

§ 469.41 Specialized definitions.

The definitions in 40 CFR part 401 and the chemical analysis methods in 40 CFR part 136 apply to this subpart. In addition,

(a) The term “luminescent materials” shall mean materials that emit light upon excitation by such energy sources as photons, electrons, applied voltage, chemical reactions or mechanical energy and which are specifically used as coatings in fluorescent lamps and cathode ray tubes. Luminescent materials include, but are not limited to, calcium halophosphate, yttrium oxide, zinc sulfide, and zinc-cadmium sulfide.

§ 469.42 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

| Pollutant or pollutant property | Maximum for any 1 day | Monthly average shall not exceed |
|---------------------------------|-----------------------------|----------------------------------|
| | Milligrams per liter (mg/l) | |
| pH | (¹) | (¹) |
| Cadmium | 0.55 | 0.26 |
| Antimony | 0.10 | 0.04 |
| Zinc | 1.64 | 0.67 |
| Fluoride | 35.0 | 18.0 |
| TSS | 60.0 | 31.0 |

¹ Within the range of 6.0 to 9.0.

§ 469.43 Pretreatment standards for new sources (PSNS).

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

| Pollutant property | For any 1 day | Monthly average shall not exceed |
|--------------------|-----------------------------|----------------------------------|
| | Milligrams per liter (mg/l) | |
| Cadmium | 0.55 | 0.26 |
| Antimony | 0.10 | 0.04 |
| Zinc | 1.64 | 0.67 |
| Fluoride | 35.0 | 18.0 |

PART 471—NONFERROUS METALS FORMING AND METAL POWDERS POINT SOURCE CATEGORY

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- 471.46 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

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- 471.50 Applicability; description of the refractory metals forming subcategory.
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- 471.60 Applicability; description of the titanium forming subcategory.
- 471.61 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
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- 471.63 New source performance standards (NSPS).
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- 471.66 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

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- 471.70 Applicability; description of the uranium forming subcategory.
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- 471.73 New source performance standards (NSPS).
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- 471.83 New source performance standards (NSPS).
- 471.84 Pretreatment standards for existing sources (PSES). [Reserved]
- 471.85 Pretreatment standards for new sources (PSNS).
- 471.86 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
- 471.103 New source performance standards (NSPS).
- 471.104 Pretreatment standards for existing sources (PSES).
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- 471.106 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

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), and 1361; 86 Stat. 816, Pub. L. 92-500; 91 Stat. 1567, Pub. L. 95-217.

SOURCE: 50 FR 34270, Aug. 23, 1985, unless otherwise noted.

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- 471.91 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 471.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- 471.93 New source performance standards (NSPS).
- 471.94 Pretreatment standards for existing sources (PSES).
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- 471.96 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

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- 471.100 Applicability; description of the metal powders subcategory.
- 471.101 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 471.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

§ 471.01 Applicability.

(a) This part applies to discharges of pollutants to waters of the United States and introduction of pollutants into a publicly owned treatment works from the forming of nonferrous metals (including nonferrous metal alloys), except beryllium, copper, and aluminum and their alloys. Aluminum alloys are defined as any alloy in which aluminum is the major constituent in percent by weight. Copper alloys are defined as any alloy in which copper is the major constituent in percent by weight except when copper is alloyed with precious metals. Any copper-precious metal alloy containing 30 percent or greater precious metal is considered a precious metal alloy for the purposes of this part. Beryllium alloys are any alloy in which beryllium is present at 0.1 percent or greater. This part applies to:

(1) Forming operations, including rolling (both hot and cold), extruding, forging, drawing, swaging, cladding, and tube reducing, and

(2) Ancillary operations performed as an integral part of the forming of these metals, including casting for subsequent forming, heat treatment, surface treatment, alkaline cleaning, solvent degreasing, product testing, surface coating, sawing, grinding, tumbling, burnishing, and wet air pollution control.

(b) This part also applies to discharges of pollutants to waters of the United States and introduction of pollutants into a publicly owned treatment works from mechanical metal powder production operations, forming of parts from metal powders, and associated ancillary operations (listed in paragraph (a)(2) of this section) of:

(1) Iron, copper, and aluminum, and their alloys; and

(2) The nonferrous metals and their alloys described in paragraph (a) of this section. This part does not regulate the production of metal powders by chemical means such as precipitation. The production of metal powder as the final step in refining metal is regulated under the Nonferrous Metals Manufacturing Point Source Category regulation, 40 CFR part 421.

