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Title 40

PART 461 - BATTERY MANUFACTURING POINT SOURCE CATEGORY

Authority: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), 308 and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the "Act"); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 816, Pub. L. 92-500; 91 Stat. 1567, Pub. L. 95-217.

Source: 49 FR 9134, Mar. 9, 1984, unless otherwise noted.

GENERAL PROVISIONS

§ 461.1 Applicability.

This part applies to any battery manufacturing plant that discharges or may discharge a pollutant to waters of the United States or that introduces pollutants to a publicly owned treatment works. Battery manufacturing operations subject to regulation under this part shall not be subject to regulation under part 413 or 433.

§ 461.2 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

- (a) "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 regulation there is no differentiation between a single cell and a battery.
- (b) "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.
- (c) "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).
- (d) "Plate soak" shall mean the process operation of soaking or reacting lead subcategory battery plates, that are more than 2.5 mm (0.100 in) thick, in sulfuric acid.
- (e) "Discharge allowance" means the amount of pollutant (mg per kg of production unit) that a plant will be permitted to discharge. For this category the allowances are specific to battery manufacturing operations.

- (f) "Miscellaneous wastewater streams" shall mean the combined wastewater streams from the process operations listed below for each subcategory. If a plant has one of these streams then the plant receives the entire miscellaneous waste stream allowance.
- (1) **Cadmium subcategory.** Cell wash, electrolyte preparation, floor and equipment wash, and employee wash.
 - (2) **Lead subcategory.** Floor wash, wet air pollution control, battery repair, laboratory, hand wash, and respirator wash.
 - (3) **Lithium subcategory.** Floor and equipment wash, cell testing, and lithium scrap disposal.
 - (4) **Zinc subcategory.** Cell wash, electrolyte preparation, employee wash, reject cell handling, floor and equipment wash.
- (g) "Trucked batteries" shall mean 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.

§ 461.3 Monitoring and reporting requirements.

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

§ 461.4 Compliance date for PSES.

The compliance date for pretreatment standards for existing sources is March 9, 1987.

Subpart A - Cadmium Subcategory

§ 461.10 Applicability; description of the cadmium subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from the manufacturing of cadmium anode batteries.

§ 461.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

- (a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:
- (1) Subpart A - Pasted and Pressed Powder Anodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
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

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(2) Subpart A - Electrodeposited Anodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
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
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(3) Subpart A - Impregnated Anodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
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)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(4) Subpart A - Nickel Electrodeposited Cathodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of 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	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(5) Subpart A - Nickel Impregnated Cathodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	557.6	246.0
Nickel	3,148.8	2,082.8
Zinc	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	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(6) Subpart A - Miscellaneous Wastewater Streams.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds 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)

¹ Within the range of 7.5 to 10.0 at all times.

(7) Subpart A - Cadmium Powder Production.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium powder produced	
	English units - pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	22.34	9.86
Nickel	126.14	83.44
Zinc	95.92	40.08
Cobalt	13.80	5.91
Oil and grease	1,314.00	788.40
TSS	2,693.00	1,281.20
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(8) Subpart A - Silver Powder Production.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver powder produced	
	English units - pounds per 1,000,000 pounds of 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
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(9) Subpart A - Cadmium Hydroxide Production.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium used	
	English units - pounds per 1,000,000 pounds of cadmium used	
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	36.90	17.60
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(10) Subpart A - Nickel Hydroxide Production.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel used	
	English units - pounds per 1,000,000 pounds 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)

¹ Within the range of 7.5 to 10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

- (a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

- (1) Subpart A - Electrodeposited Anodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
Cadmium	11.95	5.27
Nickel	67.49	44.64
Zinc	51.32	21.44
Cobalt	7.38	3.16

- (2) Subpart A - Impregnated Anodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(3) Subpart A - Nickel Electrodeposited Cathodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	11.22	4.95
Nickel	63.36	41.91
Zinc	48.18	20.13
Cobalt	6.93	2.97

(4) Subpart A - Nickel Impregnated Cathodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(5) Subpart A - Miscellaneous Wastewater Streams.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Cadmium	0.79	0.35
Nickel	4.47	2.96
Zinc	3.40	1.42
Cobalt	0.49	0.21

(6) Subpart A - Cadmium Powder Production.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium powder produced	
	English units - pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	2.23	0.99
Nickel	12.61	8.34
Zinc	9.59	4.01
Cobalt	1.38	0.59

(7) Subpart A - Silver Powder Production.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver powder produced	
	English units - pounds per 1,000,000 pounds of silver powder produced	
Cadmium	1.09	0.48
Nickel	6.16	4.08
Silver	1.32	0.55

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Zinc	4.69	1.96
Cobalt	0.67	0.29

(8) Subpart A - Cadmium Hydroxide Production.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium used	
	English units - pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.05	0.02
Nickel	0.27	0.18
Zinc	0.20	0.09
Cobalt	0.03	0.01

(9) Subpart A - Nickel Hydroxide Production.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel used	
	English units - pounds per 1,000,000 pounds of nickel used	
Cadmium	5.61	2.48
Nickel	31.68	20.96
Zinc	24.09	10.07
Cobalt	3.47	1.49

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.13 New source performance standards (NSPS).

