	BPT Effluent Limitations	.
	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	1.932	0.862
Arsenic	1.407	0.579
Lead	0.283	0.135
Zine	0.983	0.411
Ammonia (as N)	0.000	0.000
Total suspended solids	27.600	13.130
pH	(1)	(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 smelt	million pounds) of lead	
Antimony Arsenic Lead	7.491 5.455 1.096	3,341 2,245 0,522	
Zinc Ammonia (as N) Total suspended solids	3.811 0.000 107.000	1.592 0.000 50,900	
рН	(1)	(1)	

Table 13-3 Secondary Lead Kettle Wet Air Pollution Control

J	BPT Effluent Limitati	ons
		Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from refinir	million pounds) of lead
Antimony	1.129	0,058
Arsenic	0.094	0.039
Lead	0.019	0.009
Zinc	0.066	0.027
Ammonia (as N)	0.000	0.000
Total suspended solids	1.845	0.878
pH	(1)	(1)

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

Table 13-4 Secondary Lead Lead Paste Desulfurization

	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	0.000 0.000 0.000	0.000 0.000 0.000
Zinc Ammonia (as N) 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 13-5 Secondary Lead Casting Contact Cooling

	BPT 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	0.634	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 Limitation	IS
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced from smelting	
Antimony	0.060	0.027
Arsenic	0.044	0.018
Lead	0.009	0.004
Zinc	0.031	0.013
Ammonia (as N)	0.000	0.000
Total suspended solids	0.861	0.410
pН	(1)	(1)

Table 13-7 Secondary Lead Facility Washdown

	racinty washdown	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for nonthly average
Pollutant or pollutant property	mg/kg (pounds per million produced from smelting	n pounds) of lead
Antimony Arsenic	0.000 0.000	0.000 0.000
Lead	0.000	0.000 0.000
Zinc Ammonia (as N)	0.000 0.000	0.000
Total suspended solids pH	0.000 (1)	0.000 (1)

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

Table 13-8 Secondary Lead Battery Case Classification

	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of lead s pollutant property produced		ion 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)

254-121 NR 274

Table 13-9 Secondary Lead Employee Handwash

	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per n produced from smelting	nillion pounds) of lead g
Antimony	0.077	0.035
Arsenic	0.056	0.023
Lead	0.011	0.005
Zinc	0.039	0.016
Ammonia (as N)	0.000	0.000
Total suspended solids	1.107	0.527
pH	(1)	(1)

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

Table 13-10 Secondary Lead Employee Respirator Wash

	BPT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smelt	million pounds) of lead
Antimony	0.126	0.056
Arsenic	0.092	0.038
Lead	0.018	0,009
Zine	0.064	0.027
Ammonia (as N)	0,000	0.000
Total suspended solids	1.804	0.858
pH	(1)	(1)

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

Table 13-11 Secondary Lead Laundering of Uniforms

	Lauracing of Onnorms	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio produced from smelting	n pounds) of lead
Antimony	0.367	0.164
Arsenic	0.268	0.110
Lead	0.054	0.026
Zine	0.187	0.078
Ammonia (as N)	0.000	0.000
Total suspended solids	5.248	2.496
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 274,133 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		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of lead scrap produced	
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

254-123 NR 274

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

	BAT Effluent Limitations	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced from smelting	illion pounds) of lead
Antimony	5.038 3.628	2.245 1.488
Arsenic Lead	0.731	0.339
Zine Ammonia (as N)	$2.662 \\ 0.000$	1.096 0.000

Table 13-14 Secondary Lead Kettle 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 produced from refinin	million pounds) of lead
Antimony	0.087	0.039
Arsenic	0.063	0.026
Lead	0.013	0.006
Zine	0.046	0.019
Ammonia (as N)	0.000	0.000

Table 13-15 Secondary Lead Lead Paste Desulfurization

	BAT Effluent Limitati	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
Antimony Arsenic Lead Zine 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 mil	lion pounds) of lead cast
Antimony	0.042	0.019
Arsenic	0.031	0.013
Lead	0.006	0.003
Zine	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 n produced from smelting	nillion 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 Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per r produced from smeltin	nillion 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

Table 13-19 Secondary Lead Battery Case Classification

	Dated J Case Classificati		
BAT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of lead scra produced		
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 13-20 Secondary Lead Employe Handwash

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	0.052 0.038	0.023 0.015
Lead Zinc	0.008 0.028	0.004 0.011
Ammonia (as N)	0.000	0.000

Table 13-21 Secondary Lead Employe Respirator Wash

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per produced from smeltir	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

Table 13-22 Secondary Lead Laundering of Uniforms

	Daditacing of Children	<u> </u>
	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	illion pounds) of lead
Antimony	0.247	0.110
Arsenic	0.178	0.073
Lead	0.036	0.017
Zine	0.131	0.054
Ammonia (as N)	0.000	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 mil produced	lion 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 i produced from smelting	million pounds) of lead ag
Antimony	5.038	2.245
Arsenic	3.628	1.488
Lead	0.731	0.339
Zinc	2,662	1.096
Ammonia (as N)	0.000	0.000
Total suspended solids	39.150	31,320
pH	(1)	(1)

(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 refini	million pounds) of lead ng
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
pН	(1)	(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 esulfurization
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

Table 13-27 Secondary Lead Casting Contact Cooling

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli	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
Total suspended solids	0.330	0.264
pН	(1)	(1)

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

Table 13-28 Secondary Lead Truck Wash

	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 lead ng
Antimony	0.041	0.018
Arsenic Lead	0.029 0.006	0.012 0.003
Zinc	0.021	0.009
Ammonia (as N) Total suspended solids	0.000 0.315	0.000 0.252
рН	(1)	(1)

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

Table 13-29 Secondary Lead Facility Washdown

	NSPS	
	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	0.000	0.000
Arsenic	0.000	0.000
Lead	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

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 millior produced	n pounds) of lead scrap
Antimony Arsenic Lead Zinc	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
Ammonia (as N) Total suspended solids pH	0.000 0.000 (1)	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 smelti	million pounds) of lead ng
Antimony Arsenic Lead Zinc	0.052 0.038 0.008 0.028	0.023 0.015 0.004 0.011
Ammonia (as N) Total suspended solids pH	0.000 0.405 (1)	0.000 0.324 (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 smelting	million pounds) of lead ng
Antimony	0.085	0.038
Arsenic Lead	$0.061 \\ 0.012$	0.025 0.006
Zinc	0.045	0.018
Ammonia (as N)	0.000 0.660	0.000 0.528
Total suspended solids pH	(1)	(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 lead ing
Antimony Arsenic	0.247 0.178	0.110 0.073
Lead Zinc	0.036 0.131	$0.017 \\ 0.054$
Ammonia (as N)	0.000	0.000
Total suspended solids pH	1.920 (1)	1.536 (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

Register, March, 1991, No. 423

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	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of contained in sodium antimonate productions.		lion pounds) of antimony timonate product
Antimony	44.840	20,000
Arsenic	32.650	14,530
Mercury	3,906	1.562
Total suspended solids	640,600	304.700
Η̈́q	(1)	(1)

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

Table 14-2 Primary Antimony Fouled Anolyte

	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of antimon metal produced by electrowinning	
Antimony	44.840	20.000
Arsenic Mercury	$32.650 \\ 3.906$	$14.530 \\ 1.562$
Total suspended solids	640.600	304.700
pH	(1)	(1)

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

Table 14-3 Primary Antimony Cathode Antimony Wash Water

	BPT Effluent Limitation	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		
Antimony	89.680	40.000
Arsenic	65,310	29.060
Mercury	7,812	3.125
Total suspended solids	1,281,000	609.300
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 274.143 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 13.440 21.720 9.687 2.344 0.937	

Table 14-5 Primary Antimony Fouled Anolyte

	BAT 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 30.150 13.440 21.720 9.687 2.344 0.937	
Antimony Arsenic Mercury		

Table 14-6 Primary Antimony Cathode Antimony Wash Water

	outloac minimony wash	114001
	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	60.310 43.430 4.687	26.870 19.370 1.875

