

**ENVIRONMENTAL PROTECTION
AGENCY**
40 CFR Part 421
[OW-FRL-3258-1]
**Nonferrous Metals Manufacturing
Point Source Category Effluent
Limitations Guidelines, Pretreatment
Standards and New Source
Performance Standards**
AGENCY: Environmental Protection
Agency (EPA).

ACTION: Final regulation.

SUMMARY: EPA is promulgating amendments to the regulation which limits effluent discharges to waters of the United States and the introduction of pollutants into publicly owned treatment works by existing and new sources that conduct primary tungsten operations. EPA proposed these amendments on January 22, 1987 (52 FR 2480) in accordance with a settlement agreement which resolved a lawsuit challenging the final nonferrous metals manufacturing phase I regulation for this subcategory. The challenged regulation was promulgated by EPA on March 8, 1984, 49 FR 8742.

These final amendments include: (1) Certain modifications of the effluent limitations for "best practicable technology" (BAT), "best available technology economically achievable" (BAT), and "new source performance standards" (NSPS) for direct dischargers; and (2) certain modifications to the pretreatment standards for new and existing indirect dischargers (PSNS and PSES).

DATES: In accordance with 40 CFR 100.01 (45 FR 26048), this regulation shall be considered issued for purposes of judicial review at 1:00 p.m. Eastern time on February 4, 1988. This regulation shall become effective March 7, 1988.

The compliance date for the BAT regulations is as soon as possible, but in any event, no later than March 31, 1989. The compliance date for new source performance standards (NSPS) and pretreatment standards for new sources (PSNS) is the date the new source begins operations. The compliance date for pretreatment standards for existing sources (PSES) is February 22, 1988.

Under section 509(b)(1) of the Clean Water Act, judicial review of this regulation can be made only by filing a petition for review in a United States Court of Appeals within 120 days after the regulation is considered issued for purposes of judicial review. Under section 509(b)(2) of the Clean Water Act, the requirements in this regulation may

not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

The record for the final rule will be available for public review not later than March 28, 1988.

ADDRESSES: Address question on the final rule to Mr. Ernst P. Hall, Industrial Technology Division (WH-552), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, Attention Nonferrous Metals Manufacturing Rules (WH-552). The basis for this amendment is detailed in the record.

The record for the final rule will be available for public review in EPA's Public Information Reference Unit, Room 2904 (Rear) (EPA Library), 401 M Street, SW., Washington DC. The EPA public information regulation (40 CFR Part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Questions regarding this notice may be addressed to Mr. Ernst P. Hall at (202) 382-7126.

SUPPLEMENTARY INFORMATION:

Organization of this notice:

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I. Legal Authority

The regulation described in this notice is promulgated under authority of sections 301, 304, 306, 307, 308, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 et seq., as amended by the Clean Water Act of 1977, Pub. L. 95-217).

II. Background
A. Rulemaking and Settlement Agreement

On February 17, 1983, EPA proposed a regulation to establish Best Practicable Control Technology Currently Available (BPT), Best Available Technology Economically Achievable (BAT), and Best Conventional Pollutant Control Technology (BCT) effluent limitations guidelines and New Source Performance Standards (NSPS), Pretreatment

Standards for Existing Sources (PSES), and Pretreatment Standards for New Sources (PSNS) for the nonferrous metals manufacturing phase I point source category (48 FR 7032). EPA published the final nonferrous metals manufacturing phase I regulation on March 8, 1984 (49 FR 8742). Those regulations affected 80 direct dischargers and 85 indirect dischargers. The preambles to the proposed and final nonferrous metals manufacturing phase I regulation describe the history of the rulemaking.

After publication of the nonferrous metals manufacturing phase I regulation, the Aluminum Association, Inc., Kaiser Aluminum and Chemical Corp., Reynolds Metals Company, the Aluminum Recycling Association, the American Mining Congress, Kennecott, Amax, St. Joe Minerals, ASARCO Inc., Mallinckrodt, Inc., NRC Inc., and the Secondary Lead Smelters Association filed petitions to review the regulation. These challenges were consolidated into one lawsuit by the United States Court of Appeals for the Fourth Circuit (*Kennecott v. EPA*, 4th Cir. No. 84-1288 and Consolidated Cases). On December 26, 1985 the Fourth Circuit denied petitions to review the regulations for the primary lead, primary zinc, primary copper, metallurgical acid plants, secondary lead and the columbium-tantalum subcategories (780 F. 2d 445). The Supreme Court denied two petitions for a writ of certiorari on October 7, 1986. 107 U.S. 67.