(c) Surface treatment includes any chemical or electrochemical treatment applied to the surface of the metal. For the purposes of this regulation, surface treatment of metals is considered to be an integral part of the forming of metals whenever it is performed at the same plant site at which the metals are formed. Such surface treatment operations are not regulated under the Electroplating or Metal Finishing Point Source Category regulations, 40 CFR part 413 or 433, respectively.

(d) Casting is covered by this part when it is performed as an integral part of the metal forming process and takes place at the same plant site at which metals are formed. Such casting will not be regulated under the provisions of Metal Molding and Casting Point Source Category regulations, 40 CFR part 464.

(e) This part does not apply to the forming of the metals cadmium, chromium, gallium, germanium, indium, lithium, manganese, neodymium, or praseodymium.

§ 471.02 General definitions.

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

(a) “Nonferrous metal” is any pure metal other than iron or any metal alloy for which a metal other than iron is its major constituent in percent by weight.

(b) “Forming” is a set of manufacturing operations in which metals and alloys are made into semifinished products by hot or cold working.

(c) “Alkaline cleaning” uses a solution (bath), usually detergent, to remove lard, oil, and other such compounds from a metal surface. Alkaline cleaning is usually followed by a water rinse. The rinse may consist of single or multiple stage rinsing. For the purposes of this part, an alkaline cleaning operation is defined as a bath followed by a rinse, regardless of the number of rinse stages. Each alkaline cleaning bath and rinse combination is entitled to a discharge allowance.

(d) “Atomization” is the process in which a stream of water or gas impinges upon a molten metal stream, breaking it into droplets which solidify as powder particles.

(e) “Burnishing” is a surface finishing process in which minute surface irregularities are displaced rather than removed.

(f) “Casting” is pouring molten metal into a mold to produce an object of desired shape.

(g) “Cladding” or “metal cladding” is the art of producing a composite metal containing two or more layers that have been metallurgically bonded together by roll bonding (co-rolling), solder application (or brazing), or explosion bonding.

(h) “Contact cooling water” is any wastewater which contacts the metal workpiece or the raw materials used in forming metals for the purpose of removing heat from the metal.

(i) “Continuous casting” is the production of sheet, rod, or other long shapes by solidifying the metal while it is being poured through an open-ended mold.

(j) “Degreasing” is the removal of oils and greases from the surface of the metal workpiece. This process can be accomplished with detergents as in alkaline cleaning or by the use of solvents.

(k) “Direct chill casting” is the pouring of molten nonferrous metal into a water-cooled mold. Contact cooling water is sprayed onto the metal as it is dropped into the mold, and the metal ingot falls into a water bath at the end of the casting process.

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(l) "Drawing" is the process of pulling a metal through a die or succession of dies to reduce the metal's diameter or alter its cross-sectional shape.

(m) "Dye penetrant testing" is a non-destructive method for finding discontinuities that are open to the surface of the metal. A dye is applied to the surface of metal and the excess is rinsed off. Dye that penetrates surface discontinuities will not be rinsed away thus marking these discontinuities.

(n) "Emulsions" are stable dispersions of two immiscible liquids. In the Nonferrous Metals Forming and Metal Powders Point Source category, this is usually an oil and water mixture.

(o) "Electrocoating" is the electrodeposition of a metallic or non-metallic coating onto the surface of a workpiece.

(p) "Extrusion" is the application of pressure to a billet of metal, forcing the metal to flow through a die orifice.

(q) "Forging" is deforming metal, usually hot, with compressive force into desired shapes, with or without dies. Where dies are used, the metal is forced to take the shape of the die.

(r) "Grinding" is the process of removing stock from a workpiece by the use of a tool consisting of abrasive grains held by a rigid or semi-rigid grinder. Grinding includes surface finishing, sanding, and slicing.

(s) "Heat treatment" is the application of heat of specified temperature and duration to change the physical properties of the metal.

(t) "Hot pressing" is forming a powder metallurgy compact at a temperature high enough to effect concurrent sintering.