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 mg/kg (pounds per million pounds) of an pollutant property contained in sodium antimonate product		lion pounds) of antimony timonate product
Antimony Arsenic	30.150 21.720	13.440 9.687
Mercury Total suspended solids pH	$2.344 \\ 234.400 \\ (1)$	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 million pounds) of antimon metal produced by electrowinning	
Antimony	30.150	13.440
Arsenic	21.720	9.687
Mercury	2.344	0.937
Total suspended solids	3 234.400	187.500
pН	(1)	· (1)

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

Table 14-9 Primary Antimony Cathode Antimony Wash Water

	under minimony wash	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of antimpollutant property metal produced by electrowinning		ion pounds) of antimony trowinning
Arsenic 43.430 19. Mercury 4.687 1.		26.870 19.370 1.875 375.000 (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 274.146 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	ions
	Maximum for any 1 day	Maximum for monthly average
		illion pounds) of beryllium from bertrandite ore as
Beryllium (tatal)	2,763.000	1,235.000
Chromium (total) Copper	988.000 4,267.000	404.300 2,246.000
Cyanide (total)	651.300	269,500
Ammonia (as N) Fluoride	299,400.000 78,610.000	131,600.000 131,600.000
Total suspended solids	92,090.000	43,800.000
pH	(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 Limita	ations
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per r carbonate produced	nillion pounds) of beryllium from 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 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	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 solid	s 8,795.000	4,183.000	
pН	(1)	(1)	

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

Table 15-4 Primary Beryllium Beryllium Hydroxide Filtrate

1	serymum riyaroxide Fiid	лаце
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of beryllium pollutant property hydroxide produced as beryllium		
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 solid	s 5,576.000	2,652.000
pН	(1)	(1)

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

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		5,142,000	
рН	(1)	(1)	

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

Table 15-6 Primary Beryllium Beryllium Hydroxide Supernatant

	BPT Effluent Limitati	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 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:		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

	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 solid	s 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
pН	(1)	(1)

Table 15-9 Primary Beryllium Chip Treatment Wastewater

BPT Effluent Limitations		
Pollutant or pollutant property	mg/kg (pounds per mili scrap chips treated	ion 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 solid	s 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

	1100 IIII I OIIGGGIO COMO OI	
	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 solid		0.000
pH	(1)	(1)

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

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	42.763	20.339
pН	(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 °
рН	(1)	(1)

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

Table 15-13 Primary Beryllium Beryl Ore Processing

Buff of Trocessing		
	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	3 299.423	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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per beryllium carbonate)	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	s 19,188.000	9,126.000
pН	(1)	(1)

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

Table 15-15 Primary Beryllium Bertrandite Ore Leaching Scrubber

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of bertrandi ore processed		on 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 soli-	ds 61.951	29.465
pH	(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 Limitatio	ns
	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	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 solids	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:

254-144 NR 274

Table 15-17
Primary Beryllium
Solvent Extraction Rallinate 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	1,842,000	831.000
Chromium (total)	831,000	336.900
Copper	2,875,000	1,370.000
Cyanide (total)	449.200	179.700
Ammonia (as N)	299,400.000	131,600.000
Fluoride	78,610.000	44,700.000

Table 15-18
Primary Beryllium
Solvent Extraction Raffinate from Beryl 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 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

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	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	12,570.000
Fluoride	7,508.000	4,269.000

Table 15-20 Primary Beryllium Beryllium Hydroxide Filtrate

	Delyman Lyaroniae Li	VI WOO	
BAT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or mg/kg (pounds per million pounds) of berylliu pollutant property hydroxide produced as beryllium			
Beryllium	111.520	50.320	
Chromium (total)	50.320	20.400	
Copper	174.080	82,960	
Cyanide (total)	27.200	10.880	
Ammonia (as N)	18,128.800	7,969.600	
Fluoride	4,760,000	2,706.400	

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 berylliun oxide produced	
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

Table 15-22 Primary Beryllium Beryllium Hydroxide Supernatant

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 from scrap and residues as beryllium	
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

Table 15-23 Primary Beryllium Process Water

	Trocess waver	
	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mill pebbles produced	ion 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	$\begin{array}{c} 64.68 \\ 26.22 \\ 106.60 \\ 13.98 \\ 10,240.00 \\ 3,479.00 \end{array}$

Table 15-24 Primary Beryllium Fluoride Furnace Scrubber

BAT Effluent Limitations		
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of beryllium pebbles produced	
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

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

	11 00 1211 2 Ollavioli Coll	101
	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 pebbles produced	
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

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

Table 15-29 Primary Beryllium Beryl Ore Processing

Delyr Ore Processing	
BAT Effluent Limitations	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million processed	pounds) of beryl ore
5.988	2.702
2,702	1.095
9.348	4.455
1.461	0.584
973.490	427.956
255.605	145.330
	BAT Effluent Limitations Maximum for any 1 day mg/kg (pounds per million processed 5.988 2,702 9.348 1.461 973.490

Table 15-30 Primary Beryllium Aluminum Iron Sludge Area Wastewater

	BAT Effluent Limitation	าร
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi beryllium carbonate pro	illion pounds) of total duced 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
Pollutant or pollutant property	mg/kg (pounds per millic ore processed	on pounds) of bertrandite
Beryllium	1.239	0.559
Chromium (total)	0.599	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

Table 15-32 Primary Beryllium Bertrandite Ore Countercurrent and Decantation Scrubber

	Decamation Serubbe	•
	BAT Effluent Limitation	ons
	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	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 property	mg/kg (pounds per m carbonate produced beryllium	illion pounds) of beryllium from bertrandite ore as
Beryllium Chromium (total) Copper Cyanide (total) Ammonia (as N) Fluoride Total suspended solids pH	1,842,000 831,000 2,875,000 449,200 299,400,000 78,610,000 33,690,000	831,000 336,900 1,370,000 179,700 131,600,000 44,700,000 26,950,000

Table 15-34 Primary Beryllium Solvent Extraction Raffinate from Beryl Ore

7000	NSPS	
	Maximum for any 1 day	Maximum for monthly average
		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 solids		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 mil carbonate produced as	lion pounds) of beryllium 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	s 3,218.000	2,574.000
pH	(1)	(1)

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

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 mill hydroxide produced as l	ion pounds) of beryllium peryllium
Bervllium	111.520	50.320
Chromium (total)	50.320	20.320
Copper	174.080	82,960
Cyanide (total)	27,200	10,880
Ammonia (as N)	18.128.800	7,969.600
Fluoride `	4,760.000	2,706,400
Total suspended solids		1,632,000
pH	(1)	(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 million oxide produced	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 solids		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 mg/kg (pounds per million pounds) of beryllium hydroxide produced from scrap and residues as beryllium		
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		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 mi pebbles produced	llion 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 solids		2,098.00
pН	(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

Omp 11000		
	NSPS	•
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli scrap chips treated	on 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 solid		93.000
pН	(1)	(1)

Table 15-42 Primary Beryllium Beryllium Pebble Plant Area Vent Wet Air Pollutant Control

Web III. X Gridden Gordon Gr		
	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 solid	s 0.000	0.000
рН	(1)	(1)

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

Table 15-43 Primary Beryllium Beryllium Ore Gangue Dewatering

	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		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
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
Total suspended solids	39.975	31.980
рH	(1)	(1)

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

Table 15-45 Primary Beryllium Beryl Ore Processing

20071 010 1100000000		
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 solid		87.636
рН	(1)	(1)

Table 15-46 Primary Beryllium Aluminum Iron Sludge Area Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of beryllium carbonate produced as 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 solids		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
	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 milli ore processed	on 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 solid		1.212
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 274.156 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 Germanium and Gallium Still Liquor

Dent Diquoi	
BPT Effluent Limitations	\$
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per germanium chlorinated	million pounds) of
131.700	58.590
26.460	12.600
91.980	38.430
2,205.000	1,254.000
2,583.000	1,229.000
(1)	(1)
	Maximum for any 1 day mg/kg (pounds per germanium chlorinated 131.700 26.460 91.980 2,205.000 2,583.000

(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	Ş
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per germanium chlorinated	million pounds) of
Arsenic	27.530	12.250
Lead	5.531	2.634
Zinc	19.230	8.034
Fluoride	461.000	262.100
Total suspended solids	540.000	256.800
pH	(1)	(1)

Table 18-3 Primary and Secondary Germanium and Gallium Germanium Hydrolysis Filtrate

	BPT Effluent Limitation	S
	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)

DEPARTMENT OF NATURAL RESOURCES

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

1	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per hydrolyzed	million pounds) of gallium
Arsenic	70.450	31.350
Lead	14.160	6.742
Zine	49.220	20.560
Fluoride	1,180.000	670.800
Total suspended solids	1,382.000	657.300
pH	(1)	(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	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	39.330	17.500 3.764
Lead Zine	$7.904 \\ 27.480$	11.480
Fluoride	658.700	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

	20111	
	BAT Effluent Limitation	8
	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
Zine	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

	BAT 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	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
Zinc	227.400	94.990
Fluoride	5,450.000	3,099.000

Table 18-11 Primary and Secondary Germanium and Gallium Gallium Hydrolysis Filtrate

	Community and Just 2 110	
	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 hydrolyzed	
Arsenic Lead Zinc Fluoride	70.450 14.160 49.220 1,180.000	31.350 6.742 20.560 670.800

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	39.330 7.904	17.500 3.764
Zinc Fluoride	27.480 658,700	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-

254-162 NR 274

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

	phene mecholye	~
	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
Zine	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 m metal produced	illion 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	
Vine vine vine vine vine vine vine vine v	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.