Earlier in November of 1985 four aluminum parties in the consolidated lawsuits entered into two settlement agreements with EPA which resolved issues raised by the petitioners related to the primary aluminum and secondary aluminum subcategories. In accordance with the Settlement Agreements, EPA published a notice of proposed rulemaking on May 20, 1986 and solicited comments regarding certain amendments to the final nonferrous metals manufacturing phase I regulation for these subcategories (50 FR 18530). EPA has issued a final rule promulgating these amendments (52 FR 25552).

Similarly, EPA entered into another agreement on June 26, 1986 with AMAX, Inc. and GTE Products Corp., two companies affected by the regulations for the primary tungsten subcategory.

B. Effect of the Settlement Agreement for Primary Tungsten

As part of this latest Settlement Agreement, on June 26, 1986 the parties jointly requested the United States Court of Appeals for the Fourth Circuit to stay the effectiveness of those

portions of 40 CFR Part 421 which EPA is amending. The Court granted this request on July 9, 1986.

Copies of the Settlement Agreement have been sent to all EPA Regional Offices and to applicable State permit-issuing authorities. All limitations and standards contained in the final nonferrous metals manufacturing phase I regulation published on March 8, 1984 which are not specifically listed in the attached final amendments are not affected by today's rulemaking.

III. Amendments to the Nonferrous Metals Manufacturing Phase I Regulation

Below are descriptions of today's amendments to the nonferrous metals manufacturing phase I regulation. The amendments are based upon proper operation of the same technologies as those which formed the basis of the final regulation that was promulgated on March 8, 1984. See the preamble to the regulation at 49 FR 8742, for the Agency's findings with respect to these technologies.

1. Treatment Effectiveness Concentration for Ammonia Steam Stripping of High Sulfate Wastewater

EPA is amending the BPT and BAT limitations and NSPS, PSES and PSNS for ammonia in §§ 421.102(d), 421.103(d), 421.104(d), 421.105(d), and 421.106(d), when ammonia is treated under a specific set of circumstances. EPA promulgated treatment effectiveness concentration values for ammonia steam stripping that applied regardless of the composition of the influent being treated (49 FR 8812, March 8, 1984). The petitioners indicated that although they could meet these values for most of their streams, the wastestream from the ion-exchange raffinate process step could not be treated to this level because it contains unusually high concentrations of sulfates. Sulfates at such high concentrations, they stated, could interfere with steam stripping performance by plugging the stripper column.

As part of the settlement, EPA is suspending, under limited circumstances, the ammonia treatment effectiveness concentration value for the ion-exchange raffinate building block. These circumstances are: (a) Where influent (called "mother liquor") to or effluent (called "raffinate") from this process contains sulfates at concentrations exceeding 1000 ppm ("high sulfate influent or effluent"); (b) where the high sulfate influent or effluent is treated by ammonia steam stripping; and (c) where this high sulfate raffinate or mother liquor is not

commingled with other wastestreams before treatment for steam stripping for ammonia removal.

In the event a plant satisfies all three of these conditions, mass limitations would be established on a Best Professional Judgement ("BPJ") basis by a permit writer pursuant to 40 CFR 125.3(c)(2) and (3) using the regulatory flows used as the basis for the promulgated effluent limitation guidelines and standards established in this proceeding and treatment effectiveness concentration values determined by the permit writer.

EPA is taking this action because of engineering concerns that the treatment effectiveness concentrations for ammonia may not be achievable for these high sulfate wastestreams in this subcategory. This is because sulfates (particularly calcium sulfate) at this concentration could interfere with the ammonia steam stripper by plugging the column. This could necessitate more frequent column cleaning and downtime than the Agency anticipated in promulgating the rule, and prevent achieving the concentration values.

