# Chapter NR 255

# BATTERY MANUFACTURING

	Subchap	ter I — General Provisions	NR 255.34	Pretreatment standards for
	255.01	Purpose (p. 222-2)		existing sources (p. 222-35)
NR	255.015	Applicability (p. 222-2)	NR 255.35	Pretreatment standards for
NR	255.02	General definitions (p. 222-2)		new sources (p. 222-38)
NR	255.03	Monitoring and reporting re-	Subchanto	r V - Lecianche Subcategory
		quirements (p. 222-3)	NR 255.40	Applicability; description of
NR	255.04	Compliance date for PSES	1124 200.10	the Leclanche subcategory
		(p. 222-3)		(p. 222-41)
8	uhchante	r II — Cadmium Subcategory	NR 255.43	New source performance stan-
	255.10	Applicability; description of	1114 200110	dards (p. 222-41)
		the cadmium subcategory	NR 255.44	Pretreatment standards for
		(p. 222-3)	1111 200,11	existing sources (p. 222-42)
NR	255.11	Effluent limitations represent-	NR 255.45	Pretreatment standards for
		ing the degree of effluent re-	1127 200120	new sources (p. 222-42)
		duction attainable by the ap-	and the	
		plication of the best		er VI — Lithium Subcategory
		practicable control technology	NR 255.50	
		currently available (p. 222-3)		the lithium subcategory
NR	255.12	Effluent limitations represent-	NR 255.53	(p. 222-43)
		ing the degree of effluent re-	141C 200.09	New source performance stan- dards (p. 222-43)
		duction attainable by the ap-	NR 255.55	Pretreatment standards for
		plication of the best available	1414 200.00	new sources (p. 222-44)
		technology economically		
		achievable (p. 222-8)		VII — Magnesium Subcategory
NR	255.13	New source performance stan-	NR 255.60	Applicability; description of
		dards (p. 222-11)		the magnesium subcategory
NR	255.14	Pretreatment standards for	1.50 000 00	(p. 222-45)
		existing sources (p. 222-15)	NR 255.63	New source performance stan-
NR	255.15	Pretreatment standards for	17T) APP A1	dards (p. 222-46)
		new sources (p. 222-18)	NR 255.64	Pretreatment standards for
S	ubchapte	r III — Calcium Subcategory	ND ore er	existing sources (p. 222-48)
	255.20	Applicability; description of	NR 255.65	Pretreatment standards for
		the calcium subcategory		new sources (p. 222-49)
		(p. 222-21)		ter VIII — Zinc Subcategory
NR	255.23	New source performance stan-	NR 255.70	
		dards (p. 222-21)		the zinc subcategory (p. 222-
NR	255.25	Pretreatment standards for		51)
		new sources (p. 222-22)	NR 255.71	Effluent limitations represent-
	Subchan	ter IV — Lead Subcategory		ing the degree of effluent re-
NR	255.30	Applicability; description of		duction attainable by the ap-
	200.00	the lead subcategory (p. 222-		plication of the best
		22)		practicable control technology
NR	255.31	Effluent limitations represent-	NTD OFF GO	currently available (p. 222-51)
		ing the degree of effluent re-	NR 255.72	Effluent limitations represent-
		duction attainable by the ap-		ing the degree of effluent re-
		plication of the best		duction attainable by the ap-
		practicable control technology		plication of the best available
		currently available (p. 222-22)		technology economically
NR	255.32	Effluent limitations represent-	NR 255.73	achievable (p. 222-57) New source performance stan-
		ing the degree of effluent re-	1416 200:10	dards (p. 222-62)
		duction attainable by the ap-	NR 255.74	Pretreatment standards for
		plication of the best available	1140 200413	existing sources (p. 222-66)
		technology economically	NR 255.75	Pretreatment standards for
	0 × H 0 c	achievable (p. 222-27)		new sources (p. 222-71)
NK	255.33	New source performance stan-	NR 255.80	Cross-references (p. 222-75)
		dards (p. 222-30)		· · · · · · · · · · · · · · · · · · ·

#### Subchapter I — General Provisions

NR 255.01 Purpose. The purpose of this chapter is to establish effluent limitations, standards of performance, and pretreatment standards for discharges of process wastes from the battery manufacturing category of point sources and its subcategories.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.015 Applicability. This chapter applies to any battery manufacturing plant that discharges or may discharge a pollutant to waters of the state or that introduces pollutants into a publicly owned treatment works. Battery manufacturing operations subject to regulation under this chapter are not subject to regulation under chs. NR 260 and 261.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.02 General definitions. In addition to the definitions set forth in ch. NR 205 and s. NR 211.03, the following definitions apply to this chapter:

- (1) "Ancillary operations" means all of the operations specific to battery manufacturing and not included specifically within anode or cathode manufacture. Ancillary operations are primarily associated with battery assembly and chemical production of anode or cathode active materials.
- (2) "Battery" means a modular electric power source where part or all of the fuel is contained within the unit and electric power is generated directly from a chemical reaction rather than indirectly through a heat cycle engine. In this chapter, there is no differentiation between a single cell and a battery.
- (3) "Battery manufacturing operations" means all of the specific processes used to produce a battery including the manufacture of anodes and cathodes and associated ancillary operations. These manufacturing operations are excluded from regulation under any other point source category.
- (4) "Discharge allowance" means the amount of pollutant that a plant will be permitted to discharge measured by mg. per kg. of production unit. For purposes of this chapter, the allowances are specific to battery manufacturing operations.
- (5) "Existing source" means any point source, except a new source as defined in sub. (9), from which pollutants may be discharged either into the waters of the state or into a POTW.
- (6) "Leclanche type batteries" means zinc anode batteries with acid electrolyte.
- (7) "Miscellaneous wastewater streams" means the combined wastewater streams from the process operations within each of 4 subcategories: cadmium, lead, lithium, and zinc. If a plant has one of these wastewater streams, then the plant receives the entire miscellaneous wastewater stream allowance. The process operations for the cadmium subcategory are cell wash, electrolyte preparation, floor and equipment wash, and employe wash. The process operations for the lead subcategory are floor wash, wet air pollution control, battery repair, laboratory, hand wash, and respirator wash. The process operations for the Register, November, 1987, No. 383

lithium subcategory are floor and equipment wash, cell testing, and lithium scrap disposal. The process operations for the zinc subcategory are cell wash, electrolyte preparation, employe wash, reject cell handling, and floor and equipment wash.

- (8) "NSPS" means new source performance standards.
- (9) "New source," as defined for NSPS and PSNS, means any point source from which pollutants may be discharged directly into the waters of the state or into a POTW, the construction of which commenced after November 10, 1982.
  - (10) "PSES" means pretreatment standards for existing sources.
  - (11) "PSNS" means pretreatment standards for new sources.
- (12) "Plate soak" means the process operation of soaking or reacting lead subcategory battery plates, that are more than 2.5 mm. or 0.100 in. thick, in sulfuric acid.
- (13) "Trucked batteries" means batteries moved into or out of the plant by truck when the truck is actually washed in the plant to remove residues left in the truck from the batteries.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.03 Monitoring and reporting requirements. Compliance with the maximum monthly average effluent limitations and pretreatment standards listed in the tables for each regulated process is required regardless of the number of samples analyzed and averaged. The maximum monthly average effluent limitations and pretreatment standards listed in the tables for each regulated process shall be the basis for monthly average discharge limits in direct discharge permits and for pretreatment standards.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.04 Compliance date for PSES. The compliance date for pretreatment standards for existing sources is March 9, 1987.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

#### Subchapter II — Cadmium Subcategory

NR 255.10 Applicability; description of the cadmium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from manufacturing cadmium anode batteries.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.11 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 source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BPT:

222-4

NR 255

Table 1
Pasted and Pressed Powder Anodes

BPT

171 1				
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE		
	Metric units —	- mg/kg of cadmium		
·	English units - cadmium	- lb/million lbs of		
Cadmium	0.92	0.41		
Nickel	5.18	3.43		
Zinc	3.94	1.65		
Cobalt	0.57	0.24		
Oil and grease	54.00	32.40		
TSS	111.00	52.65		
pН	(1)	(1)		

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 2
Electrodeposited Anodes

	172 1	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of cadmium
	English units – cadmium	– lb/million lbs of
Cadmium	237.0	104.6
Nickel	1,338.2	885.2
Zinc	1,017.6	425.2
Cobalt	146.4	62.7
Oil and grease	13,940.0	8,364.0
TSS	28,577.0	13,592,0
рĤ	$(^1)$	(1)

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

Table 3
Impregnated Anodes

BPT

	~ I	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
		- mg/kg of cadmium – lb/million lbs of
Cadmium	339.3	149.7
Nickel	1,916.2	1,267.5
Zinc	1,457.1	608.8
Cobalt	209.6	89.8
Oil and grease	19,960.0	11,976.0
TSS	40,918.0	19,461,0
pH	$(^1)$	( <sup>1</sup> )

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 4
Nickel Electrodeposited Cathodes

RPT

	DLI	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of nickel
•	English units — lb/million lb nickel applied	
Cadmium	193.5	85.4
Nickel	1,092.5	722.6
Zinc	830.7	347.1
Cobalt	119.5	51.2
Oil and grease	11,380.0	6,828.0
TSS	23,329,0	11,095.5
pH	$\binom{1}{1}$	(1)

Within the range of 7.5 to 10.0 at all times.