- (a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:
- (1) Subpart A - Electrodeposited Anodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
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
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(2) Subpart A - Impregnated Anodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0
Oil and grease	2,000.0	2,000.0
TSS	3,000.0	2,400.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(3) Subpart A - Nickel Electrodeposited Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	6.60	2.64

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Nickel	18.15	12.21
Zinc	33.66	13.86
Cobalt	4.62	2.31
Oil and grease	330.0	330.0
TSS	495.0	396.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(4) Subpart A - Nickel Impregnated Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0
Oil and grease	2,000.0	2,000.0
TSS	3,000.0	2,400.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(5) Subpart A - Miscellaneous Wastewater Streams - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Cadmium	0.47	0.19
Nickel	1.28	0.86

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Zinc	2.38	0.98
Cobalt	0.33	0.16
Oil and grease	23.3	23.3
TSS	35.0	28.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(6) Subpart A - Cadmium Powder Production - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium powder produced	
	English units - pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	1.31	0.53
Nickel	3.61	2.43
Zinc	6.70	2.76
Cobalt	0.92	0.46
Oil and grease	65.70	65.70
TSS	98.55	78.84
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(7) Subpart A - Silver Powder Production - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver powder produced	
	English units - pounds per 1,000,000 pounds of silver powder produced	
Cadmium	0.64	0.26
Nickel	1.77	1.19
Silver	0.93	0.39

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Zinc	3.27	1.35
Cobalt	0.45	0.22
Oil and grease	32.10	32.10
TSS	48.15	38.52
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(8) Subpart A - Cadmium Hydroxide Production - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium used	
	English units - pounds per 1,000,000 pounds 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)

¹ Within the range of 7.5-10.0 at all times.

(9) Subpart A - Nickel Hydroxide Production - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel used	
	English units - pounds per 1,000,000 pounds of nickel used	
Cadmium	3.30	1.32
Nickel	9.08	6.11
Zinc	16.83	6.93
Cobalt	2.31	1.16

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Oil and grease	165.0	165.0
TSS	247.5	198.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.14 Pretreatment standards for existing sources (PSES).

- (a) Except as provided in 40 CFR 403.7 and § 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for existing sources listed below:

- (1) Subpart A - Electrodeposited Anodes.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
Cadmium	11.95	5.27
Nickel	67.49	44.64
Zinc	51.32	21.44
Cobalt	7.38	3.16

- (2) Subpart A - Impregnated Anodes.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(3) Subpart A - 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 - pounds per 1,000,000 pounds of nickel applied	
Cadmium	11.22	4.95
Nickel	63.36	41.91
Zinc	48.18	20.13
Cobalt	6.93	2.97

(4) Subpart A - Nickel Impregnated Cathodes - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	68.0	30.0
Nickel	384.0	254.0
Zinc	292.0	122.0
Cobalt	42.0	18.0

(5) Subpart A - 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 - pounds per 1,000,000 pounds of cells produced	
Cadmium	0.79	0.35
Nickel	4.47	2.96
Zinc	3.40	1.42
Cobalt	0.49	0.21

(6) Subpart A - Cadmium Powder Production - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium powder produced	
	English units - pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	2.23	0.99
Nickel	12.61	8.34
Zinc	9.59	4.01
Cobalt	1.38	0.59

(7) Subpart A - 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 - pounds per 1,000,000 pounds 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

(8) Subpart A - Cadmium Hydroxide Production - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium used	
	English units - pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.05	0.02
Nickel	0.27	0.18
Zinc	0.20	0.09
Cobalt	0.03	0.012

(9) Subpart A - 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 - pounds per 1,000,000 pounds of nickel used	
Cadmium	5.61	2.48
Nickel	31.68	20.96
Zinc	24.09	10.07
Cobalt	3.47	1.49

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.15 Pretreatment standards for new sources (PSNS).