EPA lacks operating data on ammonia steam stripping of wastewater where sulfate concentrations exceed 700 ppm, and has been informed in the phase II nonferrous manufacturing rulemaking that sulfate plugging problems would interfere with steam stripper performance should sulfate concentrations exceed 1000 ppm. (Comments of Teledyne Wah Chang, Sept. 28, 1984, pg. 5). Petitioners in the phase I primary tungsten litigation made the same points to the Agency. Thus, at least on an interim basis, EPA believes that 1000 ppm sulfates is a reasonable level to differentiate high sulfate and low sulfate streams.

The only building block in the primary tungsten subcategory that contains these high sulfate concentrations is ion exchange raffinate. Thus, today's action is limited to that building block. In addition, since commingling this stream would dilute sulfates to levels which do not interfere with steam stripper performance, EPA is suspending the ammonia concentration value only for uncommingled ion-exchange raffinate wastewater.

Due to the absence of ammonia treatment data under these conditions, EPA is unable to establish an alternative concentration for ammonia at this time. Tungsten industry petitioners expressed their belief to the Agency that they could achieve a one-day maximum of 351.8 mg/l and a monthly average of 154.7 mg/l under these conditions. Based on these representations, this should be the outer bound of any BPJ limitation.

As part of the settlement agreement, the petitioners agreed that any of their primary tungsten facilities treating the ion-exchange raffinate wastestream or mother liquor to the ion-exchange process under these conditions will provide the Agency with one year of operating data (daily observations), beginning from the time the steam stripper is in full-scale, steady state operation. These data shall include at a minimum: (a) Sulfate and ammonia concentrations and pH levels in the feed to, and effluent from, the steam stripper unit; (b) the sulfate and ammonia concentrations and pH levels in the effluent from the ion-exchange process if the mother liquor is being treated and not the raffinate; (c) the total suspended solids concentrations in the feed to and the effluent from the steam stripper unit; (d) the wastewater feed rate to the steam stripper unit; (e) the steam rate of the steam stripper unit (pounds of process steam/gallon of wastewater processed); (f) steam flux through the column (pounds of steam on column only per gallon of feed), (g) steam stripper unit back pressure in the various column sections, and (h) date and time of operation including dates and times for disruption of operation for cleaning or repair. These companies will also monitor for total dissolved solids in the feed to and effluent from the steam stripper unit once a week for the first month and monthly thereafter for the following five months, and submit the data to EPA. If these companies elect to treat high sulfate mother liquor, they agreed that treatment effectiveness concentrations from such treatment can be applied when determining the ammonia mass allowance for the ion-exchange raffinate building block.

The Agency notes that today's action is limited to situations where sulfates are present in high concentrations. The Agency is not taking any action for situations where other compounds (for instance phosphates; carbonates, or chlorides) are present.

2. Regulatory Flows for the Alkali Leach Condensate Building Block

EPA is adding a new building block for this process. This building block was omitted in the promulgated rule because the Agency believed this condensate would be accounted for through other building blocks, primarily the raffinate building block. The petitioners indicated that the flow allowance for the raffinate building block does not represent long-term performance and as such is inadequate because alkali leach condensate is a discrete process stream. Today's notice regulates the same

pollutants regulated in other primary tungsten building blocks. The flow basis for this building block is the flow at the sole plant with this unit operation.

3. Change in Production Normalizing Parameter ("PNP")

EPA is modifying the production basis for determining the amount of pollutant which may be discharged to the amount of the element tungsten produced or processed. In the final regulation, EPA used the chemical salt form of tungsten which was believed appropriate for the processing step or building block being regulated. However, the petitioners stated that the chemical formulas were incorrect and confusing. Using the element tungsten produced or processed, rather than a chemical compound, as a PNP makes the production basis clear and unambiguous. This proposed change will affect all of the building blocks except for § 421.102(i)-(k), 421.103(i)-(k), 421.104(i)-(k), 421.105(i)-(k) and 421.106(i)-(k) which were already based on the amount of elemental tungsten produced.