(u) "Hydrotesting" is the testing of piping or tubing by filling with water and pressurizing to test for integrity.

(v) "Impregnation" is the process of filling pores of a formed powder part, usually with a liquid such as a lubricant, or mixing particles of a non-metallic substance in a matrix of metal powder.

(w) "In-process control technology" is the conservation of chemicals and water throughout the production operations to reduce the amount of wastewater to be discharged.

(x) "Metal powder production" operations are mechanical process oper-

ations which convert metal to a finely divided form.

(y) "Milling" is the mechanical treatment of a nonferrous metal to produce powder, or to coat one component of a powder mixture with another.

(z) "Neat oil" is a pure oil with no or few impurities added. In nonferrous metals forming, its use is mostly as a lubricant.

(aa) "Powder forming" includes forming and compressing powder into a fully dense finished shape, and is usually done within closed dies.

(bb) "Precious metals" include gold, platinum, palladium, and silver and their alloys. Any alloy containing 30 or greater percent by weight of precious metals is considered a precious metal alloy.

(cc) "Product testing" includes operations such as dye penetrant testing, hydrotesting, and ultrasonic testing.

(dd) "Refractory metals" includes the metals of columbium, tantalum, molybdenum, rhenium, tungsten and vanadium and their alloys.

(ee) "Rolling" is the reduction in thickness or diameter of a workpiece by passing it between lubricated steel rollers.

(ff) "Roll bonding" is the process by which a permanent bond is created between two metals by rolling under high pressure in a bonding mill (co-rolling).

(gg) "Sawing" is cutting a workpiece with a band, blade, or circular disc having teeth.

(hh) "Shot casting" is the production of shot by pouring molten metal in finely divided streams to form spherical particles.

(ii) "Stationary casting" is the pouring of molten metal into molds and allowing the metal to cool.

(jj) "Surface treatment" is a chemical or electrochemical treatment applied to the surface of a metal. Such treatments include pickling, etching, conversion coating, phosphating, and chromating. Surface treatment baths are usually followed by a water rinse. The rinse may consist of single or multiple stage rinsing. For the purposes of this part, a surface treatment operation is defined as a bath followed by a rinse, regardless of the number of stages. Each surface treatment bath,

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rinse combination is entitled to discharge allowance.

(kk) "Swaging" is a process in which a solid point is formed at the end of a tube, rod, or bar by the repeated blows of one or more pairs of opposing dies.

(ll) "Tube reducing" is an operation which reduces the diameter and wall thickness of tubing with a mandrel and a pair of rolls with tapered grooves.

(mm) "Tumbling" or "barrel finishing" is an operation in which castings, forgings, or parts pressed from metal powder are rotated in a barrel with ceramic or metal slugs or abrasives to remove scale, fins, or burrs. It may be done dry or with an aqueous solution.

(nn) "Ultrasonic testing" is a non-destructive test which applies sound, at a frequency above about 20 HJz, to metal, which has been immersed in liquid (usually water) to locate inhomogeneities or structural discontinuities.

(oo) "Wet air pollution control scrubbers" are air pollution control devices used to remove particulates and fumes from air by entraining the pollutants in a water spray.

(pp) "Grab sample" is a single sample which is collected at a time and place most representative of total discharge.

(qq) "Composite sample" is a sample composed of no less than eight grab samples taken over the compositing period.

(rr) A "flow proportional composite sample" is composed of grab samples collected continuously or discretely in proportion to the total flow at time of collection or to the total flow since collection of the previous grab sample. The grab volume or frequency of grab collection may be varied in proportion to flow.

(ss) The term "control authority" is defined as the POTW if it has an approved pretreatment program; in the absence of such a program, the NPDES State if it has an approved pretreatment program or EPA if the State does not have an approved program.

(tt) "Continuous operations" means that the industrial user introduces regulated wastewaters to the POTW throughout the operating hours of the facility, except for infrequent shut-

downs for maintenance, process changes, or other similar activities.

(uu) "Intermittent operations" means the industrial users does not have a continuous operation.

(vv) The term "off-kg (off-lb)" means the mass of metal or metal alloy removed from a forming operation at the end of a process cycle for transfer to a different machine or process.

§ 471.03 Compliance date for PSES.

The compliance date for PSES under this regulation is August 23, 1988.