Register, March, 1991, No. 423

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 mg/kg (pounds per million pounds) of mer pollutant property produced from batteries		ion pounds) of mercury
Lead Mercury Total suspended solids pH	0.030 0.016 1.590 (1)	0.014 0.006 1.272 (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 mil washed and rinsed	lion pounds) of mercury
Lead	0.00056	0.00026
Mercury	0.00030	0.00012
Total suspended solids	0.03000	0.02400
pH	(1)	(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 pounds) of mercury 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 pollutant property	mg/kg (pounds per million pounds) of mer produced from batteries	
Lead Mercury	0.030 0.016	0.014 0.006

Table 20-5 Secondary Mercury Acid Wash and Rinse Water

T. A. Miller	PSNS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of washed and rinsed		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 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

1414	ny buenum bumue neach	
BPT Effluent Limitations		
	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
pН	(1)	(1)

Table 21-2 Primary Molybdenum and Rhenium Roaster Sulfur Dioxide Scrubber

	BPT Effluent Limitation	Ċ
	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
pН	(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

	morandic Oxide reacita	u e
	BPT Effluent Limitation	ns
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		million pounds) of ned 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
рН	(1)	(1)

Table 21-4 Primary Molybdenum and Rhenium Hydrogen Reduction Furnace Scrubber

]	BPT Effluent Limitation	8
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum metal pov	million pounds) of vder 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

	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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per molybdenum sulfide lea	million pounds) of chate
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

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	million pounds) of asted
Arsenic Lead Nickel Selenium Ammonia (as N) Fluoride	2.334 0.470 0.924 1.377 223.800 58.770	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	mg/kg (pounds pe molybdenum contai leachate	er million pounds) of ined 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

Try drogen recatement a made berabber		
	BAT Effluent Limitation	\$
	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	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	8
	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	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

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:

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	million pounds) of chate
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
pН	(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	million pounds) of asted
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
pН	(1)	(1)

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Table 21-13
Primary Molybdenum and Rhenium
Molybdic Oxide Leachate

-	nois bate onthe mounte	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property		million pounds) of ed 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	million pounds) of vder 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
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	million pounds) of asted
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
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 274.216 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:

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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 mi nickel, and cobalt in it	illion pounds) of copper, a crushed raw material
Copper Nickel Ammonia (as N) Cobalt Total suspended solids pH	0.146 0.148 10.260 0.016 3.157 (1)	0.077 0.098 4.512 0.007 1.502 (1)

(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
4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per powder washed	million pounds) of nickel
Copper	0.064	0.034
Nickel	0.065	0.043
Ammonia (as N)	4.515	1.985
Cobalt	0.007	0.003
Total suspended solids	1.389	0.660
pH	(1)	(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 Limitat	ions
	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 pH	24,120 24,370 1,692,000 2,666 520,500 (1)	12,700 16,120 743,900 1,143 247,600 (1)

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

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Table 23-4 Primary Nickel and Cobalt Cobalt 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 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

BAT Effluent Limitations		
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	0.099	0.047
Nickel Ammonia (as N)	$0.042 \\ 10.260$	0.028 4.512
Cobalt	0.011	0.005

Table 23-6 Primary Nickel and Cobalt Nickel Wash Water

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m powder washed	illion 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

Cobalt

WISCONSIN ADMINISTRATIVE CODE

Table 23-7 Primary Nickel and Cobalt Nickel Reduction Decant

	Nickel Reduction Decant	
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio produced	n pounds) of nickel
Copper Nickel Ammonia (as N) Cobalt	$\begin{array}{c} 16.250 \\ 6.982 \\ 1,692.000 \\ 1.777 \end{array}$	7.744 4.697 743.900 0.889
	Table 23-8 Primary Nickel and Cobalt Cobalt Reduction Decant	
	BAT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio produced	n pounds) of cobalt
Copper Nickel Ammonia (as N)	27.390 11.770 2,852.000	13.050 7.917 1,254.000

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:

2.996

1.498

Table 23-9
Primary Nickel and Cobalt
Raw Material Dust Control

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of coppollutant property nickel, and cobalt in in crushed raw materi		nillion pounds) of copper, in 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)

Table 23-10 Primary Nickel and Cobalt Nickel Wash Water

	21101101 /10011 /1001	-
	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	0.043	0.021
Nickel	0.019	0.013
Ammonia (as N)	4.515	1,985
Cobalt	0.005	0.002
Total suspended solids	0.508	0.406
pH	(1)	(1)

(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	27,390	13,050
Nickel	11.770	7.917
Ammonia (as N)	2,852,000	1,254.000
Cobalt	2,996	1.498
Total suspended solids	321.000	256.800
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 274.236 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

	ciae recommit runnes	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of slag inpu into the reclaim process	
Chromium Copper Nickel	5.653 24.410 24.670	2.313 12.850 16.320
Total suspended solids pH		250.500 (1)

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 ed
Chromium Copper Nickel Total suspended solids pH	2.198 9.491 9.590 204,800 (1)	0.899 4.995 6.344 97.400 (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
Pollutant or pollutant property	mg/kg (pounds per produced	million pounds) of nickel
Chromium Copper	0.528 2.278	0.216 1.199
Nickel Total suspended solids	2.302 49.160	1.523 23.380
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 274.245 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	•
11000	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

BPT Effluent Limitations		
	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
Zine	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

Register, March, 1991, No. 423

Table 25-2 Primary Precious Metals and Mercury Silver Chloride Reduction Spent Solution

BPT Effluent Limitations		
	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
рН	(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

В	PT 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
рН	(1)	(1)

Table 25-4
Primary Precious Metals and Mercury
Electrolyte Preparation Wet Air Pollution Control

BPT Effluent Limitations		
	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
рН	(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

]	3PT Effluent Limitatio	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
рН	(1)	(1)

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 pounds) of mercury condensed	
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
рН	(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

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of mercury condensed	
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
pH	(1)	(1)

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 millior condensed	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
pН	(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

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of mercury condensed	
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:

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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	0.364	0.169
Mercury	0.195	0.078
Silver	0.377	0.156
Zine	1.326	0.546
Gold	0.130	

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	0,112	0.052
Mercury	0.060	0.024
Silver	0.116	0.048
Zinc	0.408	0.168
Gold	0.040	

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	

Table 25-13
Primary Precious Metals and Mercury
Electrolyte Preparation Wet Air Pollution Control

	BAT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of electrolyte	silver in the produced
Lead Mercury Silver Zinc Gold	0.014 0.008 0.015 0.051 0.005	0.007 0.003 0.006 0.021

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	mg/kg (pounds per million pounds) of mercury condensed	
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 pollutant property	mg/kg (pounds per million pounds) of mercury condensed	
Lead	4,928	2.288
Mercury	2.640	1.056
Silver	5,104	2.112
Zinc	17.950	7.392
Gold	1.760	•

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 million pounds) of merc condensed	
Lead	1,162	0.540
Mercury	0.623	0.249
Silver	1.204	0.498
Zinc	4,233	1.743
Gold	0.415	