IV. Environmental Impact of the Amendments to the Nonferrous Metals Manufacturing Phase I Regulation

The amendments described above affect two facilities in the primary tungsten subcategory. These amendments would allow a greater discharge of ammonia, lead and zinc for these facilities than was allowed by the March 1984 regulation. EPA estimates that the increase above the promulgated limits in the amount of ammonia will be no greater than 11.3 kkg at these two facilities. Lead and zinc discharges would increase by approximately 18.6 kg/yr from the one affected facility. The change in the production basis for the regulation would not result in any increase in pollutants discharged.

V. Economic Impact of the Amendments

These amendments do not alter the model technologies for complying with the nonferrous metals manufacturing phase I regulation. The Agency considered the economic impact of the regulation when the final regulation was promulgated (see 49 FR 8742). EPA concluded at that time that the regulation was economically achievable. Since today's amendments are based on the same model technologies, EPA's conclusions as to economic impact and achievability are unaffected.

VI. Public Participation and Response to Major Comments

Since proposal of these amendments, two commenters have submitted

comments on the proposal. The most significant of these comments are summarized below:

1. All commenters supported the Agency's proposed changes to the promulgated nonferrous metals manufacturing phase I regulation, and recommend they be promulgated as proposed.
2. One commenter pointed out certain typographical errors in the proposal. The Agency appreciates these corrections and has made these revisions to the final amendments.
3. Limitations for existing indirect discharges are essentially unaffected by these amendments since (to the Agency's knowledge) no indirect discharger operates either of the building blocks principally affected by the amendments. The Agency also did not receive comment from any indirect discharges. Consequently, the Agency is adopting the earliest compliance date provided by the Administrative Procedures Act.

VII. Executive Order 12291

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. Major rules are defined as rules that impose an annual cost to the economy of \$100 million or more, or meet other economic criteria. This proposed regulation, which modestly reduces regulatory requirements, is not a major rule.

VIII. Regulatory Flexibility Analysis

Pub. L. 96-354 requires that EPA prepare a Regulatory Flexibility Analysis for regulations that have a significant impact on a substantial number of small entities. In the preamble to the March 8, 1984 final nonferrous metals manufacturing phase I regulation, the Agency concluded that there would not be a significant impact on a substantial number of small entities (40 FR 8775). For that reason, the Agency determined that a formal regulatory flexibility analysis was not required. That conclusion is equally applicable to these proposed amendments, since the amendments slightly reduce the regulatory requirements.

IX. OMB Review

This regulation was submitted to the Office of Management and Budget for review as required by Executive Order 12291. Any comments from OMB to EPA and any EPA response to those comments are available for public

inspection at Room M2404, U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460 from 9:00 a.m. to 4:00 p.m. Monday through Friday, excluding Federal holidays.

List of Subjects in 40 CFR Part 421

Metals, Nonferrous metals manufacturing, Water pollution control, Waste treatment and disposal.

Dated: January 10, 1988.

Lee M. Thomas,
Administrator.

For the reasons stated above, EPA amends 40 CFR Part 421 as follows:

PART 421—NONFERROUS METALS MANUFACTURING POINT SOURCE CATEGORY

1. The authority citation for Part 421 continues to read as follows:

Authority: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307, 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 1381; 86 Stat. 816, Pub. L. 92-500; 91 Stat. 1567, Pub. L. 95-217.

2. Section 421.102 is amended by revising paragraphs (a)—(1) and by adding new paragraphs (m) and (n) to read:

§ 421.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

* * * * *

(a) Subpart J—Tungstic Acid Rinse.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstic acid (as W) produced		
Lead.....	17.230	8.205
Zinc.....	59.900	25.030
Ammonia (as N) ..	5,469.000	2,404.00
Total suspended solids.....	1,682.000	800.000
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(b) Subpart J—Acid Leach Wet Air Pollution Control.

BPT EFFLUENT LIMITATIONS

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

¹ Within the range of 7.0 to 10.0 at all times.

(c) Subpart J—Alkali Leach Wash.

BPT EFFLUENT LIMITATIONS

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

¹ Within the range of 7.0 to 10.0 at all times.

(d) Subpart J—Alkali Leach Wash Condensate.