Table 5
Nickel Impregnated Cathodes

## **BPT**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of nickel
	English units — lb/million lbs o nickel applied	
Cadmium	557.6	246.0
Nickel	3,148.8	2,082.8
Zine	2,394.4	1,000.4
Cobalt	344.4	147.6
Oil and grease	32,800.0	19,680.0
TSS	67,240,0	31,980,0
pH	$^{\cdot}$ (1)	$(^1)$

Within the range of 7.5 to 10.0 at all times.

Table 6
Miscellaneous Wastewater Streams

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced English units — lb/million lbs of cells produced	
÷		
Cadmium	6.29	2.77
Nickel	35.54	23.50
Zinc	27.02	11.29
Cobalt	3.89	1.66
Oil and grease	370.20	222.12
TSS	758.91	360.94
pH	(1)	(1)

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 7 Cadmium Powder Production

BPT

	~	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — powder produc	- mg/kg of cadmium ed
	English units — lb/million lbs cadmium powder produced	
Cadmium	22.34	9.86
Nickel Zinc	$126.14 \\ 95.92$	83.44 40.08
Cobalt	13.80	5.91
Oil and grease	1,314.00	788.40
TSS	2,693.00	1,281.20
pН	$(^1)$	(1)

 $<sup>\</sup>overline{\ \ \ \ \ \ }$  Within the range of 7.5 to 10.0 at all times.

Table 8 Silver Powder Production

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — powder produc	- mg/kg of silver ed
	English units — lb/million lbs o silver powder produced	
Cadmium	7.21	3.18
Nickel	40.70	26.92
Silver	8.69	3.61
Zinc	30.95	12,93
Cobalt	4.45	1.91
Oil and grease	424.00	254,40
TSS	869.20	413.40
pН	$(^1)$	(1)

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 9
Cadmium Hydroxide Production

**BPT** 

D1 1			
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY I DAY	MAXIMUM FOR MONTHLY AVERAGE	
	Metric units — used	- mg/kg of cadmium	
· .	English units – cadmium used	- lb/million lbs of	
Cadmium	0.31	0.14	
Nickel	1.73	1.14	
Zinc	1,31	0.55	
Cobalt	0.19	0.08	
Oil and grease	18.00	10.80	
TSS	86.90	17.60	
pH	(1)	(1)	

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 10
Nickel Hydroxide Production

BPT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE	
	Metric units — used	mg/kg of nickel	
	English units — lb/million lbs of nickel used		
Cadmium	37.4	16.5	
Nickel	211,2	139.7	
Zinc	160.6	67.1	
Cobalt	23.1	9.9	
Oil and grease	2,200.0	1,320.0	
TSS	4,510.0	2,145,0	
pH	(1)	(1)	

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.12 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 source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BAT:

<sup>(2)</sup> There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 1 to 10.

Table 11 **Electrodeposited Anodes** 

D	A	Tr.	

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY I DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	- mg/kg of cadmium
	English units – cadmium	- lb/million lbs of
Cadmium	11.95	5.27
Nickel	67,49	44.64
Zinc	51.32	21.44
Cobalt	7.38	3.16

Table 12 Impregnated Anodes or Nickel Impregnated Cathodes

#### BAT

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POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — or nickel applie	- mg/kg of cadmium ed
English u cadmium		— lb/million lbs of ckel applied
Cadmium	68.0	
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0 18.0	

Table 13 Nickel Electrodeposited Cathodes

## BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of nickel applied English units — lb/million lbs o nickel applied	
Cadmium	11.22	4.95
Nickel	63.36	41.91
Zinc	48.18	20.13
Cobalt	6.93	2.97

# 222-10 WISCONSIN ADMINISTRATIVE CODE

NR 255

Table 14
Miscellaneous Wastewater Streams

BAT

	17111	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
English units — cells produced		– lb/million lbs of
Cadmium Nickel Zinc Cobalt	0.79 4.47 3.40 0.49	0.35 2.96 1.42 0.21

Table 15
Cadmium Powder Production

BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — powder produc	- mg/kg of cadmium ed
	English units – cadmium powo	– lb/million lbs of ler produced
Cadmium	2.23	0.99
Nickel	12.61	8,34
Zinc	9.59	4.01
Cobalt	1.38	0,59

Table 16 Silver Powder Production

· BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs of silver powder produced	
#* .		
Cadmium	1.09	0.48
Nickel	6.16	4,08
Silver	1,32	0.55
Zinc	4.69	1.96
Cobalt	0.67	0.29

Table 17
Cadmium Hydroxide Production

#### BAT

	23111	·
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — used	- mg/kg of cadmium
	English units — lb/million lbs of cadmium used	
Cadmium	0.05	0.02
Nickel	0.27	0.18
Zinc	0.20	0.09
Cobalt	0.03	0.01

Table 18
Nickel Hydroxide Production

#### BAT

	17.11	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — used	- mg/kg of nickel
	English units — lb/million lbs of nickel used	
Cadmium	5.61	2.48
Nickel	31.68	20.96
Zinc	24.09	10.07
Cobalt	3.47	1.49

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 11 to 18.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.13 New source performance standards. (1) The discharge of wastewater pollutants from any new source subject to this subchapter may not exceed the following standards:

Table 19 Electrodeposited Anodes

#### **NSPS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	- mg/kg of cadmium
	English units – cadmium	– lb/million lbs of
Cadmium	7.03	2.81
Nickel	19.33	13.01
Zinc	35.85	14.76
Cobalt	4,92	2,46
Oil and grease	351.5	351.5
TSS	527.3	421.8
pН	$(^1)$	$(^1)$

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 20 Impregnated Anodes or Nickel Impregnated Cathodes

**NSPS** POLLUTANT OR POLLUTANT PROPERTY MAXIMUM FOR ANY 1 DAY MAXIMUM FOR MONTHLY AVERAGE Metric units - mg/kg of cadmium or nickel applied English units — lb/million lbs of cadmium or nickel applied Cadmium 16.0 40.0Nickel 110.0 74.0Zinc 204.0 84.0 Cobalt 28.0 14.0 Oil and grease 2,000.0 2,000.0 2,400,0 (1) 3,000.0 TSS pН

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 21 Nickel Electrodeposited Cathodes

# **NSPS**

	1.010	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	mg/kg of nickel
English units — nickel applied		lb/million lbs of
Cadmium	6.60	2.64
Nickel	18.15	12.21
Zine	33.66	13.86
Cobalt	4.62	2.31
Oil and grease	330.0	330.0
TSS	495.0	396.0
pH	(1)	$(^1)$

 $<sup>^{\</sup>mbox{\scriptsize I}}$  Within the range of 7.5 to 10.0 at all times.

Table 22 Miscellaneous Wastewater Streams

ROLD	
MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIY AVERAGE
Metric units — produced	- mg/kg of cells
English units – cells produced	- lb/million lbs of
0.47	0.19
1.28	0.86
2.38	0.98
0.33	0.16
23.3	23.3
35.0	28.0
(1)	(1)
	MAXIMUM FOR ANY 1 DAY  Metric units — produced English units — cells produced  0.47 1.28 2.38 0.33 23.3

 $<sup>^{\</sup>scriptsize 1}$  Within the range of 7.5 to 10.0 at all times.

Table 23 Cadmium Powder Production

# **NSPS**

MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
Metric units — mg/kg of cadmiun powder produced English units — lb/million lbs of cadmium powder produced	
3.61	2.43
6.70	2.76
0.92	0.46
65.70	65.70
98.55	78.84
$\binom{1}{1}$	(1)
	Metric units — powder product English units — cadmium powd 1,31 3,61 6,70 0,92 65,70

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

Table 24 Silver Powder Production

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs of silver powder produced	
Cadmium	0.64	0.26
Nickel	1,77	1,19
Silver	0.93	0.39
Zinc	3.27	1.35
Cobalt	0.45	0.22
Oil and grease	32.10	32.10
TSS	48.15	38.52
pH	$(\overline{^4})$	(1)

Within the range of 7.5 to 10.0 at all times.