- (a) Except as provided in 40 CFR 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for new sources listed below:

(1) Subpart A - Electrodeposited Anodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
Cadmium	7.03	2.81
Nickel	19.33	13.01
Zinc	35.85	14.76
Cobalt	4.92	2.46

(2) Subpart A - Impregnated Anodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium	
	English units - pounds per 1,000,000 pounds of cadmium	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0

(3) Subpart A - Nickel Electrodeposited Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	6.60	2.64
Nickel	18.15	12.21
Zinc	33.66	13.86
Cobalt	4.62	2.31

(4) Subpart A - Nickel Impregnated Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Cadmium	40.0	16.0
Nickel	110.0	74.0
Zinc	204.0	84.0
Cobalt	28.0	14.0

(5) Subpart A - 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 - pounds per 1,000,000 pounds of cells produced	
Cadmium	0.47	0.19
Nickel	1.28	0.86
Zinc	2.38	0.98
Cobalt	0.33	0.16

(6) Subpart A - 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 - pounds per 1,000,000 pounds of cadmium powder produced	
Cadmium	1.31	0.53
Nickel	3.61	2.43
Zinc	6.70	2.76
Cobalt	0.92	0.46

(7) Subpart A - 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 - pounds per 1,000,000 pounds 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

(8) Subpart A - Cadmium Hydroxide Production - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cadmium used	
	English units - pounds per 1,000,000 pounds of cadmium used	
Cadmium	0.028	0.011
Nickel	0.077	0.051
Zinc	0.142	0.058
Cobalt	0.019	0.009

(9) Subpart A - Nickel Hydroxide Production - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel used	
	English units - pounds per 1,000,000 pounds of nickel used	
Cadmium	3.30	1.32
Nickel	9.08	6.11
Zinc	16.83	6.93
Cobalt	2.31	1.16

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart B - Calcium Subcategory

§ 461.20 Applicability; description of the calcium subcategory.

This subpart applies to discharges to waters of the United States and introductions of pollutants into publicly owned treatment works from manufacturing calcium anode batteries.

§§ 461.21-461.22 [Reserved]

§ 461.23 New source performance standards (NSPS).

- (a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.
- (b) There shall be no discharge for process wastewater pollutants from any battery manufacturing operations.

§ 461.24 [Reserved]

§ 461.25 Pretreatment standards for new sources (PSNS).

- (a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for new sources listed below.
- (b) There shall be no discharge for process wastewater pollutants from any battery manufacturing operations.

Subpart C - Lead Subcategory

§ 461.30 Applicability; description of the lead subcategory.

This subpart applies to discharges to waters of the United States and introduction of pollutants into publicly owned treatment works from the manufacturing of lead anode batteries.

§ 461.31 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

- (a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

(1) Subpart C - Closed Formation - Double Fill, or Fill and Dump.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
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)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(2) Subpart C - Open Formation - Dehydrated.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	20.99	11.05
Lead	4.64	2.21
Iron	16.13	6.74
Oil and grease	221.00	132.60
TSS	453.05	215.47
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(3) Subpart C - Open Formation - Wet.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.10	0.05
Lead	0.02	0.01
Iron	0.06	0.03
Oil and grease	1.06	0.64
TSS	2.17	1.03
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

- (4) Subpart C - Plate Soak.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
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)

¹ Within the range of 7.5 to 10.0 at all times.

- (5) Subpart C - Battery Wash (with Detergent).

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	1.71	0.90
Lead	0.38	0.18

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Iron	1.08	0.55
Oil and grease	18.00	10.80
TSS	36.90	17.55
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

- (6) Subpart C - Battery Wash (Water Only).

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
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	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

- (7) Subpart C - Direct Chill Lead Casting.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds 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

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

- (8) Subpart C - Mold Release Formulation.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds 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
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

- (9) Subpart C - Truck Wash.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead in trucked batteries	
	English units - pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.026	0.014
Lead	0.005	0.002
Iron	0.016	0.008
Oil and grease	0.280	0.168
TSS	0.574	0.273
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(10) Subpart C - Laundry.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.21	0.11
Lead	0.05	0.02
Iron	0.13	0.07
Oil and grease	2.18	1.31
TSS	4.47	2.13
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

(11) Subpart C - Miscellaneous Wastewater Streams.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
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)

¹ Within the range of 7.5 to 10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

- (a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

- (1) Subpart C - Open Formation - Dehydrated.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	3.19	1.68
Lead	0.71	0.34
Iron	2.02	1.02

- (2) Subpart C - Open Formation - Wet.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.100	0.053
Lead	0.022	0.010
Iron	0.06	0.03

- (3) Subpart C - Plate Soak.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.039	0.021
Lead	0.008	0.004
Iron	0.030	0.010

- (4) Subpart C - Battery Wash (Detergent).