BPT EFFLUENT LIMITATIONS

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

¹ Within the range of 7.0 to 10.0 at all times.

(e) Subpart J—Ion Exchange Raffinate (Commingled With Other Process or Nonprocess Waters).

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of ammonium tungstate (as W) produced		
Lead.....	37.160	17.700
Zinc.....	129.200	53.970
Ammonia (as N) ..	11,790.000	5,185.000
Total suspended solids.....	3,627.000	1,726.000
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(f) Subpart J—Ion Exchange Raffinate (Not Commingled With Other Process or Nonprocess Waters).

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of ammonium tungstate (as W) produced		
Lead.....	37.160	17.700
Zinc.....	129.200	53.970
Ammonia (as N) (²) ..	11,790.000	5,185.000
Total suspended solids.....	3,627.000	1,726.000
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

² The effluent limitation guideline for this pollutant does not apply if (a) the mother liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1000 mg/l; (b) this mother liquor or raffinate is treated by ammonia steam stripping; and (c) such mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.

(g) Subpart J—Calcium Tungstate Precipitate Wash.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of calcium tungstate (as W) produced		
Lead.....	31.000	14.760
Zinc.....	107.800	45.020

BPT EFFLUENT LIMITATIONS—Continued

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Ammonia (as N) ..	9,838.000	4,325.000
Total suspended solids.....	3,026.000	1,439.000
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(h) Subpart J—Crystallization and Drying of Ammonium Paratungstate.

BPT EFFLUENT LIMITATIONS

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

¹ Within the range of 7.0 to 10.0 at all times.

(i) Subpart J—Ammonium Paratungstate Conversion to Oxides Wet Air Pollution Control.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstic oxide (as W) produced		
Lead.....	11.600	5.523
Zinc.....	40.320	16.850
Ammonia (as N).....	3,681.000	1,618.000
Total suspended solids.....	1,132.000	538.500
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(j) Subpart J—Ammonium Paratungstate Conversion to Oxides Water of Formation.

BPT EFFLUENT LIMITATIONS

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

¹ Within the range of 7.0 to 10.0 at all times.

(k) Subpart J—Reduction to Tungsten Wet Air Pollution Control.

BPT EFFLUENT LIMITATIONS

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

¹ Within the range of 7.0 to 10.0 at all times.

(l) Subpart J—Reduction to Tungsten Water of Formation.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.205	.098
Zinc.....	.714	.298
Ammonia (as N).....	65.190	28.660
Total suspended solids.....	20.050	9.536
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(m) Subpart J—Tungsten Powder Acid Leach and Wash.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	1.008	0.48
Zinc.....	3.504	1.464
Ammonia (as N).....	319.900	140.700
Total suspended solids.....	98.400	46.800
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(n) Subpart J—Molybdenum Sulfide Precipitation Wet Air Pollution Control.

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.000	.000
Zinc.....	.000	.000
Ammonia (as N).....	.000	.000
Total suspended solids.....	.000	.000
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

3. Section 421.103 is amended by revising paragraphs (a)—(1) and by adding new paragraphs (m) and (n) to read:

§ 421.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

* * * * *

(a) Subpart J—Tungstic Acid Rinse.

BAT EFFLUENT LIMITATIONS

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

(b) Subpart J—Acid Leach Wet Air Pollution Control.

BAT EFFLUENT LIMITATIONS

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

(c) Subpart J—Alkali Leach Wash.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of sodium tungstate (as W) produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N).....	0.000	0.000

(d) Subpart J—Alkali Leach Wash Condensate.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of sodium tungstate (as W) produced		
Lead.....	5.372	2.494
Zinc.....	19.570	8.057
Ammonia (as N).....	2,557.000	1,124.000

(e) Subpart J—Ion Exchange Raffinate (Commingled With Other Process or Nonprocess Waters).

BAT EFFLUENT LIMITATIONS

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

(f) Subpart J—Ion Exchange Raffinate (Not Commingled With Other Process or Nonprocess Waters).

BAT EFFLUENT LIMITATIONS

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

¹ The effluent limitation for this pollutant does not apply if a) the motor liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1000 mg/l; b) this mother liquor or raffinate is treated by ammonia steam stripping; and c) such mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.