Table 25-17 Primary Precious Metals and Mercury Condenser Blowdown

BAT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per million pounds) of mercury condensed		
Lead	3.864	1.794	
Mercury	2.070	0.828	
Silver	4.002	1.656	
Zinc	14,080	5.796	
Gold	1,380		

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 million pounds) of mero condensed		lion 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:

Table 25-19
Primary Precious Metals and Mercury
Smelter Wet Air Pollution Control

Sinciple Web 21th Tollabour 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 silve	r 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)

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
рН	(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
Zinc	0.051	0.021
Gold	0.005	
Oil and grease	0.500	0.500
Total suspended solids	0.750	0,600
рН	(1)	(1)

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 mill condensed	ion pounds) of mercury
Lead	6.160	2,860
Mercury	3,300	1.320
Silver	6,380	2.640
Zinc	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 n condensed	nillion 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
рН	(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 mi condensed	llion 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
pH	(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 m condensed	illion 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
pН	(1)	(1)

Table 25-27
Primary Precious Metals and Mercury
Mercury Cleaning Bath Water

	acury Cleaning Bach V	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi 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	
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	precious metals, including or smelted
Copper Cyanide Zinc Ammonia (as N) Combined metals	136.400 20.820 104.800 9,571.000 21.54	71.800 8.616 43.800 4,207.000
Total suspended solids	2,944.000 (1)	1,400.000 (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 Limitations				
	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	12,050	6.340		
Cyanide	1.839	0.761		
Zinc	9.256	3.867		
Ammonia (as N)	845.100	371.500		
Combined metals	1.902			
Total suspended solids	259,900	123.600		
pH	(1)	(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

	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/liter of spent plating material	g 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
pH	(1)	(1)

Table 26-4 Secondary Precious Metals Spent Cyanide Stripping Solutions

	BPT Effluent Limit	·
	Maximum for any 1 day	
Pollutant or pollutant property	mg/troy ounce of stripping	gold produced by cyanide
Copper	7.030	3.700
Cyanide Zinc	$1.073 \\ 5.402$	0.444 2,257
Ammonia (as N)	$493.200 \\ 1.110$	216.800
Combined metals Total suspended solids	151.700	72.150
pH	(1)	(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

	BPT Effluent Limita	itions
	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	39.900 6.090 30.660 2,799.000 6,300	21.000 2,520 12.810 1,231.000
Total suspended solids pH	861.000 (1)	409.500 (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 gentraction	gold produced by solvent
Copper	1,197	0.630
Cyanide	0.183	0.076
Zinc	0.920	0.384
Ammonia (as N)	83.980	36.920
Combined metals	0.189	
Total suspended solids	25.830	12.290
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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gold p	roduced 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

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy o	unce of gold precipitated
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)

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	mg/troy ounce of platinum 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 26-10 Secondary Precious Metals Palladium Precipitation and Filtration

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of palladium precipitated	
Copper	11.400	6.000
Cvanide	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
рН	(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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of othe precipitated	er platinum group metals
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

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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 go product	ld contained in PGC
Copper	1.710	0.900
Cyanide	0.261	0.108
Zine	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 Limita	ations
	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
Ammonia (as N)	0.000	0.000
Combined metals	0.000	0.000
Total suspended solids	0.000	0.000
pH	(1)	(1)

Table 26-14 Secondary Precious Metals Preliminary Treatment

	Tremminary Treatm	C116
,	BPT Effluent Limitat	tions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of precious metals, metals produced through this operation	
Copper Cyanide	95.000 14,500	50.000 6.000
Zinc	73.000	30.500
Ammonia (as N) Combined metals	6,665.000 15.000	2,930.000
Total suspended solids pH	2,050.000 (1)	$975.000 \ (1)$

⁽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 274.263 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 Limitatio	ns
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of precious metals, including silver, incinerated 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

· Table 26-16 Primary Precious Metals and Mercury Raw Material Granulation

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	BAT Effluent Limitati	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	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

Table 26-17 Primary Precious Metals and Mercury Spent Plating Solutions

BAT Effluent Limitations		
1	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/liter of spent plating solution used as a raw material	
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

Table 26-18 Secondary Precious Metals Spent Cyanide Stripping Solutions

	BAT 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	4.736 0.740	2.257 0.296
Zinc Combined metals	3.774 1.110	1.554
Ammonia (as N)	493.200	216.800

Table 26-19 Secondary Precious Metals Refinery Wet Air Pollution Control(1)

	BAT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of precious metals, including silver, produced in the refinery	
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

⁽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		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of gol extraction	d produced by solvent
Copper	0.806	0.384
Cyanide	0.126	0.050
Zine	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

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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 Limitation	ıs
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of platinum 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

Table 26-25 Secondary Precious Metals Other Platimum Group Metals Precipitation and Filtration

BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of other platinum group metals 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 26-26 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 gold product	l contained in PGC
Copper Cyanide Zinc	1.152 0.180 0.918 0.270	0.549 0.072 0.376
Combined metals Ammonia (as N)	120.000	52.740

Table 26-27 Secondary Precious Metals Equipment and Floor Wash

	BAT Effluent Limita	tions
	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
Cyanide Zinc	0.000	0.000
Combined metals	0.000	
Ammonia (as N)	0.000	0.000

Table 26-28 Secondary Precious Metals Preliminary Treatment

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	BAT Effluent Limitation	ns .
	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
Zine	51.000	21.000
Combined metals Ammonia (as N)	15,000 6,665,000	2,930,000
	2,2201000	_,

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	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 crial
Copper	0.819	0,390
Cyanide	0.128	0.051
Zine	0.653	0.269
Combined metals	0.192	
Ammonia (as N)	85.310	37.500
Total suspended solids	9,600	7.680
pН	(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	ng 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
pН	(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	ld produced by cyanide
Copper	4.736	2.257
Cyanide	0.740	0.296
Zinc	3.774	1.554
Combined metals	1,110	
Ammonia (as N)	493.200	216.800
Total suspended solids	55.500	44.400
рН	(1)	(1)

(1) Within the range of 7.5 to 10 at all times

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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
Zinc	1.020	0.420
Combined metals	0.300	
Ammonia (as N)	133.300	58.600
Total suspended solids	15.000	12.000
рН	(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 gol extraction	d 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

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	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
pН	(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 plati	inum precipitated
Copper	6.656	3.172
Cyanide	1.040	0.416
Zine	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

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Palladi	um Precipitation and F	iltration
	NSPS	
	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
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
Zine	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 26-40 Secondary Precious Metals Spent Solution for PGC Salt Production

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/troy ounce of product	gold contained in PGC
Copper	1.152	0.549
Cyanide	0.180	0.072
Zine	0.918	0.378
Combined metals	0.270	
Ammonia (as N)	120.000	52.740
Total suspended solids	13.500	10.800
pH	(1)	(1)

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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
Pollutant or pollutant property	mg/troy ounce of produced through the	total precious metals is operation
Copper	64.000	50.000
Cyanide	10.000	6.000
Zinc	51.000	30.500
Ammonia (as N)	6,665.000	2,930.000
Combined metals	15.000	
Total suspended solids	750.000	600.000
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 274.265 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	million pounds) of from wet rare earth
Hexachlorobenzene	0.042	0.042
Chromium	1.544	0.626
Lead	1.168	0.542
Nickel	2.295	1.544
Total suspended solids	62.600	50.080
pН	(1)	(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)

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 mischmetal produced	million 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 m mischmetal produced	nillion pounds) of total
Hexachlorobenzene Chromium Lead Nickel 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 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 milli mischmetal produced	on pounds) of total
Hexachlorobenzene Chromium	0.004 0.134	0.004 0.054
Lead Nickel	0.101 0.199	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.