Table 25
Cadmium Hydroxide Production

#### NSPS

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY I DAY	MONTHLY AVERAGE
	Metric units — used	- mg/kg of cadmium
	English units — lb/million lbs of cadmium used	
Cadmium	0.028	0.011
Nickel	0.077	0.051
Zinc	0.142	0,058
Cobalt	0.019	0.009
Oil and grease	1.40	1.40
TSS	2.10	1,68
pH	$(^1)$	$(^1)$

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 26
Nickel Hydroxide Production

#### **NSPS**

	11010	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — used	mg/kg of nickel
	English units — lb/million lbs onickel used	
Cadmium	3.30	1.32
Nickel	9.08	6.11
Zine	16.83	6.93
Cobalt	2.31	1.16
Oil and grease	165.0	165.0
TSS	247.5	198.0
pH	(1)	(1)

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 19 to 26.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.14 Pretreatement standards for existing sources. (1) Except as provided in 40 C.F.R. ss. 403.7 and 403.13, any existing source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for existing sources:

Table 27
Electrodeposited Anodes

## **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cadmi	
	English units - cadmium	- lb/million lbs of
Cadmium	11.95	5.27
Nickel	67.49	44.64
Zine	51.32	21,44
Cobalt	7.38	3.16

Table 28
Impregnated Anodes or Nickel Impregnated Cathodes

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cadmium or nickel applied	
ş	English units — lb/million lbs of cadmium or nickel applied	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122,0
Cobalt	42.0	18.0

Table 29
Nickel Electrodeposited Cathodes

## **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of nickel applied English units — lb/million lbs of nickel applied	
Cadmium	11.22	4.95
Nickel	63,36	41.91
Zinc	48.18	20,13
Cobalt	6.93	2.97

Table 30 Miscellaneous Wastewater Streams

#### **PSES**

LOLO	
MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
Metric units — produced	- mg/kg of cells
English units — lb/million lbs of cells produced	
0.79	0.35
4.47	2,96
3.40	1.42
0.49 0.21	
	MAXIMUM FOR ANY 1 DAY  Metric units — produced  English units — cells produced  0.79 4.47 3.40

# Table 31 **Cadmium Powder Production**

#### PSES

	1010	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — powder produc	- mg/kg of cadmium ed
	English units — lb/million lbs of cadmium powder produced	
Cadmium	2.23	0.99
Nickel	12.61	8.34
Zine	9.59	4.01
Cobalt 1.38		0.59

# Table 32 Silver Powder Production

#### PSES

	1000	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs of silver powder produced	
Cadmium	1.09	0.48
Nickel	6.16	4.08
Silver	1.32 0.8	
Zinc	inc 4,69	
Cobalt 0.67		0.29

Table 33 **Cadmium Hydroxide Production** 

#### PSES

	1 OEO	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — used	mg/kg of cadmium
	English units — lb/million lbs of cadmium used	
Cadmium	0.05	0.02
Nickel	0.27	0.18
Zinc	0.20	0.09
Cobalt	0.03 0.012	

Table 34 Nickel Hydroxide Production

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of nickel used English units — lb/million lbs of nickel used	
Cadmium	5,61	2,48
Nickel	31.68	20.96
Zine	24,09	10.07
Cobalt	3.47	1.49

<sup>(2)</sup> There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 27 to 34.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.15 Pretreatment standards for new sources. (1) Except as provided in 40 C.F.R. s. 403.7, any new source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for new sources:

Table 35
Electrodeposited Anodes

## **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of cadmium
÷ .	English units – cadmium	– lb/million lbs of
Cadmium	7.03	2.81
Nickel	19.33	13.01
Zine	35.85	14.76
Cobalt	4.92	2.46

Table 36
Impregnated Anodes or Nickel Impregnated Cathodes

# **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — or nickel applie	mg/kg of cadmium
	English units — lb/million ll cadmium or nickel applied	
Cadmium	40.0 16.0	
Nickel	110.0	74.0
Zine	204.0 84.	
Cobalt	28.0	14.0

# Table 37 Nickel Electrodeposited Cathodes

#### **PSNS**

	I BIND	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of nickel
	English units – nickel applied	- lb/million lbs of
Cadmium	6.60	2,64
Nickel	18.15	12.21
Zinc	33,66	13.86
Cobalt	4.62 2.31	

Table 38
Miscellaneous Wastewater Streams

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced English units — lb/million lbs of cells produced	
Cadmium	0.47 0.19	
Nickel	1,28	0.86
Zine	2.38	0.96
Cobalt 0.33		0.16

# Table 39 Cadmium Powder Production

# PSNS

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cadmium powder produced	
	English units - cadmium powo	– lb/million lbs of ler produced
Cadmium	1,31 0.53	
Nickel	3.61	2,43
Zine	6.70	2.76
Cobalt	0.92	0.46

# Table 40 Silver Powder Production

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs of silver powder produced	
Cadmium	0.64	0.26
Nickel	1.77	1.19
Silver	0.93	0.39
Zine	3.27	1.35
Cobalt	0.45	0.22

Table 41 Cadmium Hydroxide Production

#### **PSNS**

1 0110	
MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
Metric units — used	- mg/kg of cadmium
English units - cadmium used	→ lb/million lbs of
0.028	0.011
0.077	0.051
0.142	0.058
0.019	0.009
	MAXIMUM FOR ANY 1 DAY  Metric units — used  English units — cadmium used  0.028 0.077 0.142

Table 42
Nickel Hydroxide Production

#### **PSNS**

	I DI TO	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — used	mg/kg of nickel
	English units — lb/million lbs of nickel used	
Cadmium	3.30	1.32
Nickel	9.08	6.11
Zine	16.83	6.93
Cobalt	2.31	1.16

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 35 to 42.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

## Subchapter III - Calcium Subcategory

NR 255.20 Applicability; description of the calcium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from manufacturing calcium anode batteries.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.23 New source performance standards. There may be no discharge allowance for process wastewater pollutants from any battery manufacturing new source subject to this subchapter.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.25 Pretreatment standards for new sources. There may be no discharge allowance for process wastewater pollutants into a POTW from any battery manufacturing new source subject to this subchapter.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

#### Subchapter IV — Lead Subcategory

NR 255.30 Applicability; description of the lead subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from manufacturing lead anode batteries.

History; Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.31 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 source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BPT:

Table 43
Closed Formation — Double Fill, or Fill and Dump

	BPT	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	- mg/kg of lead used
	English units - lead used	— lb/million lbs of
Copper	0.86	0.45
Lead	0.19	0.090
Iron	0.54	0.27
Oil and grease	9.00	5.40
TSS	18,45	8.78
pH	(1)	$\underline{\hspace{1cm}}^{(1)}$

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

Table 44
Open Formation — Dehydrated

BPT

	Df T	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
		- mg/kg of lead used lb/million lbs of
Copper Lead Iron Oil and grease TSS pH	20.99 4.64 16.13 221.00 453.05 (1)	11.06 2.21 6.74 132.60 215.47 ( <sup>1</sup> )

 $<sup>^{\</sup>mbox{\scriptsize 1}}$  Within the range of 7.5 to 10.0 at all times.

Table 45 Open Formation — Wet

D1 4	
MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
Metric units —	- mg/kg of lead used
English units — lb/million lbs of lead used	
0.10	0.05
0.02	0.01
0.06	0.03
1.06	0.64
2.17	1.03
$(^1)$	(1)
	MAXIMUM FOR ANY I DAY  Metric units — English units — lead used  0.10 0.02 0.06 1.06

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 46 Plate Soak

# BPT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of lead used
	English units – lead used	- lb/million lbs of
Copper	0.040	0.020
Lead	0.009	0.004
Iron	0.030	0.010
Oil and grease	0.420	0.250
TSS	0.860	0.410
pH	$(^1)$	$(^{1})$

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 47
Battery Wash with Detergent

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of lead used
er en	English units — lb/million lbs of lead used	
Copper	1.71	0.90
Lead	0.38	0.18
Iron	1.08	0.55
Oil and grease	18.00	10.80
TSS	36,90	17.55
pH	$(^1)$	$(^1)$

 $<sup>^{\</sup>scriptsize 1}$  Within the range of 7.5 to 10.0 at all times.

Table 48
Battery Wash — Water Only

•	44.04.4
	RPT

DI I		
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY I DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of lead used
	English units – lead used	- lb/million lbs of
Copper	1.12	0.59
Lead	0.25	0.12
Iron	0.71	0.36
Oil and grease	11.80	7.08
TSS	24.19	11.51
pH	( <sup>1</sup> )	$\binom{1}{\cdot}$

 $<sup>^{</sup>m 1}$  Within the range of 7.5 to 10.0 at all times.