BAT Effluent Limitations

Pollutant or Pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	1.71	0.90
Lead	0.38	0.18
Iron	1.08	0.55

(5) Subpart C - Direct Chill Lead Casting.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.0004	0.0002
Lead	0.00008	0.00004
Iron	0.0002	0.0001

(6) Subpart C - Mold Release Formulation.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.011	0.006
Lead	0.002	0.001
Iron	0.007	0.003

(7) Subpart C - Truck Wash.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead in trucked batteries	
	English units - pounds per 1,000,000 pounds of lead in trucked batteries	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Copper	0.026	0.014
Lead	0.005	0.002
Iron	0.016	0.008

(8) Subpart C - Laundry.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.21	0.11
Lead	0.05	0.02
Iron	0.13	0.07

(9) Subpart C - Miscellaneous Wastewater Streams.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.58	0.31
Lead	0.13	0.06
Iron	0.37	0.19

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984, as amended at 51 FR 30816, Aug. 28, 1986]

§ 461.33 New source performance standards (NSPS).

- (a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

(1) Subpart C - Open Formation - Dehydrated - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
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Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
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	(¹)	(¹)

¹ Within the limits of 7.5 to 10.0 at all times.

(2) Subpart C - Open Formation - Wet - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of 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)

¹ Within the limits of 7.5 to 10.0 at all times.

(3) Subpart C - Plate Soak - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.026	0.012
Lead	0.005	0.002
Iron	0.025	0.012
Oil and grease	0.21	0.21

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
TSS	0.32	0.25
pH	(¹)	(¹)

¹ Within the limits of 7.5 to 10.0 at all times.

(4) Subpart C - Battery Wash (Detergent) - NSPS.

Pollutant or pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
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
pH	(¹)	(¹)

¹ Within the limits of 7.5 to 10.0 at all times.

(5) Subpart C - 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 - pounds per 1,000,000 pounds 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)

¹ Within the limits of 7.5 to 10.0 at all times.

(6) Subpart C - Mold Release Formulation - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
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Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
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)

¹ Within the limits of 7.5 to 10.0 at all times.

(7) Subpart C - Truck Wash - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead in trucked batteries	
	English units - pounds per 1,000,000 pounds of 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)

¹ Within the limits of 7.5 to 10.0 at all times.

(8) Subpart C - Laundry - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.14	0.07
Lead	0.03	0.01
Iron	0.13	0.07

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Oil and grease	1.09	1.09
TSS	1.64	1.31
pH	(¹)	(¹)

¹ Within the limits of 7.5 to 10.0 at all times.

(9) Subpart C - 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 - pounds per 1,000,000 pounds of lead used	
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)

¹ Within the limits of 7.5 to 10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984, as amended at 51 FR 30816, Aug. 28, 1986]

§ 461.34 Pretreatment standards for existing sources (PSES).

- (a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the pretreatment standards for existing sources listed below:

(1) Subpart C - 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 - pounds per 1,000,000 pounds of lead used	
Copper	3.19	1.68
Lead	0.71	0.34

(2) Subpart C - Open Formation - Wet - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.100	0.053
Lead	0.022	0.010

(3) Subpart C - 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 - pounds per 1,000,000 pounds of lead used	
Copper	0.039	0.021
Lead	0.008	0.004

(4) Subpart C - Battery Wash - (Detergent) - PSES.

Pollutant or pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	1.71	0.90
Lead	0.38	0.18

(5) Subpart C - Direct Chill Lead Casting - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.0004	0.0002
Lead	0.00008	0.00004

(6) Subpart C - 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 - pounds per 1,000,000 pounds of lead used	
Copper	0.011	0.006

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Lead	0.002	0.001

(7) Subpart C - Truck Wash - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead in trucked batteries	
	English units - pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.026	0.014
Lead	0.005	0.002

(8) Subpart C - Laundry - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.21	0.11
Lead	0.05	0.02

(9) Subpart C - Miscellaneous Wastewater Streams - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.58	0.31
Lead	0.13	0.06

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

(c)

- (1) In cases where battery employee shower wastewater containing concentrations of lead exceeding 0.20 mg/l is combined with process wastewaters prior to treatment, the Control Authority may, for purposes of applying the Combined Wastestream Formula under § 403.6(e) of this chapter, notwithstanding the provisions of § 403.6(e), exercise its discretion and classify battery employee shower wastewater as an unregulated rather than a dilute (F_D) wastestream.
- (2) 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.

[49 FR 9134, Mar. 9, 1984, as amended at 51 FR 30816, Aug. 28, 1986]

§ 461.35 Pretreatment standards for new sources (PSNS).

- (a) Except as provided in § 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources:

- (1) Subpart C - Open Formation - Dehydrated - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	2.15	1.02
Lead	0.47	0.21

- (2) Subpart C - Open Formation - Wet - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.067	0.032
Lead	0.014	0.006

- (3) Subpart C - 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 - pounds per 1,000,000 pounds of lead used	
Copper	0.026	0.012
Lead	0.005	0.002

- (4) Subpart C - Battery Wash - (Detergent) - PSNS.