Register, March, 1991, No. 423

NR 274

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 Chromium Lead Nickel	0.007 0.272 0.206 0.404	0.007 0.110 0.095 0.272

Table 27-8 Primary Rare Earth Metals Electrolytic Cell Water Quench and Scrubber

PSES		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of total mischmetal produced	
Hexachlorobenzene	0.094	0.094
Chromium	3.474	1.409
Lead	2.629	1.221
Nickel	5.165	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 mischmetal produced	million pounds) of total		
Hexachlorobenzene	0.000	0.000		
Chromium	0.000	0.000		
Lead	0.000	0.000		
Nickel	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 Chromium Lead Nickel	0.004 0.134 0.101 0.199,	0.004 0.054 0.047 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:

Table 28-1 Secondary Tantalum Tantalum Alloy Leach and Rinse

]	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millior powder produced	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

·	deputottor noutra and ren	
-	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tantalum powder produced from leaching	
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
рН	(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 Limitations		
	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	390.100	205.300
Lead	86.230	41.060
Nickel	394.200	260.700
Zinc	299.700	125.200
Tantalum	92.390	
Total suspended solids	8,417.000	4,003.000
pH	(1)	(1)

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Table 28-4 Secondary Tantalum Tantalum Powder Acid Wash and Rinse

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli powder produced	on pounds) of tantalum
Copper Lead Nickel Zinc Tantalum	0.665 0.147 0.672 0.511 0.158	0.350 0.070 0.445 0.214
Total suspended solids pH	14.350 (1)	6.825 (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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per equivalent pure tantalu	million pounds) of im powder produced
Copper	9,272	4,880
Lead	2.050	0.976
Nickel	9.370	6.198
Zine	7.125	2.977
Tantalum	2.196	
Total suspended solids	200,100	95.160
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 274.283 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 Tantalum Alloy Leach 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 tantalum powder produced	
Copper	295,200	140.700
Leâd	64,570	29,980
Nickel	126,800	85.320
Zinc	235,200	96,850
Tantalum	103.800	

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 pounds) of tantalum powder produced from leaching	
Copper	25.860 12.320	
Lead	5.656	2.626
Nickel	11.110	7.474
Zine	20.600	8,484
Tantalum	9.090	

Table 28-8 Secondary Tantalum Tantalum Sludge Leach and Rinse

	BAT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of equivalent pure tantalum powder produced	
Copper	262.800	125,200
Lead	57.480	26.690
Nickel	112.900	75.960
Zinc	209.400	86.230
Tantalum	92.390	

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 million pounds) of tantalun powder produced	
Copper	0.448	0.214
Lead	0.098	0.046
Nickel	0.193	0.130
Zine	0.357	0.147
Tantalum	0.158	

Table 28-10 Secondary Tantalum Leaching Wet Air Pollution Control

	BAT Effluent Limitation	S
4	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 mil powder produced	llion 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

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Table 28-12 Secondary Tantalum Capacitor Leach and Rinse

NSPS		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of tantalur pollutant property powder produced from leaching		
Copper	25.860	12,320
Lead	5.656	2.626
Nickel	11.110	7.474
Zine	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 m powder produced
Copper	262.800	125.200
Lead	57.480	26.690
Nickel	112.900	75.960
Zinc	209.400	86,230
Tantalum	92,390	
Total suspended solids	3,080.000	2,464.000
рН	(1)	(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

	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
рН	(1)	(1)

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 tantals	million pounds) of am powder produced
Copper	6,246	2.977
Lead	1.366	0.634
Nickel	2.684	1.806
Zinc	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	19.220	8.554
Lead	3.863	1.840
Iron	11,040	5.611
Tin	3.495	2.024
Total suspended solids	377.100	179.400
рĤ	(1)	(1)

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

Table 29-2 Secondary Tin Dealuminizing Rinse

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per dealuminized scrap produ	million pounds) of uced
Lead Cyanide Fluoride Tin Total suspended solids pH	$egin{array}{c} 0.015 \\ 0.010 \\ 1.225 \\ 0.013 \\ 1.435 \\ (1) \end{array}$	0.007 0.004 0.700 0.008 0.683 (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 Limitation	ons
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of neutralized dewatered tin mud produced	
2.120 1.464 176.600 1.918 Is 206,900	1,009 0,606 100,400 1,110 98,420 (1)
	Maximum for any 1 day mg/kg (pounds pe neutralized dewatered 1.464 176.600 1.918

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	5.020	2.391
Cyanide	3.466	1,434
Fluoride	418.400	237.900
Tin	4.542	2.630
Total suspended solids	490.100	233.100
pH	(1)	(1)

(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 Limitat	ions
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per i tin produced	million pounds) of cathode
Lead	7.056	3.360
Cyanide	4.872	2.016
Fluoride	588.000	334.300
Tin	6,384	3.696
Total suspended solids	688.800	327,600
pН	(1)	(1)

(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 Cyanide Fluoride Tin Total suspended solids pH	0.050 0.035 4.165 0.045 4.879 (1)	0.024 0.014 2.368 0.026 2.321 (1)

Table 29-7 Secondary Tin Tin Hydroxide Supernatant From Scrap

	BPT Effluent Limitation	าร
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil recovered from scrap	lion 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)

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

Table 29-8 Secondary Tin Tin Hydroxide Supernatant From Plating Solutions and Sludges

	BPT Effluent Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of tin meta recovered from plating 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)

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

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Table 29-9 Secondary Tin Tin Hydroxide Filtrate

	1 m 12 m 0 m 0 m 0 m 0 m 0 m 0 m 0 m 0 m 0 m	***
	BPT Effluent Limitati	ions
	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
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	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m tapped tin metal produ	nillion pounds) of crude aced
Arsenic Lead Iron Tin	12.790 2.575 11.040 3.495	5.703 1.196 5.611 2.024

Table 29-11 Secondary Tin ealuminizing Rinse

Dealuminizing Rinse		
	BAT Effluent Limitations	\$
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per dealuminized scrap prod	million pounds) of luced
Lead Cyanide Fluoride Tin	0.010 0.007 1.225 0.013	0.005 0.003 0.697 0.008

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Table 29-12 Secondary Tin Tin Mud Acid Neutralization 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 neutralized dewatered tin mud produced	
Lead Cyanide	1.413 1.009	0.656 0.404
Fluoride Tin	176.600 1.918	100.400 1.110

Table 29-13 Secondary Tin Tin Hydroxide Wash

BAT 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	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	mg/kg (pounds per million pounds) of cathode tin produced	
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 Limitations		
	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 Cyanide Fluoride Tin	0.033 0.024 4.165 0.045	0.015 0.010 2.368 0.026

Table 29-16 Secondary Tin Tin Hydroxide Supernatant From Scrap

	BAT Effluent Limitation	S
	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	15.580	7.233
Cyanide	11.130	4.451
Cyanide Fluoride	1,947.000	1,107.000
Tin	21.140	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	32.20	14.95
Cyanide	23.00	9.20
Fluoride	4,025.00	2,289.00
Tin	43.70	25.30

Table 29-18 Secondary Tin Tin Hydroxide Filtrate

•	BAT Effluent Limitation	18
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of crude tapped tin metal produced	
Lead	7.012	3,256
Cyanide	5.009	2.004
Fluoride	876,500	498.400
Tin	9.517	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 duced
Arsenic	12,790	5.703
Lead	2.575	1.196
Iron	11.040	5.611
Tin	3.495	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 pro	million pounds) of duced
Lead Cyanide Fluoride Tin Total suspended solids pH	$egin{array}{c} 0.010 \\ 0.007 \\ 1.225 \\ 0.013 \\ 0.525 \\ (1) \end{array}$	0.005 0.003 0.697 0.008 0.420 (1)

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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 p neutralized dewater	per million pounds) of ed tin mud produced
Lead Cyanide Fluoride Tin Total suspended solids pH	1.413 1.009 176.600 1.918 75.710 (1)	0.656 0.404 100.400 1.110 60.560 (1)

(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)	1.554 0.956 237.900 2,630 143,400 (1)

(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 mg/kg (pounds per million pounds) of cathod tin produced		
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
pН	(1)	(1)

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

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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 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
Total suspended solids	1,785	1.428
рH	(1)	(1)

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

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 mil recovered from scrap	lion pounds) of tin metal
Lead	15.580	7.233
Cyanide Fluoride	11.130	4.451
	1,947.000	1,107.000
Tin	21.140	21.240
Total suspended solids	834.600	667.700
pH	(1)	(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	mg/kg (pounds per mi recovered from platin	llion pounds) of tin metal g solutions and sludges
Lead	32.20	14.95
Cyanide	23.00	9,20
Fluoride	4,025.00	2,289.00
Tin	43.70	25.30
Total suspended solids	1,725.00	1,380.00
pH	(1)	(1)