Table 49
Direct Chill Lead Casting

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
•		
Copper	0.00040	0.00020
Lead	0.00008	0.00004
Iron	0.00020	0.00010
Oil and grease	0.00400	0.00200
TSS	0.00800	0.00300
pH ·	$(^{1})$	$^{(1)}$

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times,

222-26

NR 255

Table 50
Mold Release Formulation

#### врт

	A7K ±	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIY AVERAGE
	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
Copper	0.011	0.006
Lead	0.002	0.001
Iron	0.007	0.004
Oil and grease	0.120	0.072
TSS	0.246	0.117
рH	(1)	(*)

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 51 Truck Wash

271 1		
MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE	
Metric units — mg/kg of lead in trucked batteries		
English units - lead in trucked	– lb/million lbs of l batteries	
0.026	0.014	
7.7 <b>F.F</b> 7.7		
0.016 0.006		
Oil and grease 0.280		
0.574 0.273		
(1) $(1)$		
	Metric units— trucked batter English units— lead in trucked 0.026 0.005 0.016 0.280	

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

## Laundry BPT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
1	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
Copper Lead Iron Oil and grease TSS	0,21 0,05 0,13 2,18 4,47	0.11 0.02 0.07 1.31 2.13
pH	$\tilde{a}^{(1)}$	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 53
Miscellaneous Wastewater Streams

#### RPT

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHIX AVERAGE
* 3	•	- mg/kg of lead used - lb/million lbs of
Copper	0.81	0.43
Lead	0.18	0.09
Iron	0.51	0.26
Oil and grease	8.54	5.12
TSS	17.51	8.33
pH	(1)	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 43 to 53.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.32 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 source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BAT:

# 222-28 WISCONSIN ADMINISTRATIVE CODE $_{\mathrm{NR}\ 255}$

Table 54
Open Formation — Dehydrated

BAT		
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	- mg/kg of lead used
	English units - lead used	- lb/million lbs of
Copper	3.19	1.68
Lead	0.71	0.34
Iron <sup>-</sup>	2.02	1.02

# Table 55 Open Formation — Wet

BAI		
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
•	Metric units —	- mg/kg of lead used
	English units - lead used	lb/million lbs of
Copper	0.100	0.053
Lead	0.022	0,010
Iron	0.06	0.03

# Table 56 Plate Soak

## BAT

	17711	
POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHIX AVERAGE
		- mg/kg of lead used lb/million lbs of
Copper	0.039	0.021
Lead	0.008	0.004
Iron	0.030	0.010

# Table 57 **Battery Wash with Detergent**

## BAT

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
Copper	1.71	0.90
Lead	0.38	0.18
Iron	1.08	0.55

# Table 58 **Direct Chill Lead Casting**

## BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
. •		
Copper Lead	0.0004 0.00008	0.0002 0.00004
Iron	0.0002	0.0001

# Table 59 Mold Release Formulation

#### BAT

	17111	
POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of lead English units — lb/million lbs lead used	
Copper	0.011	0.006
Lead	0.002	0.001
Iron	0.007	0.003

Table 60 Truck Wash

#### BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lea trucked batteries English units — lb/million l lead in trucked batteries	
Copper	0.026	0.014
Lead	0.005	0.002
Iron 0.016		0.008

## Table 61

## Laundry

#### BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE	
	Metric units —	mg/kg of lead used	
4 I	English units lead used	lish units — lb/million lbs of l used	
Copper Lead Iron	0.21 0.05 0.13	0.11 0.02 0.07	

Table 62
Miscellaneous Wastewater Streams

#### RAT

	DAI	
POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
Metric units — mg/kg of lead us English units — lb/million lbs of lead used		
Copper	0.58	0.31
Lead	0.13	0.06
Iron	0.37	0.19

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 54 to 62.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.33 New source performance standards. (1) The discharge of wastewater pollutants from any new source subject to this subchapter may not exceed the following standards:

Register, November, 1987, No. 383

Table 63
Open Formation — Dehydrated

## NSPS

POLLUTANT OR POLLUTANT PROPERTY	1.11	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
		Metric units —	mg/kg of lead used
		English units – lead used	– lb/million lbs of
Copper		2.15	1.02
Lead		0.47	0,21
Iron		2.01	1.02
Oil and grease		16.80	16.80
TSS		25.20	20.16
pH		( <sup>1</sup> )	( <sup>1</sup> )

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 64
Open Formation — Wet

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of lead used
	English units — lb/million l lead used	
Copper	0.067	0.032
Lead	0.014	0.006
Iron	0.063	0.032
Oil and grease	0.53	0.53
TSS	0.80	0.64
pH	(1)	$(^1)$

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

222-32

NR 255

Table 65 Plate Soak

#### **NSPS**

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of lea English units — lb/million ll lead used	
Copper	0.026	0.012
Lead	0.005	0.002
Iron	0.025	0.012
Oil and grease	0.21	0.21
TSS	0.32	0.25
pH	(1)	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 66
Battery Wash with Detergent

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
,	Metric units —	- mg/kg of lead used
÷	- English units – lead used	– lb/million lbs of
Copper	1.152	0.549
Lead	0.252	0.117
Iron	1.08	0.55
Oil and grease	9.0	9.0
TSS	13.5	10.8
pН	$(^1)$	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 67
Direct Chill Lead Casting

## **NSPS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
Copper	0.000256	0.000122
Lead	0.000056	0.000026
Iron	0.000240	0.000122
Oil and grease	0.0020	0.0020
TSS	0.0030	0.0024
pH	(1)	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 68
Mold Release Formulation

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
,	Metric units — mg/kg of lead u	
	English units – lead used	– lb/million lbs of
Copper	0.0077	0.0037
Lead	0.0017	0.0008
Iron	0.0072	0.0037
Oil and grease	0.060	0.060
TSS	0.090	0.072
pH	$(^1)$	$(^1)$

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

# 222-34 WISCONSIN ADMINISTRATIVE CODE

NR 255

Table 69 Truck Wash

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — trucked batter	- mg/kg of lead in ies
1114 E	English units — lb/million lbs lead in trucked batteries	
Copper	0.006	0.003
Lead	0.001	0.0007
Iron	0.006	0.003
Oil and grease	0.050	0.050
TSS	0.075	0.060
pH	(1) $(1)$	

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

Table 70 Laundry NSPS

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of lead used
• 14 4	English units - lead used	- lb/million lbs of
Copper	0.14	0.07
Lead	0.03	0.01
Iron	0.13	0.07
Oil and grease	1.09	1.09
TSS	1.64	1.31
pH	$(^1)$	(1)

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 71
Miscellaneous Wastewater Streams

#### NSPS

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead used	
	English units - lead used	- lb/million lbs of
Copper	0.39	0.19
Lead	0.085	0.039
Iron	0.37	0.19
Oil and grease	3,07	3.07
TSS	4.61	3,69
pH	$(^1)$	(1)

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 63 to 71.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.34 Pretreatment standards for existing sources. (1) Except as provided in 40 C.F.R. ss. 403.7 and 403.13, any existing source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for existing sources:

Table 72
Open Formation — Dehydrated

#### PSES

· ·		
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead used	
	English units - lead used	— lb/million lbs of
Copper Lead	3.19	1.68
Lead	0.71	0.34

# Table 73 Open Formation - Wet

## **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead u	
	English units – lead used	— lb/million lbs of
Copper	0.100	0.053
Copper Lead	0.022	0.010

# Table 74

# Plate Soak

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
Copper Lead	0.039 0.008	0.021 0.004

# Table 75

## **Battery Wash with Detergent**

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIX AVERAGE.
	Metric units -	- mg/kg of lead used
	English units — lb/million lbs of lead used	
Copper	1.71	0.90
Lead	0.38	0.18

#### Table 76

## **Direct Chill Lead Casting**

#### **PSES**

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of lead used English units — lb/million lbs of lead used	
Copper	0.0004	0.0002
Lead	0.00008	0.00004

# Table 77 Mold Release Formulation

# **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units -	mg/kg of lead used
	English units - lead used	— lb/million lbs of
Copper	0.011	0.006
Lead	0.002	0.001

# Table 78 Truck Wash

### PSES

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of lead in trucked batteries	
	English units — lb/million lbs of lead in trucked batteries	
Copper	0.026	0.014
Lead	0.005	0.002

# Table 79

# Laundry

#### **PSES**

MAXIMUM FOR

POLLUTANT OR

POLLUTANT PROPERTY	ANY I DAY	MONTHLY AVERAGE
	Metric units —	- mg/kg of lead used
	English units - lead used	- lb/million lbs of
Copper	0.21	0.11
Lead	0.05	0.02