(g) Subpart J—Calcium Tungstate Precipitate Wash.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per/million pounds) of calcium tungstate (as W) produced		
Lead.....	20.670	9.594
Zinc.....	75.280	31.000
Ammonia (as N) ..	9,838.000	4,325.000

(h) Subpart J—Crystallization and Drying of Ammonium Paratungstate.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per/million pounds) of ammonium paratungstate (as W) produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N) ..	0.000	0.000

(i) Subpart J—Ammonium Paratungstate Conversion to Oxides Wet Air Pollution Control.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per/million pounds) of tungstic oxide (as W) produced		
Lead.....	0.773	0.359
Zinc.....	2.817	1.160
Ammonia (as N) ..	368.200	161.900

(j) Subpart J—Ammonium Paratungstate Conversion to Oxides Water of Formation.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per/million pounds) of tungstic oxide (as W) produced		
Lead.....	0.018	0.008
Zinc.....	0.064	0.026
Ammonia (as N) ..	8.398	3.692

(k) Subpart J—Reduction to Tungsten Wet Air Pollution Control.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per/million pounds) of tungsten metal produced		
Lead.....	0.862	0.400
Zinc.....	3.142	1.294
Ammonia (as N) ..	410.600	180.500

(l) Subpart J—Reduction to Tungsten Water of Formation.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per/million pounds) of tungsten metal produced		
Lead.....	0.137	0.064
Zinc.....	0.499	0.205
Ammonia (as N) ..	65.190	28.660

(m) Subpart J—Tungsten Powder Acid Leach and Wash.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	0.672	0.312
Zinc.....	2.448	1.008
Ammonia (as N) ..	319.900	140.700

(n) Subpart J—Molybdenum Sulfide Precipitation Wet Air Pollution Control.

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N) ..	0.000	0.000

4. Section 421.104 is amended by revising paragraphs (a)–(1) and by adding new paragraphs (m) and (n) to read:

§ 421.104 Standards of performance for new sources.

* * * * *

(a) Subpart J—Tungstic Acid Rinse.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstic acid (as W) produced		
Lead.....	11.490	5.333
Zinc.....	41.850	17.230
Ammonia (as N) ..	5,469.000	2,404.000
Total suspended solids.....	615.400	492.300
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(b) Subpart J—Acid Leach Wet Air Pollution Control.

NSPS

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

¹ Within the range of 7.0 to 10.0 at all times.

(c) Subpart J—Alkali Leach Wash.

NSPS

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

¹ Within the range of 7.0 to 10.0 at all times.

(d) Subpart J—Alkali Leach Wash Condensate.

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of sodium tungstate (as W) produced		
Lead.....	5.372	2.494
Zinc.....	19.570	8.057
Ammonia (as N) ..	2,557.000	1,124.000
Total suspended solids.....	287.800	229.600
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

(e) Subpart J—Ion Exchange Raffinate (Commingled With Other Process or Nonprocess Waters).

NSPS

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

¹ Within the range of 7.0 to 10.0 at all times.

(f) Subpart J—Ion Exchange Raffinate (Not Commingled With Other Process or Nonprocess Waters).

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of ammonium tungstate (as W) produced		
Lead.....	24.780	11.500
Zinc.....	90.240	37.160
Ammonia (as N) (2).....	11,790.000	5,185.000
Total suspended solids.....	1,327.000	1,062.000
pH.....	(¹)	(¹)

¹ Within the range of 7.0 to 10.0 at all times.

² The new source standard for this pollutant does not apply if (a) the mother liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1000 mg/l; (b) this mother liquor or raffinate is treated by ammonia steam stripping; and (c) such mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.

(g) Subpart J—Calcium Tungstate Precipitate Wash.

NSPS

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

¹ Within the range of 7.0 to 10.0 at all times.

(h) Subpart J—Crystallization and Drying of Ammonium Paratungstate.

NSPS

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

¹ Within the range of 7.0 to 10.0 at all times.

(i) Subpart J—Ammonium Paratungstate Conversion to Oxides Wet Air Pollution Control.