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

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	7.012	3,256
Cyanide	5.009	2.004
Fluoride	876.500	498.400
Tin	9.517	5.510
Total suspended solids	375.700	300.500
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 274.295 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 millio tetrachloride produced	n pounds) of titanium
Chromium	0.412	0.168
Lead	0.393	0.187
Nickel	1.797	1.187
Titanium	0.880	0.384
Oil and grease	18.720	11.230
Total suspended solids	38.380	18.250
pН	(1)	(1)

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

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 mg/kg (pounds per million pounds) of titani pollutant property tetrachloride produced		
Chromium	0.458	0,187
Lead	0.437	0.208
Nickel	1.997	1.321
Titanium	0.978	0.426
Oil and grease	20.800	12,480
Total suspended solids	42.640	20.280
pH	(1)	(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 Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of titani pollutant property tetrachloride handled		
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)

Table 30-4 Primary and Secondary Titanium Reduction Area Wet Air Pollution Control

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi produced	llion pounds) of titanium
Chromium	18.170	7.435
Lead	17.350	8.261
Nickel	79,300	52.450
Titanium	38.820	16.930
Oil and grease	826.100	495,600
Total suspended solids	1,693.000	805,400
pН	(1)	(1)

(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 Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or mg/kg (pounds per million pounds) of tital pollutant property produced		llion pounds) of titanium	
Chromium	9.352	3,826	
Lead	8,927	4.251	
Nickel	40,810	26.990	
Titanium	19.980	8.714	
Oil and grease	425,100	255,000	
Total suspended solids	871.400	414.500	
pH	(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 Limitatio	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of titar pollutant property produced		
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
рН	(1)	(1)

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

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Table 30-7 Primary and Secondary Titanium Sodium Reduction Container Reconditioning Wash Water

	BPT Effluent Limitation	S
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titanium produced	
Chromium	0.564	0.231
Lead	0.538	0.256
Nickel	2.461	1.628
Titanium	1.205	0.526
Oil and grease	25.640	15.380
Total suspended solids	52.560	25.000
рН	(1)	(1)

⁽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	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli produced	on 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
рН	(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

BPT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per millior produced	n pounds) of titanium	
Chromium	5,210	2.131	
Lead	4.973	2.368	
Nickel	22.730	15.040	
Titanium	11.130	4.854	
Oil and grease	236.800	142.100	
Total suspended solids	485,400	230,900	
pH	(1)	(1)	

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

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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	2.847	1.165
Lead	2,717	1.294
Nickel	12,420	8.217
Titanium	6,082	2.653
Oil and grease	129.400	77.640
Total suspended solids	265.300	126.200
pН	(1)	(1)

(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 millio pickled	on pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.027 0.026 0.117 0.057 1.220 2.501 (1)	0.011 0.012 0.077 0.025 0.732 1.190 (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

]	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millio milled	on pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.995 0.950 4.341 2.125 45.220 92.700 (1)	0.407 0.452 2.871 0.927 27.130 44.090 (1)

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

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Table 30-13 Primary and Secondary Titanium Scrap Detergent Wash Water

BPT Effluent Limitations			
	Maximum for any 1 day	Maximum for monthly average	
Pollutant or pollutant property	mg/kg (pounds per washed	million pounds) of scrap	
Chromium	7.948	3,252	
Lead	7.587	3.613	
Nickel	34,680	22.940	
Titanium	16,980	7.406	
Oil and grease	361.300	216.800	
Total suspended solids	740,600	352,300	
pH	(1)	(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	n pounds) of titanium
Chromium Lead	0.210 0.200	0.086 0.095
Nickel	0.916	0.606
Titanium Oil and grease	0.448 9.540	$0.196 \\ 5.724$
Total suspended solids	19,560	9.302
pH_	(1)	(1)

Table 30-15 Primary and Secondary Titanium Casting Contract Cooling Water

J	3PT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per millic cast	n pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	$\begin{array}{c} 321.100 \\ 306.500 \\ 1,401.000 \\ 685.900 \\ 14,590.000 \\ 29,920.000 \\ (1) \end{array}$	131.400 145.900 926.800 299.200 8,757.000 14,230.000 (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 274.303 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 titaniun 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 Lead Nickel Titanium	0.385 0.291 0.572 0.551	0.156 0.135 0.385 0.239

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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	0.069	0.028
Lead	0.052	0.024
Nickel	0.103	0.069
Titanium	0.099	0.043

Table 30-19 Primary and Secondary Titanium Reduction Area Wet Air Pollution Control

BAT Effluent Limitations		
Maximum for Maximum any 1 day monthly av		
Pollutant or mg/kg (pounds per million pound produced		on pounds) of titanium
Chromium	1.528	0.620
Lead	1.156	0.537
Nickel	2,272	1.528
Titanium	2,189	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

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 Lead	11.010 8.332	4,463 3,868
Nickel Titanium	16.370 15.770	11,010 6.844

Table 30-22 Primary and Secondary Titanium Sodium Reduction Container Reconditioning 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 titaniun produced	
Chromium	0.474	0.192
Lead	0.359	0.167
Nickel	0.705	0.474
Titanium	0.679	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	0.848	0.344
Lead	0.642	0.298
Nickel	1,261	0.848
Titanium	1.215	0.527

Table 30-24 Primary and Secondary Titanium Acid Leachate and Rinse Water

	BAT Effluent Limitatio	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	4.381 3.315 6.512 6.275	1.776 1.539 4.381 2.723

Table 30-25 Primary and Secondary Titanium Sponge Crushing and Screening 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	0.239	0.097
Lead	0.181	0.084
Nickel	0.356	0.239
Titanium	0.343	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 million pounds) of tita y pickled	
Chromium	0.023	0.009
Lead	0.017	0.008
Nickel	0.034	0.023
Titanium	0.032	0.014

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Table 30-27 Primary and Secondary Titanium Scrap Milling 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 milled	
Chromium Lead Nickel Titanium	0.084 0.064 0.125 0.120	0,034 0,030 0,084 0,052

Table 30-28 Primary and Secondary Titanium Scrap Detergent Wash Water

BAT Effluent Limitations		
	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

	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of titani cast	
Chromium	0.176	0.072
Lead	0.134	0.062
Nickel	0.262	0.176
Titanium	0.253	0.110

Table 30-30 Primary and Secondary Titanium Casting Contract Cooling 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 titaniun 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 mill tetrachloride produced	ion 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
pH	(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	on 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)

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
рН	(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 mi produced	llion 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
pH	(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 millio produced	on 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
рН	(1)	(1)

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

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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 millio produced	n 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 30-37
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 millio produced	n pounds) of titanium
Chromium	0.474	0.192
Lead	0.359	0.167
Nickel	0.705	0.474
Titanium	0.679	0.295
Oil and grease	12.820	12.820
Total suspended solids	19.230	15,380
рН	(1)	(1)

⁽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 millio produced	n 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
рН	(1)	(1)

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

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 milli produced	on pounds) of titanium	
Chromium	4.381	1.776	
Lead	3,351	1.539	
Nickel	6.512	4.381	
Titanium	6.275	2.723	
Oil and grease	118.400	118.400	
Total suspended solids	177,600	142.100	
pН	(1)	(1)	

(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 millior produced	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 million pickled	pounds) of titanium
Chromium Lead Nickel Titanium Oil and grease Total suspended solids pH	0.023 0.017 0.034 0.032 0.610 0.915 (1)	0.009 0.008 0.023 0.014 0.610 0.732 (1)

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

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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 millio milled	on 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 30-43 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	6.684	2.710
Lead	5.058	2.348
Nickel	9.935	6.684
Titanium	9.574	4.155
Oil and grease	180.600	180.600
Total suspended solids	271.000	216.000
pН	(1)	(1)

(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 mill cast	ion pounds) of titanium
Chromium Lead	0.176 0.134	0.072 0.062
Nickel Titanium Oil and grease	$egin{array}{c} 0.262 \ 0.253 \ 4.770 \end{array}$	$0.176 \\ 0.110 \\ 4.770$
Total suspended solids pH	7.155 (1)	5.724 (1)

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 mi cast	llion pounds) of titanium
Chromium	27.000	10,950
Lead	20.430	9.486
Nickel	40.140	27,000
Titanium	38.680	16,780
Oil and grease	729.700	729,700
Total suspended solids	1.095.000	875.700
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 274.305 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 Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi scrap washed	llion 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
pH	(1)	(1)