Table 80
Miscellaneous Wastewater Streams

#### PSES

POLLUTANT OR POLLUTANT PROPERTY		MAXIMUM FOR ANY I DAY	MAXIMUM FOR MONTHLY AVERAGE
The state of the s	Metric units — mg/kg of le		- mg/kg of lead used
		English units - lead used	→ lb/million lbs of
Copper Lead		0.58 0.13	0.31 0.06

- (2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 72 to 80.
- (3) In cases where battery employe shower wastewater containing concentrations of lead exceeding 0.20 mg/l is combined with process wastewaters prior to treatment, the control authority may, under and notwithstanding the provisions of s. NR 211.12, exercise its discretion and classify battery employe shower wastewater as an unregulated rather than a dilute (F<sub>D</sub>) wastestream, for the purpose of applying the combined wastestream formula. Before the control authority may exercise its discretion to classify such a stream as an unregulated stream, the battery manufacturer must provide engineering, production, and sampling and analysis information sufficient to allow a determination by the control authority on how the stream should be classified.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.35 Pretreatment standards for new sources. (1) Except as provided in 40 C.F.R. s. 403.7, any new source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for new sources:

Table 81
Open Formation — Dehydrated

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
•	Metric units —	mg/kg of lead used
	English units - lead used	lb/million lbs of
Copper	2.15	1.02
Lead	0.47	0.21

# Table 82 Open Formation — Wet

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
- The second of	Metric units –	mg/kg of lead used
	English units - lead used	— lb/million lbs of
Copper	0.067	0.032
Lead	0.014	0.006

# Table 83

# Plate Soak

#### PSNS

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of lead used
	English units — lb/million lbs lead used	
Copper	0.026	0.012
Lead	0.005	0.002

# Table 84

# Battery Wash with Detergent

#### PSNS

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of lead used	
er.	English units — lb/millio lead used	
Copper	1.152	0.549
Lead	0.252	0.117

# Table 85

# **Direct Chill Lead Casting**

	10110	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units	mg/kg of lead used
	English units — lb/million lead used	
Copper Lead	0.000256	0.000122
Lead	0.000056	0.000026

# 222-40 WISCONSIN ADMINISTRATIVE CODE NR 255

Table 86
Mold Release Formulation

#### **PSNS**

POLLUTANT OR		MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY		ANY 1 DAY	MONTHLY AVERAGE
1/8		Metric units —	mg/kg of lead used
		English units - lead used	— lb/million lbs of
Copper		0.007	0.0037
Lead		0.0017	0.0008

# Table 87 Truck Wash

#### PSNS

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR	
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE	
	Metric units — mg/kg of lead in trucked batteries		
	English units - lead in trucked	— lb/million lbs of l batteries	
Copper	0.006	0.003	
Lead	0.001	0.0007	

# Table 88

# Laundry

# PSNS .

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
. :	Metric units —	mg/kg of lead used
	English units - lead used	— lb/million lbs of
Copper Lead	0.14	0.07
Lead	0.03	0.01

0.039

Table 89
Miscellaneous Wastewater Streams

# PSNS POLLUTANT OR MAXIMUM FOR MAXIMUM FOR ANY 1 DAY MONTHLY AVERAGE Metric units — mg/kg of lead used English units — lb/million lbs of lead used Copper 0.39 0.19

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 81 to 89.

0.085

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

Lead

## Subchapter V — Leclanche Subcategory

NR 255.40 Applicability; description of the leclanche subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from manufacturing Leclanche type batteries.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.43 New source performance standards. (1) The discharge of wastewater pollutants from any new source subject to this subchapter may not exceed the following standards:

Table 90 Foliar Battery Miscellaneous Wash

#### NSPS POLLUTANT OR POLLUTANT PROPERTY MAXIMUM FOR MAXIMUM FOR MONTHLY AVERAGE ANY 1 DAY Metric units — mg/kg of cells produced English units — lb/million lbs of cells produced 0.0100.004Mercury Zinc 0.0670.030Manganese 0.019 0.0150.66 Oil and grease 0.66TSS 0.990.79(1)(1)pΗ

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than the battery manufacturing operation listed in table 90.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

Within the range of 7.5 to 10.0 at all times.

# 222-42 WISCONSIN ADMINISTRATIVE CODE

NR 255

NR 255.44 Pretreatment standards for existing sources. (1) Except as provided in 40 C.F.R. ss. 403.7 and 403.13, any existing source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for existing sources:

Table 91 Foliar Battery Miscellaneous Wash

## PSES

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
	English units - cells produced	- lb/million lbs of
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than the battery manufacturing operation listed in table 91.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.45 Pretreatment standards for new sources. (1) Except as provided in 40 C.F.R. s. 403.7, any new source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for new sources:

Table 92
Foliar Battery Miscellaneous Wash

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
	English units – cells produced	- lb/million lbs of
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than the battery manufacturing operation listed in table 92.

History: Cr. Register, November, 1987, No. 883, eff. 12-1-87.

# Subchapter VI — Lithium Subcategory

NR 255.50 Applicability; description of the lithium subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from manufacturing lithium anode batteries.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.53 New source performance standards. (1) The discharge of wastewater pollutants from any new source subject to this subchapter may not exceed the following standards:

Table 93 Lead Iodide Cathodes

	NSPS	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY I DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	- mg/kg of lead
	English units - lead	— lb/million lbs of
Chromium	23,34	9.46
Lead	17.66	8,20
Iron	75,70	38.48
TSS	946.2	756.96
pH	$(^1)$	$(^1)$

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

Table 94
Iron Disulfide Cathodes

	21.02.0	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — disulfide	- mg/kg of iron
	English units — lb/million lbs of iron disulfide	
Chromium	2.79	1.13
Lead	2.11	0.96
Iron	9.05	4.60
TSS	113.1	90.5
pH	( <sup>1</sup> )	(1)

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

Table 95 Miscellaneous Wastewater Streams

** .a	NSPS	+ <b>1</b> \$
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — produced	mg/kg of cells
*	English units - cells produced	— lb/million lbs of
Chromium	0.039	0.016
Lead	0.030	0.014
Iron	0.129	0.066
TSS	1.62	1.30
pH	$(^1)$	$(^1)$

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

# Table 96 Air Scrubbers

#### **NSPS**

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
	English units – cells produced	- lb/million lbs of
TSS	434.0	207.0
pH	(1)	(1)

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.55 Pretreatment standards for new sources. (1) Except as provided in 40 C.F.R. s. 403.7, any new source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for new sources:

<sup>(2)</sup> There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 93 to 96.

Table 97 Lead Iodide Cathodes

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIX AVERAGE
	Metric units — mg/kg of lead	
	English units - lead	— lb/million lbs of
Chromium	23.34	9,46
Lead	17.66	8.20

# Table 98 Iron Disulfide Cathodes

#### PSNS

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
POLECTANT PROPERTY		mg/kg of iron
	English units — lb/million lbs of iron disulfide	
Chromium Lead	2.79 2.11	1,13 0.96

# Table 99 Miscellaneous Wastewater Streams

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIX AVERAGE
	Metric units — produced	- mg/kg of cells
	English units - cells produced	– lb/million lbs of
Chromium	0.039	0.016
Lead	0.030	0.014

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 97 to 99.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

# Subchapter VII - Magnesium Subcategory

NR 255.60 Applicability; description of the magnesium subcategory. This subchapter applies to the discharge of pollutants to waters of the state

# 222-46 WISCONSIN ADMINISTRATIVE CODE

NR 255

and the introduction of pollutants into POTWs from manufacturing magnesium anode batteries.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.63 New source performance standards. (1) The discharge of wastewater pollutants from any new source subject to this subchapter may not exceed the following standards:

Table 100 Silver Chloride Cathodes — Chemically Reduced

	NSPS	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — processed	- mg/kg of silver
	English units — lb/million lbs of silver processed	
Lead	22,93	10.65
Silver	23.75	9.83
Iron	98.28	49.96
TSS	1,228.5	982.8
COD	4,095.0	1,999.0
pН	$(^1)$	$(^1)$

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 101
Silver Chloride Cathodes — Electrolytic

#### NSPS POLLUTANT OR MAXIMUM FOR MAXIMUM FOR POLLUTANT PROPERTY MONTHLY AVERAGE ANY I DAY Metric units - mg/kg of silver processed English units - lb/million lbs of silver processed 40.6 18.9 Lead Silver 42.1 17.4Iron 174.086.5 TSS2,175.0 1,740.0 COD 7,250.03.540.0 Ηq

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

# Table 102 Cell Testing

	MOLO	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — produced	- mg/kg of cells
	English units - cells produced	lb/million lbs of
Lead	19.5	7,89
Silver	15.3	6.31
Iron	63.1	32.1
TSS	789.0	631.2
COD	2,630,0	1,290.0
pH	$(^1)$	(1)

 $<sup>^{\</sup>rm 1}\,$  Within the range of 7.5 to 10.0 at all times.