Pollutant or pollutant Property	Maximum for any 1 Day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	1.152	0.549
Lead	0.252	0.117

- (5) Subpart C - Direct Chill Lead Casting - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.000256	0.000122
Lead	0.000056	0.000026

(6) Subpart C - Mold Release Formulation - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.007	0.0037
Lead	0.0017	0.0008

(7) Subpart C - Truck Wash - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead in trucked batteries	
	English units - pounds per 1,000,000 pounds of lead in trucked batteries	
Copper	0.006	0.003
Lead	0.001	0.0007

(8) Subpart C - Laundry - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.14	0.07
Lead	0.03	0.01

(9) Subpart C - Miscellaneous Wastewater Streams - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead used	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	English units - pounds per 1,000,000 pounds of lead used	
Copper	0.39	0.19
Lead	0.085	0.039

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operations other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984, as amended at 51 FR 30817, Aug. 28, 1986]

Subpart D - Leclanche Subcategory

§ 461.40 Applicability; description of the Leclanche subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from manufacturing Leclanche type batteries (zinc anode batteries with acid electrolyte).

§§ 461.41-461.42 [Reserved]

§ 461.43 New source performance standards (NSPS).

- (a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:
- (1) Subpart D - Foliar Battery Miscellaneous Wash - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015
Oil and grease	0.66	0.66
TSS	0.99	0.79
pH	(¹)	(¹)

¹ Within the range of 7.5 to 10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.44 Pretreatment standards for existing sources (PSES).

- (a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources listed below:

- (1) Subpart D - 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 - pounds per 1,000,000 pounds of cells produced	
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 27946, July 9, 1984]

§ 461.45 Pretreatment standards for new sources (PSNS).

- (a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below.

- (1) Subpart D - 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 - pounds per 1,000,000 pounds of cells produced	
Mercury	0.010	0.004
Zinc	0.067	0.030
Manganese	0.019	0.015

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart E - Lithium Subcategory

§ 461.50 Applicability; description of the lithium subcategory.

This subpart applies to discharges to waters of the United States and introduction of pollutants into publicly owned treatment works from the manufacturing of lithium anode batteries.

§§ 461.51-461.52 [Reserved]**§ 461.53 New source performance standards (NSPS).**

- (a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

- (1) Subpart E - Lead Iodide Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead	
	English units - pounds per 1,000,000 pounds of lead	
Chromium	23.34	9.46
Lead	17.66	8.20
Iron	75.70	38.48
TSS	946.2	756.96
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (2) Subpart E - Iron Disulfide Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of Iron disulfide	
	English units - pounds per 1,000,000 pounds of Iron disulfide	
Chromium	2.79	1.13
Lead	2.11	0.98
Iron	9.05	4.60
TSS	113.1	90.5
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (3) Subpart E - Miscellaneous Wastewater Streams - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	English units - pounds per 1,000,000 pounds of cells produced	
Chromium	0.039	0.016
Lead	0.030	0.014
Iron	0.129	0.066
TSS	1.62	1.30
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(4) Subpart E - Air Scrubbers - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
TSS	434.0	207.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.54 [Reserved]

§ 461.55 Pretreatment standards for new sources (PSNS).

- (a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below:

(1) Subpart E - Lead Iodide Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of lead	
	English units - pounds per 1,000,000 pounds of lead	
Chromium	23.34	9.46
Lead	17.66	8.20

(2) Subpart E - Iron Disulfide Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of iron disulfide	
	English units - pounds per 1,000,000 pounds of iron disulfide	
Chromium	2.79	1.13
Lead	2.11	0.98

(3) Subpart E - 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 - pounds per 1,000,000 pounds of cells produced	
Chromium	0.039	0.016
Lead	0.030	0.014

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart F - Magnesium Subcategory

§ 461.60 Applicability; description of the magnesium subcategory.

This subpart applies to discharges to waters of the United States and introduction of pollutants into publicly owned treatment works from the manufacturing of magnesium anode batteries.

§§ 461.61-461.62 [Reserved]

§ 461.63 New source performance standards (NSPS).

- (a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:
- (1) Subpart F - Silver Chloride Cathodes - Chemically Reduced - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds of silver processed	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
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
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(2) Subpart F - Silver Chloride Cathodes - Electrolytic - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds of silver processed	
Lead	40.6	18.9
Silver	42.1	17.4
Iron	174.0	88.5
TSS	2,175.0	1,740.0
COD	7,250.0	3,540.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(3) Subpart F - Cell Testing - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Lead	19.5	7.89
Silver	15.3	6.31
Iron	63.1	32.1

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
TSS	789.0	631.2
COD	2,630.0	1,290.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(4) Subpart F - Floor and Equipment Wash - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Lead	0.026	0.012
Silver	0.027	0.011
Iron	0.112	0.057
COD	4.70	2.30
TSS	1.41	1.13
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(5) Subpart F - Air Scrubber - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
TSS	8,467.0	4,030.0
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.64 Pretreatment standards for existing sources (PSES).