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

Table 31-2 Secondary Tungsten and Cobalt Tungsten Leaching Acid

	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 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
рН	(1)	(1)

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Table 31-3 Secondary Tungsten and Cobalt Tungsten Post Leaching Wash and Rinse

I	3PT 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 tungsten
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

]	3PT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mil scheelite produced	lion 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
рН	(1)	(1)

Table 31-5 Secondary Tungsten and Cobalt Tungsten Carbide Leaching Wet Air Pollution Control

1	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli cardide scrap leached	on 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
pH	(1)	(1)

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

Table 31-6 Secondary Tungsten and Cobalt Tungsten Carbide Wash Water

1	3PT Effluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi carbide produced	llion 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)

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Table 31-7 Secondary Tungsten and Cobalt Cobalt Sludge Leaching Wet Air Pollution Control

]	3PT Effluent Limitation	ns
	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 sludge
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 Limitations .		
	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

	nord wash Decan	v
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
pH	(1)	(1)

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

Table 31-10 Secondary Tungsten and Cobalt Cobalt Hydroxide Filtrate

]	BPT 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 Oil and grease Total suspended solids pH	107.600 108.800 7,551,000 223,189 394.300 1,133.000 2,323,000 (1)	56.650 71,940 3,320.000 97.999 157.500 679.800 1,105.000 (1)

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Table 31-11 Secondary Tungsten and Cobalt Cobalt Hydroxide Filter Cake Wash

	e Hydroxide Filter C.	 , , , , ,
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 tungster scrap washed	
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

Table 31-13 Secondary Tungsten and Cobalt Tungsten Leaching Acid

	I diiPoten meagning II.	J14
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	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

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 million pounds) of tungsten produced	
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 million pounds) of synthetic scheelite produced	
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

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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 million pounds) of tungster carbide scrap leached	
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	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

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

	010000000000000000000000000000000000000	
BAT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced	illion 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 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	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 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 Tungsten	72.510 31.160 7,551.000 156.346 197.100	34,560 20,960 3,320,000 68,543 87,800

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Table 31-22 Secondary Tungsten and Cobalt Cobalt Hydroxide Filter Cake Wash

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	BAT Effluent Limitation	ıs
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m produced	illion 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 millio scrap washed	on 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

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Table 31-24 Secondary Tungsten and Cobalt Tungsten Leaching Acid

	Tungoven meadining me	
	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	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
рН	(1)	(1)

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

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 m produced	illion 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
рН	(1)	(1)

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

Table 31-26 Secondary Tungsten and Cobalt Synthetic Scheelite Filtrate

	y HORICOIC Deficered I no	
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m scheelite produced	illion 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
рН	(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 mill carbide scrap leached	ion 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 carbide produced	million 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
рН	(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 mg/kg (pounds per million pounds) of cobpollutant property 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
Oil and grease	357.800	357.800
Total suspended solids	536.700	429.400
рН	(1)	(1)

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Table 31-30 Secondary Tungsten and Cobalt Crystallization Decant

	Of Journaucton Dece	4110
	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		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

	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
pН	(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
pH	(1)	(1)

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

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

	xeomitely loaning interests	
-	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	32.270	13.200
Copper	139.300	73.340
Nickel	140.800	93.140
Fluoride	2,567.000	1,459.000
Total suspended solids		1,430.000
pН	(1)	(1)

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

Table 32-2 Secondary Uranium Slag Leach Reslurry

	Dide Licatin Itemani	
	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per milli- processed in the refinery	on 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

Table 32-3 Secondary Uranium Solvent Extraction Raffinate Filtrate

	3PT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uraniur processed in the refinery	
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

	BPT Effluent Limitations	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uraniur processed in the refinery	
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 32-5 Secondary Uranium Evaporation and Denitration Wet Air Pollution Control

I	3PT 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
pH	(1)	(1)

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Table 32-6 Secondary Uranium Hypofluorination Alkaline Scrubber

, P		
	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	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	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 7.5 to 10.0 at all times

Table 32-8 Secondary Uranium Magnesium Reduction and Casting Floor Wash

	BPT 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 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

	Danial y Waste Water	
	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of urani pollutant property produced by magnesium reduction		llion pounds) of uranium m 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

	recurery bump ruciae	
	BAT Effluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of uranium pollutant property processed in the refinery		
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 million pounds) of uranium processed in the refinery	
Chromium	1.689	0.685
Copper	5.844	2.785
Nickel	2.511	1.689
Fluoride	159.800	90,860

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Table 32-12 Secondary Uranium Solvent Extraction Raffinate Filtrate

	BAT Effluent Limitation	ons
	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 Nickel Fluoride	2,357 8,152 3,503 222,900	0.955 3.885 2,357 126.700

Table 32-13 Secondary Uranium Digestion 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 processed in the refinery	
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000

Table 32-14 Secondary Uranium Evaporation and Denitration 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 uraniun trioxide produced	
Chromium	0.000	0.000
Copper	0.000	0.000
Nickel	0.000	0.000
Fluoride	0.000	0.000

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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 million pounds) of uraniun tetrafluoride produced	
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	3
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of uranium tetrafluoride produced	
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

Table 32-18 Secondary Uranium Laundry Wastewater

	manag march	
	BAT Effluent Limitatio	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 Copper Nickel Fluoride	0,036 0,123 0,053 3,360	0.014 0.059 0.036 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

	Renner's Sump Pricial	VC .
	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per m processed in the refine	illion pounds) of uranium ery
Chromium	27.14	11.00
Copper	93.88	44.74
Nickel	40.34	27.14
Fluoride	2,567.00	1,459.00
Total suspended solids	1,100.00	880.10
pH	(1)	(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 millior processed in the refinery	pounds) of uranium
Chromium	1.689	0.685
Copper	5.844	2.785
Nickel	2.511	1.689
Fluoride	159.800	90.860
Total suspended solids	68.490	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 mi processed in the refine	illion pounds) of uranium ry
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)

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

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 million processed in the refinery	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 m trioxide produced	illion 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

Table 32-24 Secondary Uranium Hypofluorination Alkaline Scrubber

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of urar pollutant property tetrafluoride produced		on 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 mg/kg (pounds per million pounds) of urani pollutant property tetrafluoride produced		
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

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 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
Total suspended solids	0.452	0.361
pН	(1)	(1)

Table 32-27 Secondary Uranium Laundry Wastewater

	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of urani pollutant property produced by magnesium reduction		
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 million pounds) of zirconium dioxide and hafnium dioxide produced	
Chromium	0.250	0.102
Cyanide	0.165	0.068
Lead	0.239	0.114
Nickel	1.091	0.721
Ammonia (as N)	75.710	33.280
Total suspended solids	23.290	11.080
pH	(1)	(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

J	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	19.130	7.825
Cyanide	12.610	5.216
Lead	18.260	8.694
Nickel	83,460	55,210
Ammonia (as N)	5,795.000	2,547.000
Total suspended solids	1,782.000	847.700
pH	(1)	(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 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	3.751	1.534
Cyanide	2.472	1.023
Lead	3.580	1.705
Nickel	16.370	10.830
Ammonia (as N)	1.136.000	449.500
Total suspended solids	349.500	166.200
pH	(1)	(1)

(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	3,299	1,350
Cyanide	2.174	0.900
Lead	3.149	1,500
Nickel	14.400	9,522
Ammonia (as N)	999,500	439.400
Total suspended solids	307.400	146.200
pH	(1)	(1)

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

Table 33-5 Primary Zirconium and Hafnium Feed Make Up Wet Air Pollution Control

]	BPT Effluent Limitati	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	2.501	1.023
Cyanide	1.648	0.682
Lead	2.387	1.137
Nickel	10.910	7.217
Ammonia (as N)	757.500	333.000
Total suspended solids	233,000	110,800
pH	(1)	(1)

(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 mg/kg (pounds per million pounds) of zircon pollutant property dioxide and hafnium dioxide produced		lion pounds) of zirconium lioxide 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)

Table 33-7 Primary Zirconium and Hafnium Zirconium Filtrate

	Diroomani I moravo	
	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
pН	(1)	(1)