Subpart A—Lead-Tin-Bismuth Forming Subcategory

§ 471.10 Applicability; description of the lead-tin-bismuth forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the lead-tin-bismuth forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent emulsions.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions | |
| Antimony | 0.068 | 0.030 |
| Lead | 0.010 | 0.005 |
| Oil and grease | 0.468 | 0.281 |
| TSS | 0.960 | 0.457 |
| pH | (1) | |

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

(b) *Rolling spent soap solutions.*

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| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions | |
| Antimony | 0.125 | 0.055 |
| Lead | 0.019 | 0.009 |
| Oil and grease | 0.860 | 0.520 |
| TSS | 1.80 | 0.840 |
| pH | | (¹) |

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

(c) *Drawing spent neat oils—subpart A—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions | |
| Antimony | 0.076 | 0.034 |
| Lead | 0.011 | 0.005 |
| Oil and grease | 0.526 | 0.316 |
| TSS | 1.08 | 0.513 |
| pH | | (¹) |

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

(e) *Drawing spent soap solutions.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions | |
| Antimony | 0.022 | 0.010 |
| Lead | 0.003 | 0.002 |
| Oil and grease | 0.149 | 0.090 |
| TSS | 0.306 | 0.146 |
| pH | | (¹) |

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

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated | |
| Antimony | 4.14 | 1.850 |
| Lead | 0.605 | 0.288 |
| Oil and grease | 28.80 | 17.30 |
| TSS | 59.10 | 28.10 |
| pH | | (¹) |

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

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded | |
| Antimony | 0.158 | 0.071 |
| Lead | 0.023 | 0.011 |
| Oil and grease | 1.10 | 0.660 |
| TSS | 2.26 | 1.07 |
| pH | | (¹) |

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

(h) *Continuous strip casting contact cooling water.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method | |
| Antimony | 0.003 | 0.001 |
| Lead | 0.0004 | 0.0002 |
| Oil and grease | 0.020 | 0.012 |
| TSS | 0.041 | 0.020 |
| pH | | (¹) |

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

(i) *Semi-continuous ingot casting contact cooling water.*

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SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth ingot cast by the sem-continuous method | |
| Antimony | 0.085 | 0.038 |
| Lead | 0.013 | 0.006 |
| Oil and grease | 0.588 | 0.353 |
| TSS | 1.21 | 0.574 |
| pH | | (¹) |

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

(j) *Shot casting contact cooling water.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast | |
| Antimony | 0.107 | 0.048 |
| Lead | 0.016 | 0.008 |
| Oil and grease | 0.746 | 0.448 |
| TSS | 1.53 | 0.728 |
| pH | | (¹) |

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

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed | |
| Antimony | 1.69 | 0.753 |
| Lead | 0.247 | 0.118 |
| Oil and grease | 11.8 | 7.06 |
| TSS | 24.1 | 11.5 |
| pH | | (¹) |

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

(l) *Alkaline cleaning spent baths.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.345 | 0.154 |
| Lead | 0.051 | 0.024 |
| Oil and grease | 2.40 | 1.44 |
| TSS | 4.92 | 2.34 |
| pH | | (¹) |

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

(m) *Alkaline cleaning rinse.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 6.78 | 3.02 |
| Lead | 0.991 | 0.472 |
| Oil and grease | 47.2 | 28.4 |
| TSS | 96.8 | 46.0 |
| pH | | (¹) |

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

(n) *Swaging spent emulsions.*

SUBPART A—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion | |
| Antimony | 0.005 | 0.002 |
| Lead | 0.0007 | 0.0004 |
| Oil and grease | 0.036 | 0.022 |
| TSS | 0.073 | 0.034 |
| pH | | (¹) |

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

(o) *Degreasing spent solvents—subpart A—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

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

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 (BAT):

(a) *Rolling spent emulsions.*

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SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsion | |
| Antimony | 0.067 | 0.030 |
| Lead | 0.010 | 0.005 |

(b) *Rolling spent soap solutions.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions | |
| Antimony | 0.120 | 0.055 |
| Lead | 0.018 | 0.009 |

(c) *Drawing spent neat oils—subpart A—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions | |
| Antimony | 0.080 | 0.034 |
| Lead | 0.011 | 0.005 |