- (a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources listed below:

- (1) Subpart F - Silver Chloride Cathodes - Chemically Reduced - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds of silver processed	
Lead	1,032.36	491.60
Silver	1,007.78	417.86

- (2) Subpart F - Silver Chloride Cathodes - Electrolytic - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds of silver processed	
Lead	60.9	29.0
Silver	59.5	24.7

- (3) Subpart F - Cell Testing - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Lead	22.1	10.5
Silver	21.6	8.9

- (4) Subpart F - Floor and Equipment Wash - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	English units - pounds per 1,000,000 pounds of cells produced	
Lead	0.039	0.018
Silver	0.038	0.015

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.65 Pretreatment standards for new sources (PSNS).

- (a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below:

- (1) Subpart F - Silver Chloride Cathodes - Chemically Reduced - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds of silver processed	
Lead	22.93	10.65
Silver	23.75	9.83

- (2) Subpart F - Silver Chloride Cathodes - Electrolytic PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds of silver processed	
Lead	40.6	18.9
Silver	42.1	17.4

- (3) Subpart F - Cell Testing - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	English units - pounds per 1,000,000 pounds of cells produced	
Lead	19.5	7.89
Silver	15.3	6.31

(4) Subpart F - Floor and Equipment Wash - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Lead	0.026	0.012
Silver	0.027	0.011

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

Subpart G - Zinc Subcategory

§ 461.70 Applicability; description of the zinc subcategory.

This subpart applies to discharges to waters of the United States, and introductions of pollutants into publicly owned treatment works from the manufacturing of zinc anode batteries.

§ 461.71 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

- (a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available:

(1) Subpart G - Wet Amalgamated Powder Anodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of Zinc	
	English units - pounds per 1,000,000 pounds of Zinc	
Chromium	1.67	0.68
Mercury	0.95	0.38
Silver	1.56	0.65

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Zinc	5.55	2.32
Manganese	2.58	1.10
Oil and grease	76.0	45.6
TSS	155.8	74.1
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(2) Subpart G - Gelled Amalgam Anodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of Zinc	
	English units - pounds per 1,000,000 pounds of Zinc	
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	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(3) Subpart G - Zinc Oxide, Formed Anodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of Zinc	
	English units - pounds per 1,000,000 pounds of Zinc	
Chromium	62.9	25.7
Mercury	35.8	14.3

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
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
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (4) Subpart G - Electrodeposited Anodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc deposited	
	English units - pounds per 1,000,000 pounds of zinc deposited	
Chromium	1,404.0	574.0
Mercury	798.0	319.0
Silver	1,308.0	543.0
Zinc	4,657.0	1,946.0
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)

¹ Within the range of 7.5-10.0 at all times.

- (5) Subpart G - Silver Powder, Formed Cathodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	English units - pounds per 1,000,000 pounds of silver applied	
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
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (6) Subpart G - Silver Oxide Powder, Formed Cathodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds of silver applied	
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
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (7) Subpart G - Silver Peroxide Cathodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds of silver applied	
Chromium	13.8	5.65
Mercury	7.85	3.14
Silver	12.9	5.34
Zinc	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)

¹ Within the range of 7.5-10.0 at all times.

(8) Subpart G - Nickel Impregnated Cathodes.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Chromium	721.6	295.2
Mercury	410.0	164.0
Nickel	3,149.0	2,083.0
Silver	672.4	279.0
Zinc	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)

¹ Within the range of 7.5-10.0 at all times.

(9) Subpart G - Miscellaneous Wastewater Streams.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
Chromium	3.85	1.58
Cyanide	2.54	1.05
Mercury	2.19	0.88
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)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(10) Subpart G - Silver Etch.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds of silver processed	
Chromium	21.6	8.84
Mercury	12.3	4.91
Silver	20.2	8.35
Zinc	71.7	30.0
Manganese	33.4	14.3
Oil and grease	982.0	589.2

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
TSS	2,013.1	957.5
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

(11) Subpart G - Silver Peroxide Production.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver peroxide processed	
	English units - pounds per 1,000,000 pounds of silver peroxide processed	
Chromium	23.0	9.40
Mercury	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)

¹ Within the range of 7.5-10.0 at all times.

(12) Subpart G - Silver Powder Production.