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

Table 33-8 Primary Zirconium and Hafnium Hafnium Filtrate

	BPT Effluent Limitation	ns
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconiun 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 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	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		
	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	16.860	6.897
Cyanide	11.110	4.598
Lead	16.090	7.663
Nickel	73.570	48.660
Ammonia (as N)	5,108.000	2,245.000
Total suspended solids	1,571.000	747.200
pH	(1)	(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 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	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
рН	(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

	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	9,123	3.732
Cyanide	6,013	2,488
Lead	8.708	4.147
Nickel	39,810	26.330
Ammonia (as N)	2,764,000	1,215.000
Total suspended solids	850,100	404.300
pH	(1)	(1)

Table 33-13
Primary Zirconium and Hafnium
Magnesium Recovery 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	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	5 .
	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

BPT Effluent Limitations		
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per million pounds) of zirconiu 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
pН	(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
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BPT Effluent Limitations		
•	Maximum for any 1 day	Maximum for monthly average
Pollutant or mg/kg (pounds per million pounds) of zirconi pollutant property dioxide and hafnium dioxide produced		llion pounds) of zirconium dioxide 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)

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

Table 33-17
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Metal Production

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	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
рH	(1)	(1)

Table 33-18 Primary Zirconium and Hafnium Leaching Rinse Waters From Zirconium Alloy Production

J	BPT Effluent Limitatio	ons
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi dioxide and hafnium	llion pounds) of zirconium 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 Limitation	าร
	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 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 16.080 Cyanide 8.694 Lead 12.170 Nickel 23.910 Ammonia (as N) 5,795.000		6,521 3,478 5,651 16,080 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)	$\begin{array}{cccc} 3.154 & 1.279 \\ 1.705 & 0.682 \\ 2.387 & 1.108 \\ 4.688 & 3.154 \\ 1,136.000 & 499.500 \end{array}$	

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)	2.103 1.137 1.591 3.126 757.500	0.852 0.455 0.739 2.103 333.000

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	0.830 0.33 0.449 0.18	
Nickel Ammonia (as N)	$egin{array}{c} 0.628 \ 1.234 \ 299.100 \end{array}$	0.292 0.830 131,500

Table 33-25 Primary Zirconium and Hafnium Zirconium Filtrate

	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)	$\begin{array}{cccc} 14.350 & 5.819 \\ 7.758 & 3.103 \\ 10.860 & 5.043 \\ 21.330 & 14.350 \\ 5,171.000 & 2,273.000 \end{array}$	

Table 33-26 Primary Zirconium and Hafnium Hafnium Filtrate

	1141114111 2 1101400	<u></u>
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	0.000 0.000	0.000 0.000
Lead	0.000	0.000
Nickel Ammonia (as N)	0.000 0.000	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)	3.329 1.799 2.519 14.948 1,199.000	1.350 0.720 1.170 3.329 527.200

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	14.180 5.748	
Cyanide	7,663	3.065
Lead	10.730	4.981
Nickel	21,070	14.180
Ammonia (as N)	5,108.000	2,245.000

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)	$\begin{array}{cccc} 1.364 & 0.553 \\ 0.737 & 0.295 \\ 1.032 & 0.479 \\ 2.027 & 1.364 \\ 491.300 & 216.000 \end{array}$	

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 7.671 3 Cyanide 4.147 1 Lead 5.805 2 Nickel 11.400 7		3.110 1.659 2.695 7.671 1,215.000

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	
mg/kg (pounds per million pounds) of zirconium dioxide and hafnium dioxide produced		
4.262 1.728		
2.304	0.921	
3.225	1,497	
26.335	4.262	
1,535.000	675.000	
	Maximum for any 1 day mg/kg (pounds per mi dioxide and hafnium of 4.262 2.304 3.225 26.335	

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	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

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)	$\begin{array}{ccc} 10.900 & 4.420 \\ 5.893 & 2.357 \\ 8.250 & 3.831 \\ 16.210 & 10.900 \\ 3,928.000 & 1,674.000 \end{array}$	

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 Cyanide Lead Nickel Ammonia (as N)	5.835 2.366 3.154 1.262 4.416 2.050 8.674 5.835 2.102.000 895.000	

Table 33-35
Primary Zirconium and Hafnium
Leaching Rinse Waters 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)	$\begin{array}{cccc} 21.810 & 8.840 \\ 11.790 & 4.715 \\ 16.500 & 7.661 \\ 32.410 & 21.810 \\ 7.856.000 & 3.453.000 \end{array}$		

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)	$\begin{array}{ccc} 0.292 & 0.118 \\ 0.158 & 0.063 \\ 0.221 & 0.103 \\ 1.434 & 0.292 \\ 105.200 & 46.240 \end{array}$	

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 mg/kg (pounds per million pounds) of zirconi pollutant property dioxide and hafnium dioxide produced		lion pounds) of zirconium lioxide 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		
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)

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

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 mi dioxide and hafnium	llion pounds) of zirconium dioxide produced
Chromium	3.154	1.279
Cyanide	1.705	0.682
Lead	2.387	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

111100	NSPS	
	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi dioxide and hafnium	llion pounds) of zirconium dioxide produced
Chromium	2.774	1.125
Cyanide	1.500	0.600
Lead	2.099	0.975
Nickel	4,124	2.774
Ammonia (as N)	999.500	439,400
Total suspended solids	112,500	89.980
pН	(1)	(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 lioxide 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 mi dioxide and hafnium	llion pounds) of zirconium dioxide 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
pН	(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 mg/kg (pounds per million pounds) of zirconic pollutant property dioxide and hafnium dioxide produced		llion 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

	Haimain Phylace	
	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	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
pН	(1)	(1)

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

Table 33-45 Primary Zirconium and Hafnium Calcining Caustic Wet Air Pollution Control

· · · · · · · · · · · · · · · · · · ·	NSPS	
1	Maximum for any 1 day	Maximum for monthly average
Pollutant or pollutant property	mg/kg (pounds per mi dioxide and hafnium	llion pounds) of zirconium dioxide produced
Chromium	3.329	1.350
Cyanide	1.799	0.720
Lead	2.519	1,170
Nickel	4.948	3,329
Ammonia (as N)	1,199.000	527.200
Total suspended solids	135.000	108.000
pН	(1)	(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 mi dioxide and hafnium	llion pounds) of zirconium dioxide produced
Chromium	14.180	5.748
Cyanide	7.663	3.065
Lead	10.730	4.981
Nickel	21.070	14.180
Ammonia (as N)	5,108.000	2,245.000
Total suspended solids	574,800	459.800
pH	(1)	(1)

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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 mil dioxide and hafnium o	lion pounds) of zirconium lioxide 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 mi dioxide and hafnium	llion pounds) of zirconium dioxide produced
Chromium	4.262	1.728
Cyanide	2,304	0.921
Lead	3.225	1.497
Nickel	6.335	4,262
Ammonia (as N)	1,535,000	675.000
Total suspended solids	172.800	138.200
pH .	(1)	(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 mil dioxide and hafnium d	lion pounds) of zirconium ioxide 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
pН	(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 mi dioxide and hafnium	llion pounds) of zirconium dioxide 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
pH	(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 mi dioxide and hafnium o	llion pounds) of zirconium 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	895.800
Total suspended solids	236,600	189.300
pH	(1)	(1)

Table 33-53
Primary Zirconium and Hafnium
Leaching Rinse Waters From Zirconium Metal Production

NSPS	
Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per mil dioxide and hafnium o	lion pounds) of zirconium lioxide produced
21.810	8.840
11.790	4.715
16.500	7.661
32.410	21.810
7,856,000	3,453.000
884.000	707.200
(1)	(1)
	Maximum for any 1 day mg/kg (pounds per mil dioxide and hafnium of the second

(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 mi dioxide and hafnium o	llion pounds) of zirconium dioxide 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.

State Code	Corresponding Federal Regulation	
s. NR 205.03	40 C.F.R. s. 401.11	
s. NR 205,04 ch. NR 211	40 C.F.R. s. 401.11 40 C.F.R. Part 403	
s. NR 211.03 s. NR 211.13	40 C.F.R. s. 403.3 40 C.F.R. s. 403.7	
s. NR 211,14	40 C.F.R. s. 403.13	
ch. NR 219 ch. NR 256	40 C.F.R. Part 136 40 C.F.R. Part 464	
ch. NR 274	40 C.F.R. Part 421	