Table 103 Floor and Equipment Wash NSPS

	Noro	•
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — produced	- mg/kg of cells
	English units — lb/millio cells produced	
Lead	0.026	0.012
Silver	0.027	0.011
Iron	0.112	0.057
COD	1.41	1.13
TSS	4.70	2.30
pH	(1)	$(^1)$

Within the range of 7.5 to 10.0 at all times.

Table 104 Air Scrubber

#### **NSPS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE	
	Metric units — produced	Metric units — mg/kg of cells produced	
; •	English units - cells produced	- lb/million lbs of	
TSS pH	8,467.0 (1)	<b>4,030.0</b> (1)	

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 100 to 104.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.64 Pretreatment standards for existing sources. (1) Except as provided in 40 C.F.R. ss. 403.7 and 403.13, any existing source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for existing sources:

Table 105 Silver Chloride Cathodes — Chemically Reduced

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of silver processed English units — lb/million lbs of silver processed	
Lead	1,032.36	491.60
Silver	1,007.78	417.86

# Table 106 Silver Chloride Cathodes — Electrolytic

#### PSES.

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of silver processed	
i i	English units — lb/million lbs of silver processed	
Lead	60.9	29.0
Silver	59.5	24.7

# Table 107 Cell Testing

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — produced	mg/kg of cells
4.42	English units — lb/million lbs of cells produced	
Lead	22.1	10.5
Silver	21.6	8.9

# Table 108 Floor and Equipment Wash

#### **PSES**

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
	English units - cells produced	— lb/million lbs of
Lead	0.039	0.018
Silver	0.038	0.105

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 105 to 108.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.65 Pretreatment standards for new sources. (1) Except as provided in 40 C.F.R. s. 403.7, any new source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for new sources:

Table 109
Silver Chloride Cathodes — Chemically Reduced

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
174446	Metric units — processed	mg/kg of silver
	English units – silver processed	– lb/million lbs of l
Lead Silver	22,93 23,75	10.65 9.83

# Table 110 Silver Chloride Cathodes — Electrolytic

# **PSNS**

MAXIMUM FOR	MAXIMUM FOR
ANY 1 DAY	MONTHLY AVERAGE
Metric units — mg/kg of silver processed	
English units -	— lb/million lbs of
silver processe	d
40.6	18.9
42.1	17.4
	Metric units — processed English units - silver processe

# Table 111 Cell Testing

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
	English units - cells produced	— lb/million lbs of
Lead	19.5	7.89
Silver	15.3	6.31

Table 112 Floor and Equipment Wash

#### **PSNS**

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY 1 DAY	MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
	English units - cells produced	lb/million lbs of
Lead	0.026	0.012
Silver	0.027	0.001

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 109 to 112.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

#### Subchapter VIII — Zinc Subcategory

NR 255.70 Applicability; description of the zinc subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from manufacturing zinc anode batteries.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.71 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 source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BPT:

Table 113 Wet Amalgamated Powder Anodes

#### **RPT**

	Di I	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units mg/kg zinc	
	English units – zine	- lb/million lbs of
Chromium	1.67	0.68
Mercury	0.95	0.38
Silver	1.56	0.65
Zine -	5.55	2.32
Manganese	2.58	1,10
Oil and grease	76.0	45.6
TSS	155.8	74.1
pH	$(^1)$	$(^1)$

 $<sup>^{</sup>m I}$  Within the range of 7.5 to 10.0 at all times.

Register, November, 1987, No. 383

Table 114 Gelled Amalgam Anodes

BPT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of zinc	
	English units – zinc	– lb/million lbs of
Chromium	0.30	0.12
Mercury	0.17	0.07
Silver	0.28	0.12
Zinc	0.99	0.42
Manganese	0.46	0.20
Oil and grease	13.6	8.16
TSS	27.9	13.26
pH	( <sup>1</sup> )	$(^1)$

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 115
Zinc Oxide, Formed Anodes

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of zinc	
	English units - zine	— lb/million lbs of
Chromium	62.9	25.7
Mercury	35.8	14.3
Silver	58.7	24.3
Zinc	208.8	87.2
Manganese	97.2	41.5
Oil and grease	2,860.0	1,716.0
TSS	5,863.0	2,789,0
pН	(1)	(1)

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times,

Table 116
Electrodeposited Anodes

#### RPT

	DET	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — deposited	- mg/kg of zinc
La Maria	English units — lb/million lbs of zinc deposited	
Chromium	1,404.0	574.0
Mercury	798.0	319.0
Silver	1,308.0	543.0
Zinc	4,657.0	1,948.0
Manganese	2,169.0	925.0
Oil and grease	63,800.0	38,280.0
TSS	130,700,0	62,210,0
pH	$(^1)$	(1)

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

Table 117
Silver Powder, Formed Cathodes

		u	
POLLUTANT OR POLLUTANT PROPERTY	7.4	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
		Metric units — applied	mg/kg of silver
·		English units – silver applied	– lb/million lbs of
Chromium		86.2	35,3
Mercury	•	49.0	19.6
Silver		80.4	33,3
Zinc		286.2	119.6
Manganese		133.3	56.8
Oil and grease		3,920.0	2,350.0
TSS		8,036,0	3,822.0
рН		( <sup>1</sup> )	(1)

 $<sup>\</sup>overline{1}$  Within the range of 7.5 to 10.0 at all times.

Table 118
Silver Oxide Powder, Formed Cathodes

RPT

	DI I	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver applied	
English silver ap		- lb/million lbs of
Chromium	57.7	23.6
Mercury	32.8	13.1
Silver	53.7	22.3
Zinc	191.3	79.9
Manganese	89.1	38.0
Oil and grease	2,620.0	1,570.0
TSS	5,370,0	2,554,0
pН	$^{(1)}$	$(^1)$

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 119 Silver Peroxide Cathodes

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of silver
	English units – silver applied	- lb/million lbs of
Chromium	13.8	5.65
Mercury	7.85	3.14
Silver	12.9	5.34
Zine	45.8	19.2
Manganese	21.4	9.11
Oil and grease	628.0	377.0
TSS	1,287.0	612.0
pH	(1)	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 120 Nickel Impregnated Cathodes

	Dr 1	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of nickel
	English units – nickel applied	– lb/million lbs of
Chromium	721.6	295.2
Mercury	410.0	164.0
Nickel	3,149.0	2,083.0
Silver	672.4	279.0
Zine	2,394.4	1,000.4
Manganese	1,115.2	475.6
Oil and grease	32,800.0	19,680.0
TSS	67,240,0	31,980,0
pH	$(^1)$	$(^1)$

 $<sup>^{\</sup>scriptsize 1}\,$  Within the range of 7.5 to 10.0 at all times.

Table 121 Miscellaneous Wastewater Streams

	BPT	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIY AVERAGE
	Metric units — produced	- mg/kg of cells
	English units – cells produced	lb/million lbs of
Chromium	3.85	1.58
Cyanide	2.54	1.05
Mercury	2.19	0.68
Nickel	16.82	11,12
Silver	3,59	1.49
Zinc	12.79	5.34
Manganese	5.96	2.54
Oil and grease	175.20	105.12
TSS	359.16	170.82
pH	$(^1)$	( <sup>1</sup> )

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times,

Table 122 Silver Etch

**BPT** 

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — processed	mg/kg of silver
	English units – silver processed	– lb/million lbs of l
Chromium	21.6	8.84
Mercury	12.3	4.91
Silver	20.2	8.35
Zine	71.7	30.0 -
Manganese	33.4	14.3
Oil and grease	982.0	589.2
TSS	2,013,1	957.5
pH	$(^1)$	$(^{1})$

Within the range of 7.5 to 10.0 at all times.

Table 123
Silver Peroxide Production

	27 A	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
·	Metric units — silver peroxide	- mg/kg of silver in produced
	English units — lb/million lbs o silver in silver peroxide produce	
Chromium	23.0	9.40
Mercury	$\bar{13.1}$	5.22
Silver	21.4	8.88
Zinc	76.2	31.80
Manganese	35.5	15.10
Oil and grease	1,044.0	627.00
TSS	2,140.0	1,018.00
pH	(1)	(1)

Within the range of 7.5 to 10.0 at all times.