BPT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver powder processed	
	English units - pounds per 1,000,000 pounds of silver powder processed	
Chromium	9.33	3.82
Mercury	5.30	2.12
Silver	8.69	3.61

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Zinc	30.95	12.93
Manganese	14.42	6.15
Oil and grease	424.0	254.40
TSS	869.0	413.40
pH	(¹)	(¹)

¹ Within the range of 7.5-10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

- (a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable:

- (1) Subpart G - Wet Amalgamated Powder Anodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of Zinc	
	English units - pounds per 1,000,000 pounds of Zinc	
Chromium	0.24	0.099
Mercury	0.14	0.055
Silver	0.23	0.093
Zinc	0.80	0.34
Manganese	0.37	0.16

- (2) Subpart G - Gelled Amalgam Anodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of Zinc	
	English units - pounds per 1,000,000 pounds of Zinc	

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Chromium	0.030	0.012
Mercury	0.017	0.007
Silver	0.028	0.012
Zinc	0.099	0.042
Manganese	0.046	0.020

(3) Subpart G - Zinc Oxide Formed Anodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of Zinc	
	English units - pounds per 1,000,000 pounds 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

(4) Subpart G - Electrodeposited Anodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc deposited	
	English units - pounds per 1,000,000 pounds 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

(5) Subpart G - Silver Powder Formed Cathodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds of silver applied	
Chromium	13.07	5.35
Mercury	7.43	2.97
Silver	12.18	5.05
Zinc	43.36	18.12
Manganese	20.20	8.61

(6) Subpart G - Silver Oxide Powder Formed Cathodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds 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

(7) Subpart G - Silver Peroxide Cathodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds of silver applied	
Chromium	2.09	0.87

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Mercury	1.19	0.48
Silver	1.95	0.81
Zinc	6.95	2.90
Manganese	3.24	1.38

(8) Subpart G - Nickel Impregnated Cathodes.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Chromium	88.0	36.0
Mercury	50.0	20.0
Nickel	384.0	254.0
Silver	82.0	34.0
Zinc	292.0	122.0
Manganese	136.0	58.0

(9) Subpart G - Miscellaneous Wastewater Streams.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds 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

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Zinc	1.88	0.79
Manganese	0.88	0.37

(10) Subpart G - Silver Etch.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds 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

(11) Subpart G - Silver Peroxide Production.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver peroxide produced	
	English units - pounds per 1,000,000 pounds of silver peroxide produced	
Chromium	3.48	1.42
Mercury	1.98	0.79
Silver	3.24	1.34
Zinc	11.55	4.83
Manganese	5.38	2.29

(12) Subpart G - Silver Powder Production.

BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver powder produced	
	English units - pounds per 1,000,000 pounds 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	0.93

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

§ 461.73 New source performance standards. (NSPS).

- (a) The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below:

- (1) Subpart G - 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 - pounds per 1,000,000 pounds of zinc	
Chromium	4.55	1.97
Mercury	2.82	1.19
Silver	4.55	1.97
Zinc	0.87	0.39
Manganese	6.50	4.98
Oil and grease	216.7	216.7
TSS	325.0	260.0
pH	(¹)	(¹)

¹ Within the limits of 7.5-10.0 at all times.

- (2) Subpart G - Electrodeposited Anodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc deposited	
	English units - pounds per 1,000,000 pounds of zinc deposited	
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)

¹ Within the limits of 7.5-10.0 at all times.

(3) Subpart G - Silver Powder Formed Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds of silver applied	
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)

¹ Within the limits of 7.5-10.0 at all times.

(4) Subpart G - Silver Oxide Powder Formed Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds 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
Oil and grease	198.5	198.5
TSS	297.8	238.2
pH	(¹)	(¹)

¹ Within the limits of 7.5-10.0 at all times.

(5) Subpart G - Silver Peroxide Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds 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
Oil and grease	47.6	47.6
TSS	71.4	57.1
pH	(¹)	(¹)

¹ Within the limits of 7.5-10.0 at all times.

(6) Subpart G - Nickel Impregnated Cathodes - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
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	2,400.00
pH	(¹)	(¹)

¹ Within the limits of 7.5-10.0 at all times.

(7) Subpart G - Miscellaneous Wastewater Streams - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of cells produced	
	English units - pounds per 1,000,000 pounds of cells produced	
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)

¹ Within the limits of 7.5-10.0 at all times.

(8) Subpart G - Silver Etch - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds 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
Oil and grease	74.40	74.40
TSS	111.60	89.28
pH	(¹)	(¹)

¹ Within the limits of 7.5-10.0 at all times.