NSPS

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

¹ Within the range of 7.0 to 10.0 at all times.

(j) Subpart J—Ammonium Paratungstate Conversion to Oxides Water of Formation.

NSPS

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

¹ Within the range of 7.0 to 10.0 at all times.

(k) Subpart J—Reduction to Tungsten Wet Air Pollution Control.

NSPS		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.862	.400
Zinc.....	3.142	1.294
Ammonia (as N) ..	410.600	180.500
Total suspended solids.....	46.200	36.960
pH.....	(¹)	(¹)

¹Within the range of 7.0 to 10.0 at all times.

(1) Subpart J—Reduction to Tungsten Water of Formation.

NSPS		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.137	.064
Zinc.....	.499	.205
Ammonia (as N) ..	65.190	28.660
Total suspended solids.....	7.335	5.868
pH.....	(¹)	(¹)

¹Within the range of 7.0 to 10.0 at all times.

(m) Subpart J—Tungsten Power Acid Leach and Wash.

NSPS		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.672	.312
Zinc.....	2.448	1.008
Ammonia (as N) ..	319.900	140.700
Total suspended solids.....	36.000	28.800
pH.....	(¹)	(¹)

¹Within the range of 7.0 to 10.0 at all times.

(n) Subpart J—Molybdenum Sulfide Precipitation Wet Air Pollution Control.

NSPS		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
Mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.00	.000
Zinc.....	.000	.000
Ammonia (as N) ..	.000	.000
Total suspended solids.....	.000	.000
pH.....	(¹)	(¹)

¹Within the range of 7.0 to 10.0 at all times.

5. Section 421.105 is amended by revising paragraphs (a)-(l) and by adding new paragraphs (m) and (n) to read:

§ 421.105 Pretreatment standards for existing sources.

* * * * *

(a) Subpart J—Tungstic Acid Rinse.

PSES		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstic acid (as W) produced		
Lead.....	11.490	5.333
Zinc.....	41.850	17.230
Ammonia (as N) ..	5,469.000	2,404.000

(b) Subpart J—Acid Leach Wet Air Pollution Control.

PSES		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstic acid (as W) produced		
Lead.....	1.003	0.466
Zinc.....	3.653	1.504
Ammonia (as N) ..	477.400	209.900

(c) Subpart J—Alkali Leach Wash.

PSES		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstate (as W) produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N) ..	0.000	0.000

(d) Subpart J—Alkali Leach Wash Condensate.

PSES		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of sodium tungstate (as W) produced		
Lead.....	5.372	2.494
Zinc.....	19.570	8.057
Ammonia (as N) ..	2,557.000	1,124.000

(e) Subpart J—Ion Exchange Raffinate (Commingled With Other Process or Nonprocess Waters).

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

(f) Subpart J—Ion Exchange Raffinate (Not Commingled With Other Process or Nonprocess Waters).

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

¹ The pretreatment standard for this pollutant does not apply if (a) the mother liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1000 mg/l; (b) this mother liquor or raffinate is treated by ammonia steam stripping; and (c) such mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.

(g) Subpart J—Calcium Tungstate Precipitate Wash.

PSES

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

(h) Subpart J—Crystallization and Drying of Ammonium Paratungstate.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of ammonium paratungstate (as W) produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N) ..	0.000	0.000

(i) Subpart J—Ammonium Paratungstate Conversion to Oxides Wet Air Pollution Control.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstic oxide (as W) produced		
Lead.....	0.773	0.359
Zinc.....	2.817	1.160
Ammonia (as N) ..	368.200	161.900

(j) Subpart J—Ammonium Paratungstate Conversion to Oxides Water of Formation.

PSES		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungstic oxide (as W) produced		
Lead.....	0.018	0.008
Zinc.....	0.064	0.026
Ammonia (as N) ..	8.398	3.692

Subpart J—Reduction to Tungsten Wet Air Pollution Control.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.862	.400
Zinc.....	3.142	1.294
Ammonia (as N) ..	410.600	180.500

(l) Subpart J—Reduction to Tungsten Water of Formation.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.137	.064
Zinc.....	.499	.205
Ammonia (as N) ..	65.190	28.660

(m) Subpart J—Tungsten Powder Acid Leach and Wash.

PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	.672	.312
Zinc.....	2.448	1.008
Ammonia (as N) ..	319.900	140.700

(n) Subpart J—Molybdenum Sulfide Precipitation Wet Air Pollution Control.

PSES		
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
mg/kg (pounds per million pounds) of tungsten metal produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N) ..	0.000	0.000

6. Section 421.106 is amended by revising paragraphs (a)–(l) and by adding new paragraphs (m) and (n) to read:

§ 421.106 Pretreatment standards for new sources.

* * * * *

(a) Subpart J—Tungstic Acid Rinse.

PSNS

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

(b) Subpart J—Acid Leach Wet Air Pollution Control.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of tungstic acid (as W) produced		
Lead.....	1.003	0.466
Zinc.....	3.653	1.504
Ammonia (as N).....	477.400	209.900

(c) Subpart J—Alkali Leach Wash.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of sodium tungstate (as W) produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000

PSNS—Continued

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
Ammonia (as N).....	0.000	0.000

(d) Subpart J—Alkali Leach Wash Condensate.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of sodium tungstate (as W) produced		
Lead.....	5.372	2.494
Zinc.....	19.570	8.057
Ammonia (as N).....	2,557.000	1,124.000

(e) Subpart J—Ion Exchange Raffinate (Commingled With Other Process or Nonprocess Waters).

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of ammonium tungstate (as W) produced		
Lead.....	24.780	11.500
Zinc.....	90.240	37.160
Ammonia (as N).....	11,790.000	5,185.000

(f) Subpart J—Ion Exchange Raffinate (Not Commingled With Other Process or Nonprocess Waters).

PSNS

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

¹ The pretreatment standard for this pollutant does not apply if a) the mother liquor feed to the ion exchange process or the raffinate from the ion exchange process contains sulfates at concentrations exceeding 1000 mg/l; b) this mother liquor or raffinate is treated by

ammonia steam stripping; and c) such mother liquor or raffinate is not commingled with any other process or nonprocess waters prior to steam stripping for ammonia removal.

(g) Subpart J—Calcium Tungstate Precipitate Wash.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of calcium tungstate (as W) produced		
Lead.....	20.670	9.594
Zinc.....	75.280	31.000
Ammonia (as N).....	9,838.000	4,325.000

(h) Subpart J—Crystallization and Drying of Ammonium Paratungstate.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of ammonium paratungstate (as W) produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N).....	0.000	0.000

(i) Subpart J—Ammonium Paratungstate Conversion to Oxides Wet Air Pollution Control.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of tungstic oxide (as W) produced		
Lead.....	0.773	0.359
Zinc.....	2.817	1.160
Ammonia (as N).....	368.200	161.900

(j) Subpart J—Ammonium Paratungstate Conversion to Oxides Water of Formation.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of tungstic oxide (as W) produced		
Lead.....	0.018	0.008
Zinc.....	0.064	0.026
Ammonia (as N).....	8.398	3.692

(k) Subpart J—Reduction to Tungsten Wet Air Pollution Control.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (pounds per million) of tungsten metal produced		
Lead.....	.862	.400
Zinc.....	3.142	1.294
Ammonia (as N).....	410.600	180.500

(l) Subpart J—Reduction to Tungsten Water of Formation.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (lb/ million lbs) of tungsten metal produced		
Lead.....	.137	.064
Zinc.....	.499	.205
Ammonia (as N).....	65.190	28.660

(m) Subpart J—Tungsten Powder Acid Leach and Wash.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (parts per million) of tungsten metal produced		
Lead.....	.672	.312
Zinc.....	2.448	1.008
Ammonia (as N).....	319.900	140.700

(n) Subpart J—Molybdenum Sulfide Precipitation Wet Air Pollution Control.

PSNS

Pollutant or pollutant property	Maximum for any one day	Maximum for monthly average
mg/kg (parts per million) of tungsten metal produced		
Lead.....	0.000	0.000
Zinc.....	0.000	0.000
Ammonia (as N).....	0.000	0.000

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