(e) *Drawing spent soap solutions.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions | |
| Antimony | 0.022 | 0.010 |
| Lead | 0.003 | 0.002 |

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated | |
| Antimony | 0.414 | 0.185 |
| Lead | 0.061 | 0.030 |

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded | |
| Antimony | 0.158 | 0.071 |
| Lead | 0.023 | 0.011 |

(h) *Continuous strip casting contact cooling water.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method | |
| Antimony | 0.003 | 0.001 |
| Lead | 0.0004 | 0.0002 |

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method | |
| Antimony | 0.009 | 0.004 |
| Lead | 0.001 | 0.0006 |

(j) *Shot casting contact cooling water.*

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SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast | |
| Antimony | 0.107 | 0.048 |
| Lead | 0.016 | 0.008 |

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed | |
| Antimony | 0.169 | 0.076 |
| Lead | 0.025 | 0.012 |

(l) *Alkaline cleaning spent baths.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.345 | 0.154 |
| Lead | 0.051 | 0.024 |

(m) *Alkaline cleaning rinse.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.678 | 0.302 |
| Lead | 0.099 | 0.047 |

(n) *Swaging spent emulsions.*

SUBPART A—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion | |
| Antimony | 0.005 | 0.002 |
| Lead | 0.0008 | 0.0004 |

(o) *Degreasing spent solvents—subpart A—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.13 **New source performance standards (NSPS).**

Any new source subject to this subpart must achieve the following new source performance standards. The mass of pollutants in the lead-tin-bismuth forming operations' process wastewater shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions | |
| Antimony | 0.067 | 0.030 |
| Lead | 0.010 | 0.005 |
| Oil and grease | 0.468 | 0.281 |
| TSS | 0.960 | 0.457 |
| pH | (1) | |

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

(b) *Rolling spent soap solutions.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions | |
| Antimony | 0.120 | 0.055 |
| Lead | 0.018 | 0.009 |
| Oil and grease | 0.860 | 0.520 |
| TSS | 1.80 | 0.840 |
| pH | (1) | |

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

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(c) *Drawing spent neat oils—subpart A—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions | |
| Antimony | 0.076 | 0.034 |
| Lead | 0.011 | 0.005 |
| Oil and grease | 0.526 | 0.316 |
| TSS | 1.087 | 0.513 |
| pH | | (¹) |

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

(e) *Drawing spent soap solutions.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions | |
| Antimony | 0.022 | 0.010 |
| Lead | 0.003 | 0.002 |
| Oil and grease | 0.149 | 0.090 |
| TSS | 0.306 | 0.146 |
| pH | | (¹) |

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

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated | |
| Antimony | 0.414 | 0.185 |
| Lead | 0.061 | 0.030 |
| Oil and grease | 2.80 | 1.72 |
| TSS | 5.91 | 2.81 |
| pH | | (¹) |

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

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded | |
| Antimony | 0.158 | 0.071 |
| Lead | 0.023 | 0.011 |
| Oil and grease | 1.10 | 0.660 |
| TSS | 2.26 | 1.07 |
| pH | | (¹) |

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

(h) *Continuous strip casting contact cooling water.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method | |
| Antimony | 0.003 | 0.001 |
| Lead | 0.0004 | 0.0002 |
| Oil and grease | 0.020 | 0.012 |
| TSS | 0.041 | 0.020 |
| pH | | (¹) |

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

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth ingot cast by the semi-continuous method | |
| Antimony | 0.009 | 0.004 |
| Lead | 0.001 | 0.0006 |
| Oil and grease | 0.059 | 0.036 |
| TSS | 0.121 | 0.058 |
| pH | | (¹) |

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

(j) *Shot casting contact cooling water.*

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SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast | |
| Antimony | 0.107 | 0.048 |
| Lead | 0.016 | 0.008 |
| Oil and grease | 0.746 | 0.448 |
| TSS | 1.53 | 0.728 |
| pH | | (¹) |

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

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed | |
| Antimony | 0.169 | 0.076 |
| Lead | 0.025 | 0.012 |
| Oil and grease | 1.18 | 0.706 |
| TSS | 2.41 | 1.15 |
| pH | | (¹) |