(9) Subpart G - Silver Peroxide Production - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver peroxide produced	
	English units - pounds per 1,000,000 pounds of silver peroxide produced	
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
Oil and grease	79.10	79.10
TSS	118.65	94.92
pH	(¹)	(¹)

¹ Within the limits of 7.5-10.0 at all times.

(10) Subpart G - Silver Powder Production - NSPS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver powder produced	
	English units - pounds per 1,000,000 pounds 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
Oil and grease	32.10	32.10
TSS	48.15	38.52
pH	(¹)	(¹)

¹ Within the limits of 7.5-10.0 at all times.

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.74 Pretreatment standards for existing sources (PSES).

- (a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources:

(1) Subpart G - Wet Amalgamated Powder Anode - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc	
	English units - pounds per 1,000,000 pounds of zinc	
Chromium	0.24	0.099
Mercury	0.14	0.055
Silver	0.23	0.093
Zinc	0.80	0.34
Manganese	0.37	0.16

(2) Subpart G - Gelled Amalgam Anodes - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc	
	English units - pounds per 1,000,000 pounds of zinc	
Chromium	0.030	0.12
Mercury	0.017	0.006
Silver	0.028	0.012
Zinc	0.099	0.042
Manganese	0.046	0.020

(3) Subpart G - Zinc Oxide Formed Anodes - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc	
	English units - pounds per 1,000,000 pounds 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

(4) Subpart G - Electrodeposited Anodes - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc deposited	
	English units - pounds per 1,000,000 pounds 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

(5) Subpart G - 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 - pounds per 1,000,000 pounds of silver applied	
Chromium	13.07	5.35
Mercury	7.43	2.97
Silver	12.18	5.05
Zinc	43.36	18.12
Manganese	20.20	8.61

(6) Subpart G - Silver Oxide 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 - pounds per 1,000,000 pounds 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

(7) Subpart G - 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 - pounds per 1,000,000 pounds of silver applied	
Chromium	2.09	0.87
Mercury	1.19	0.48
Silver	1.95	0.81
Zinc	6.95	2.90

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Manganese	3.24	1.38

(8) Subpart G - Nickel Impregnated Cathodes - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
Chromium	88.0	36.0
Mercury	50.0	20.0
Nickel	384.0	254.0
Silver	82.0	34.0
Zinc	292.0	122.0
Manganese	136.0	58.0

(9) Subpart G - 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 - pounds per 1,000,000 pounds 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

(10) Subpart G - Silver Etch - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
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Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds 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

(11) Subpart G - Silver Peroxide Production - PSES.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver peroxide produced	
	English units - pounds per 1,000,000 pounds of silver peroxide produced	
Chromium	3.48	1.42
Mercury	1.98	0.79
Silver	3.24	1.34
Zinc	11.55	4.83
Manganese	5.38	2.29

(12) Subpart G - 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 - pounds per 1,000,000 pounds of silver powder produced	
Chromium	1.41	0.58
Mercury	0.80	0.32
Silver	1.32	0.55
Zinc	4.69	1.96

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Manganese	2.18	0.93

- (b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

§ 461.75 Pretreatment standards for new sources (PSNS).

- (a) Except as provided in § 403.7 any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources listed below:

- (1) Subpart G - Zinc Oxide Formed Anodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of zinc	
	English units - pounds per 1,000,000 pounds of zinc	
Chromium	4.55	1.97
Mercury	2.82	1.19
Silver	4.55	1.97
Zinc	0.87	0.39
Manganese	6.50	4.98

- (2) Subpart G - 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 - pounds per 1,000,000 pounds of zinc deposited	
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

- (3) Subpart G - Silver Powder Formed Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds of silver applied	
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

(4) Subpart G - Silver Oxide Powder Formed Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds 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

(5) Subpart G - Silver Peroxide Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver applied	
	English units - pounds per 1,000,000 pounds of silver applied	
Chromium	1.00	0.43
Mercury	0.62	0.26
Silver	1.00	0.43
Zinc	0.19	0.09

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Manganese	1.43	1.09

(6) Subpart G - Nickel Impregnated Cathodes - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of nickel applied	
	English units - pounds per 1,000,000 pounds of nickel applied	
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

(7) Subpart G - 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 - pounds per 1,000,000 pounds of cells produced	
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

(8) Subpart G - Silver Etch - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
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Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver processed	
	English units - pounds per 1,000,000 pounds 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

(9) Subpart G - Silver Peroxide Production - PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/kg of silver peroxide produced	
	English units - pounds per 1,000,000 pounds of silver peroxide produced	
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

(10) Subpart G - 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 - pounds per 1,000,000 pounds of silver powder produced	
Chromium	0.67	0.29
Mercury	0.42	0.18
Silver	0.67	0.29
Zinc	0.13	0.06

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Manganese	0.96	0.74

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]