Table 124 Silver Powder Production

#### **RPT**

	Dr 1	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIX AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs of silver powder produced	
Chromium	9.33	3.82
Mercury	5.30	2.12
Silver	8,69	
Zine	30.95	
Manganese	14.42	6.15
Oil and grease	424.0	254.40
TSS	869.0 413.40	
pH	(1) $(1)$	

<sup>1</sup> Within the range of 7.5 to 10.0 at all times.

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 113 to 124.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.72 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 source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BAT:

Table 125
Wet Amalgamated Powder Anodes

#### BAT

	DAI	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of zinc English units — lb/million lbs of zinc	
Chromium		0.099
Mercury	0.14	0.056
Silver	0.23	0.093
Zinc	0.80	0.34
Manganese	0.37	0.16

Table 126 Gelled Amalgam Anodes

BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE	
	Metric units –	- mg/kg of zinc	
•	English units — lb/million lbs of zinc		
Chromium	0.030	0.012	
Mercury	0.017	0.007	
Silver	0,028	0.012	
Zinc	0.099	0.042	
Manganese	0.046	46 0.020	

Table 127
Zinc Oxide Formed Anodes

BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of zinc English units — lb/million lbs of zinc	
Chromium	9.53	3,90
Mercury	5.42	2.17
Silver	8.89	3.68
Zine	31.64	13.22
Manganese	14.74	6.28

Table 128 Electrodeposited Anodes

BAT

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — deposited	- mg/kg of zinc
	English units — lb/million lbs of zinc deposited	
Chromium	94.47	38.65
Mercury	53.68	21.47
Silver	88.03	36.50
Zinc	313.46	130.97
Manganese	146.00	62.26

Table 129 Silver Powder Formed Cathodes

BAT MAXIMUM FOR ANY 1 DAY MAXIMUM FOR MONTHLY AVERAGE POLLUTANT OR POLLUTANT PROPERTY Metric units - mg/kg of silver applied English units — lb/million lbs of silver applied 13.07 7.43 12.18 5.35 2.97 Chromium Mercury Silver 5.05 Zinc 43.36 20.20 18.12 8.61 Manganese

Table 130
Silver Oxide Powder Formed Cathodes

	BAT	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	mg/kg of silver
	English units — lb/million lbs of silver applied	
Chromium	8.73	3.57
Mercury	4.96	1,99
Silver	8.14	3.37
Zinc	28.96	12.11
Manganese	13.50	5.76

Table 131 Silver Peroxide Cathodes

	BAT	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of silver
	English units - silver applied	- lb/million lbs of
Chromium	2.09	0.87
Mercury	1.19	9.48
Silver	1.95	0.81
Zinc	6.95	2.90
Manganese	3.24	1.38

Register, November, 1987, No. 383

Table 132 Nickel Impregnated Cathodes

BAT

	DAI	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of nickel applied English units — lb/million lbs of nickel applied	
Chromium	88.0	36.0
Mercury	50.0	20.0
Nickel	384.0	254.0
Silver	82.0	34.0
Zine	292.0	122,0
Manganese	136.0	58.0

Table 133
Miscellaneous Wastewater Streams

BAT

	47144	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced English units — lb/million lbs of cells produced	
Chromium	0.57	0.23
Cyanide	0.38	0.16
Mercury	0.32	0.13
Nickel	2.48	1.64
Silver	0.53	0.22
Zinc	1.88	0.79
Manganese	0.88	0.37

# Table 134 Silver Etch

#### BAT

	27122	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver processed English units — lb/million lbs of silver processed	
Chromium	3,27	1,34
Mercury	1.86	0.74
Silver	3.05	1.26
Zinc	10.86	4.54
Manganese	5.06	2.16

# Table 135 Silver Peroxide Production

#### BAT

	DAL	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver i silver peroxide produced English units — lb/million lbs of silver in silver peroxide produce	
Chromium	3.48	1.42
Mercury	1.96	0.79
Silver	3.24 1.3	
Zine	11.56	4.83
Manganese	5.36 2.29	

# Table 136 Silver Powder Production

#### BAT

	PAL	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs silver powder produced	
Chromium	1.41	0.58
Mercury	0.80	0.32
Silver	1.32	0.55
Zinc	4,69 1,96	
Manganese	2.18 0.93	

Register, November, 1987, No. 383

## 222-62 WISCONSIN ADMINISTRATIVE CODE

NR 255

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 125 to 136.

History: Cr. Register, November, 1987, No. 883, eff. 12-1-87.

NR 255.73 New source performance standards. (1) The discharge of wastewater pollutants from any new source subject to this subchapter may not exceed the following standards:

Table 137

Zinc Oxide Formed Anodes

	NSPS	-
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of zinc
	English units — lb/million lbs of zinc	
Chromium Mercury	4.55 2.82	1.97 1.19
Silver	$\overline{4.55}$	$\bar{1.97}$
Zinc	0.87	0.39
Manganese Oil and grease	6.50 216.7	$\begin{array}{c} 4.98 \\ 216.7 \end{array}$
TSS	325.0	260.0
nΗ	(1)	[*]

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 138
Electrodeposited Anodes

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — deposited	- mg/kg of zinc
•	English units – zinc deposited	– lb/million lbs of
Chromium	45.09	19.54
Mercury	27.91	11.81
Silver	45.09	19.54
Zinc	8.59	3.86
Manganese	64.41	49.38
Oil and grease	2,147.00	2,147.00
TSS	3,220.50	2,576.40
pH	$(^1)$	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 139 Silver Powder Formed Cathodes

NSPS

	Noro	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIX AVERAGE
	Metric units — applied	mg/kg of silver
	English units — silver applied	- lb/million lbs of
Chromium	6.24	2.70
Mercury	3.86	1.63
Silver	6.24	2.70
Zinc	1.19	0.53
Manganese	8.91	6,83
Oil and grease	297.00	297.00
TSS	445.5	356.40
pH	$(^{1})$	$(^1)$

 $<sup>\</sup>overline{\phantom{a}}$  Within the range of 7.5 to 10.0 at all times.

Table 140
Silver Oxide Powder Formed Cathodes

	HOLD	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of silver
	English units – silver applied	→ lb/million lbs of
Chromium	4.17	1.81
Mercury	2.58	1.09
Silver	4.17	1.81
Zine	0.79	0.36
Manganese	5.96	4.57
Oil and grease	198.5	198.5
TSS	297.8	238.2
рH	$(^1)$	$(^1)$

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 141 Silver Peroxide Cathodes

# **NSPS**

	11010	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of silver
	English units – silver applied	– lb/million lbs of
Chromium	1.00	0.43
Mercury	0.62	0.26
Silver	1.00	0.43
Zinc	0.19	0.09
Manganese	1.43	1.09
Oil and grease	47.6	47.6
TSS	71.4	57.1
pH	(1)	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 142 Nickel Impregnated Cathodes

	HULD	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIX AVERAGE
	Metric units — applied	mg/kg of nickel
	English units – nickel applied	- lb/million lbs of
Chromium	42.0	18.2
Mercury	26.0	11.0
Nickel	42.0	18.2
Silver	42.0	18.2
Zinc	8.0	3.6
Manganese	60.0	46.0
Oil and grease	2,000.0	2,000.0
TSS	3,000,0	2,400.0
pH	$\binom{1}{1}$	$\binom{1}{1}$

 $<sup>^{1}\,</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 143 Miscellaneous Wastewater Streams

## **NSPS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — produced	mg/kg of cells
	English units – cells produced	– lb/million lbs of
Chromium	0.27	0.12
Cyanide	0.039	0.016
Mercury	0.17	0.07
Nickel	0.27	0.12
Silver	0.27	0.12
Zinc	0.05	0.02
Manganese	0.39	0.30
Oil and grease	12.90	12,90
TSS	19.35	15.48
pH	$(^1)$	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 144 Silver Etch

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg silver processed	
	English units – silver processed	– lb/million lbs of i
Chromium	1.56	0.68
Mercury	0.97	0.41
Silver	1.56	0.68
Zinc	0.30	0.13
Manganese	2,23	1.71
Oil and grease	74,40	74.40
TSS	111.60	89,28
pН	(1)	(1)

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

Table 145
Silver Peroxide Production

#### NSPS

	TOLD	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — silver peroxide	- mg/kg of silver in produced
		– lb/million lbs of peroxide produced
Chromium	1.66	0.72
Mercury	1.03	0.44
Silver	1,66	0.72
Zine	0.32	0.14
Manganese	2.37	1,82
Oil and grease	79.10	79.10
TSS	118,65	94.92
pH	(1)	(1)

Within the range of 7.5 to 10.0 at all times.