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

(l) *Alkaline cleaning spent baths.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.345 | 0.154 |
| Lead | 0.051 | 0.024 |
| Oil and grease | 2.40 | 1.44 |
| TSS | 4.92 | 2.34 |
| pH | | (¹) |

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

(m) *Alkaline cleaning rinse.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.678 | 0.302 |
| Lead | 0.099 | 0.047 |
| Oil and grease | 4.72 | 2.84 |
| TSS | 9.68 | 4.60 |
| pH | | (¹) |

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

(n) *Swaging spent emulsions.*

SUBPART A—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion | |
| Antimony | 0.005 | 0.002 |
| Lead | 0.0008 | 0.0004 |
| Oil and grease | 0.036 | 0.022 |
| TSS | 0.073 | 0.035 |
| pH | | (¹) |

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

(o) *Degreasing spent solvents—subpart A—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.14 Pretreatment standards for existing sources (PSES).

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 by August 23, 1988, achieve the pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in lead-tin-bismuth forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions | |
| Antimony | 0.067 | 0.030 |
| Lead | 0.010 | 0.005 |

(b) *Rolling spent soap solutions.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions | |
| Antimony | 0.120 | 0.055 |
| Lead | 0.018 | 0.009 |

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(c) *Drawing spent neat oils—subpart A—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions | |
| Antimony | 0.076 | 0.034 |
| Lead | 0.011 | 0.005 |

(e) *Drawing spent soaps solutions.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions | |
| Antimony | 0.022 | 0.010 |
| Lead | 0.003 | 0.002 |

(f) *Extrusion press and solution heat treatment contact cooling water.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated | |
| Antimony | 0.414 | 0.185 |
| Lead | 0.061 | 0.029 |

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded | |
| Antimony | 0.158 | 0.071 |
| Lead | 0.023 | 0.011 |

(h) *Continuous strip casting contact cooling water.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method | |
| Antimony | 0.003 | 0.001 |
| Lead | 0.0004 | 0.0002 |

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the semi-continuous strip method | |
| Antimony | 0.009 | 0.004 |
| Lead | 0.001 | 0.0006 |

(j) *Shot casting contact cooling water.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast | |
| Antimony | 0.107 | 0.048 |
| Lead | 0.016 | 0.008 |

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed | |
| Antimony | 0.169 | 0.076 |
| Lead | 0.025 | 0.012 |

(l) *Alkaline Cleaning Spent Baths.*

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SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.345 | 0.154 |
| Lead | 0.051 | 0.024 |

(m) *Alkaline cleaning rinse.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.678 | 0.302 |
| Lead | 0.099 | 0.047 |

(n) *Swaging spent emulsions.*

SUBPART A—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion | |
| Antimony | 0.005 | 0.002 |
| Lead | 0.0008 | 0.0004 |

(o) *Degreasing spent solvents—subpart A—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.15 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new sources subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in lead-tin-bismuth forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with emulsions | |
| Antimony | 0.067 | 0.030 |
| Lead | 0.010 | 0.005 |

(b) *Rolling spent soap solutions.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth rolled with soap solutions | |
| Antimony | 0.120 | 0.055 |
| Lead | 0.018 | 0.009 |

(c) *Drawing spent neat oils—subpart A—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with emulsions | |
| Antimony | 0.076 | 0.034 |
| Lead | 0.011 | 0.005 |

(e) *Drawing spent soap solutions.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth drawn with soap solutions | |
| Antimony | 0.022 | 0.010 |
| Lead | 0.003 | 0.002 |

(f) *Extrusion press and solution heat treatment contact cooling water.*

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SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth heat treated | |
| Antimony | 0.414 | 0.185 |
| Lead | 0.061 | 0.029 |

(g) *Extrusion press hydraulic fluid leakage.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth extruded | |
| Antimony | 0.158 | 0.071 |
| Lead | 0.023 | 0.011 |

(h) *Continuous strip casting contact cooling water.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth cast by the continuous strip method | |
| Antimony | 0.003 | 0.001 |
| Lead | 0.0004 | 0.0002 |

(i) *Semi-continuous ingot casting contact cooling water.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth ingot cast by the semi-continuous method | |
| Antimony | 0.009 | 0.004 |
| Lead | 0.001 | 0.0006 |