Table 146 Silver Powder Production

#### NSPS

	TIOT D	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — powder produc	- mg/kg of silver ed
	English units - silver powder p	– lb/million lbs of produced
Chromium	0.67	0.29
Mercury	0.42	0.18
Silver	0.67	0.29
Zine	0.13	0.06
Manganese	0.96	0.74
Oil and grease	32.10	32.10
TSS	48.15	38.52
pH	$(^{1})$	$(^{\mathrm{I}})$

 $<sup>^{1}</sup>$  Within the range of 7.5 to 10.0 at all times.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.74 Pretreatment standards for existing sources. (1) Except as provided in 40 C.F.R. ss. 403.7 and 403.13, any existing source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for existing sources:

<sup>(2)</sup> There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 137 to 146.

Table 147
Wet Amalgamated Powder Anode

# PSES

	I DEED	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of zinc
	English units — lb/million lbs of zinc	
Chromium	0.24	0.099
Mercury	0.14	0.055
Silver	0.23	0.093
Zine	0.80	0.34
Manganese	0.37	0.16

# Table 148 Gelled Amalgam Anodes

#### PSES

1 0110	
MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHIX AVERAGE
Metric units —	mg/kg of zinc
English units - zine	- lb/million lbs of
0.030	0.12
0.017	0.006
0.028	0.012
0.099	0.042
0.046	0.020
	MAXIMUM FOR ANY 1 DAY  Metric units — English units — zine  0.030 0.017 0.028 0.099

# Table 149 Zinc Oxide Formed Anodes

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of zinc English units — lb/million lbs of zinc	
Chromium	9.53	3.90
Mercury	5.42	2.17
Silver	8.89	3.68
Zinc	31.64	13.22
Manganese	14.74	6.28

Table 150 **Electrodeposited Anodes** 

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — deposited	mg/kg of zinc
	English units — lb/million lbs of zinc deposited	
Chromium	94.47	38.65
Mercury	53.68	21.47
Silver	88.03	36,50
Zinc	313.46	130.97
Manganese	146.00	62,26

Table 151 Silver Powder Formed Cathodes

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver applied English units — lb/million lbs of silver applied	
+ 11 +3		
Chromium	13.07	5.35
Mercury	7.43	2.97
Silver	12.18	5.05
Zine	43.36	18.12
Manganese	20.20	8.61

# Table 152 Silver Oxide Powder Formed Cathodes

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	mg/kg of silver
	English units — lb/million lbs of silver applied	
Chromium	8.73	3.57
Mercury	4.96	1.99
Silver	8.14	3.37
Zinc	28.98	12.11
Manganese	13.50	5.76

# HEALTH AND SOCIAL SERVICES

Table 153 Silver Peroxide Cathodes

# **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver applied English units — lb/million lbs of silver applied	
Chromium	2.09	0.87
Mercury	1.19	0.48
Silver	1.95	0.81
Zinc	6.95	2,90
Manganese	3.24	1.38

# Table 154 Nickel Impregnated Cathodes

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of nickel applied English units — lb/million lbs of nickel applied	
Chromium	88.0	36.0
Mercury	50.0	20.0
Nickel	384.0	254.0
Silver	82.0	34.0
Zine	292.0	122.0
Manganese	136.0	58.0

Table 155 Miscellaneous Wastewater Streams

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
	English units - cells produced	– lb/million lbs of
Chromium	0.57	0.23
Cyanide	0.38	0.16
Mercury	0.32	0.13
Nickel	2.48	1.64
Silver	0.53	0.22
Zinc	1.88	0.79
Manganese	0.88	0.37

# Table 156

## Silver Etch

#### **PSES**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY I DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver processed English units — lb/million lbs of silver processed	
Chromium	3.27	1.34
Mercury	1.86	0.74
Silver	3.05	1.26
Zinc	10.86	4,54
Manganese	5.06	2.16

#### Table 157

# Silver Peroxide Production

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — silver peroxide	- mg/kg of silver in produced
	English units — lb/million l silver in silver peroxide prod	
Chromium	3.48	1.42
Mercury	1.98	0.79
Silver	3.24	1.34
Zine	11,55	4.83
Manganese	5.38	2,29

Table 158 Silver Powder Production

#### PSES

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs of silver powder produced	
Chromium	1.41	0.58
Mercury	0.80	0.32
Silver	1.32	0.55
Zinc	4.69	1.96
Manganese	2.18 0.9	

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 147 to 158.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.75 Pretreatment standards for new sources. (1) Except as provided in 40 C.F.R. s. 403.7, any new source subject to this subchapter that introduces pollutants into a POTW shall comply with 40 C.F.R. Part 403 and achieve the following pretreatment standards for new sources:

Table 159
Zinc Oxide Formed Anodes

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units —	mg/kg of zinc
	English units – zinc	- lb/million lbs of
Chromium Mercury	4.55 2.82	1.97 1.19
Silver	4,55 0.87	1.97 0.39
Zinc Manganese	6.50	4.98

#### WISCONSIN ADMINISTRATIVE CODE

NR 255

Table 160
Electrodeposited Anodes

# **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of zinc deposited	
	English units - zinc deposited	– lb/million lbs of
Chromium	45.09	19.54
Mercury	27.91	11.81
Silver	45,09	19.54
Zinc	8,59	3.86
Manganese	64.41	49.38

Table 161 Silver Powder Formed Cathodes

#### PSNS

10110	
MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
Metric units — applied	- mg/kg of silver
English units — lb/million lbs o silver applied	
6.24	2.70
3.86	$\overline{1.63}$
6.24	2.70
1.19	0.53
8.91 6.8	
	MAXIMUM FOR ANY 1 DAY  Metric units — applied  English units — silver applied  6.24 3.86 6.24 1.19

Table 162
Silver Oxide Powder Formed Cathodes

POLLUTANT OR	MAXIMUM FOR	MAXIMUM FOR
POLLUTANT PROPERTY	ANY I DAY	MONTHLY AVERAGE
	Metric units — mg/kg of silver applied English units — lb/million lbs of silver applied	
Chromium	4.17	1.81
Mercury	2.58	1.09
Silver	4.17	1.81
Zinc	0.79	0.36
Manganese	5.96	4.57

Table 163 Silver Peroxide Cathodes

# PSNS

	LOMO	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	mg/kg of silver
	English units — lb/million lbs of silver applied	
Chromium	1.00	0,43
Mercury	0.62	0.26
Silver	1.00	0.43
Zinc	0.19	0.09
Manganese	1.43	1.09

# Table 164 Nickel Impregnated Cathodes

	rana	
POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — applied	- mg/kg of nickel
	English units – nickel applied	– lb/million lbs of
Chromium	42.0	18.2
Mercury	26.0	11.0
Nickel	42.0	18.2
Silver	42.0	18.2
Zinc	8.0	3.6
Manganese	60.0	46.0

Table 165 Miscellaneous Wastewater Streams

**PSNS** 

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of cells produced	
English units — lb/milli cells produced		– lb/million lbs of
Chromium	0.27	0.12
Cyanide	0.039	0.016
Mercury	0.17	0.07
Nickel	0.27	0.12
Silver	0.27	0.12
Zinc	0.05	0.02
Manganese	0.39	0.30

# Table 166 Silver Etch

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver processed English units — lb/million lbs of silver processed	
Chromium	1.56	0.68
Mercury	0.97	0.41
Silver	1.56	0.68
Zinc	0.30	0.13
Manganese	2.23	1.71

Table 167 Silver Peroxide Production

## **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — silver peroxide	mg/kg of silver in produced
	English units — lb/million lb: silver in silver peroxide produ	
Chromium	1,66	0.72
Mercury	1.03	0.44
Silver	1,66	0.72
Zinc	0.32	0.14
Manganese	2.37	1.82

Register, November, 1987, No. 383

Table 168 Silver Powder Production

#### **PSNS**

POLLUTANT OR POLLUTANT PROPERTY	MAXIMUM FOR ANY 1 DAY	MAXIMUM FOR MONTHLY AVERAGE
	Metric units — mg/kg of silver powder produced English units — lb/million lbs of silver powder produced	
Chromium	0.67	0.29
Mercury	0.42	0.18
Silver	0.67	0.29
Zinc	0.13	0.06
Manganese	0.96	0.74

(2) There may be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed in tables 159 to 168.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.

NR 255.80 Cross-references. The federal citations in this chapter correspond to provisions of the Wisconsin administrative code and Wisconsin statutes. The federal citations may be cross-referenced in the following table:

Code of Federal Regulations	Corresponding state code section
40 C.F.R. Part 401	ch. NR 205
40 C.F.R. s. 403.6 (e)	s, NR 211.12
40 C.F.R. ss. 125.30 to 125.32	s. 147.04 (3), Stats.

History: Cr. Register, November, 1987, No. 383, eff. 12-1-87.