(j) *Shot casting contact cooling water.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot cast | |
| Antimony | 0.107 | 0.048 |
| Lead | 0.016 | 0.008 |

(k) *Shot-forming wet air pollution control scrubber blowdown.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth shot formed | |
| Antimony | 0.169 | 0.076 |
| Lead | 0.025 | 0.012 |

(l) *Alkaline cleaning spent baths.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.345 | 0.154 |
| Lead | 0.051 | 0.024 |

(m) *Alkaline cleaning rinse.*

SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth alkaline cleaned | |
| Antimony | 0.678 | 0.302 |
| Lead | 0.099 | 0.047 |

(n) *Swaging spent emulsions.*

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SUBPART A—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of lead-tin-bismuth swaged with emulsion | |
| Antimony | 0.005 | 0.003 |
| Lead | 0.0008 | 0.0004 |

(o) *Degreasing spent solvents—subpart A—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.16 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart B—Magnesium Forming Subcategory

§ 471.20 Applicability; description of the magnesium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the magnesium forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent emulsions.*

SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions | |
| Chromium | 0.033 | 0.014 |
| Zinc | 0.109 | 0.046 |
| Ammonia | 9.95 | 4.37 |
| Fluoride | 4.440 | 1.97 |
| Oil and grease | 1.49 | 0.895 |
| TSS | 3.06 | 1.46 |
| pH | | (¹) |

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

(b) *Forging spent lubricants—subpart B—BPT.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged magnesium cooled with water | |
| Chromium | 1.27 | 0.520 |
| Zinc | 4.22 | 1.77 |
| Ammonia | 385 | 170 |
| Fluoride | 172 | 76.3 |
| Oil and grease | 57.8 | 34.7 |
| TSS | 119 | 56.4 |
| pH | | (¹) |

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

(d) *Forging equipment cleaning wastewater.*

SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium forged | |
| Chromium | 0.018 | 0.007 |
| Zinc | 0.059 | 0.025 |
| Ammonia | 5.32 | 2.34 |
| Fluoride | 2.38 | 1.06 |
| Oil and grease | 0.798 | 0.479 |
| TSS | 1.64 | 0.778 |
| pH | | (¹) |

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

(e) *Direct chill casting contact cooling water.*

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SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods | |
| Chromium | 1.74 | 0.711 |
| Zinc | 5.77 | 2.41 |
| Ammonia | 527 | 232 |
| Fluoride | 235 | 105 |
| Oil and grease | 79.0 | 47.4 |
| TSS | 162 | 77.1 |
| pH | | (¹) |

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

(f) *Surface treatment spent baths.*

SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.205 | 0.084 |
| Zinc | 0.681 | 0.285 |
| Ammonia | 62.1 | 27.3 |
| Fluoride | 27.8 | 12.3 |
| Oil and grease | 9.32 | 5.59 |
| TSS | 19.1 | 9.09 |
| pH | | (¹) |

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

(g) *Surface treatment rinse.*

SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 8.32 | 3.4 |
| Zinc | 27.6 | 11.5 |
| Ammonia | 2520 | 1110 |
| Fluoride | 1130 | 499 |
| Oil and grease | 378 | 227 |
| TSS | 775 | 369 |
| pH | | (¹) |

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

(h) *Sawing or grinding spent emulsions.*

SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground | |
| Chromium | 0.009 | 0.004 |
| Zinc | 0.029 | 0.012 |
| Ammonia | 2.60 | 1.15 |
| Fluoride | 1.16 | 0.515 |
| Oil and grease | 0.390 | 0.234 |
| TSS | 0.800 | 0.381 |
| pH | | (¹) |

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

(i) *Degreasing spent solvents—subpart B—BPT.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged | |
| Chromium | 0.273 | 0.112 |
| Zinc | 0.904 | 0.378 |
| Ammonia | 82.5 | 36.3 |
| Fluoride | 36.9 | 16.4 |
| Oil and grease | 12.4 | 7.43 |
| TSS | 25.4 | 12.1 |
| pH | | (¹) |

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

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

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 (BAT):

(a) *Rolling spent emulsions.*

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SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions | |
| Chromium | 0.033 | 0.014 |
| Zinc | 0.109 | 0.046 |
| Ammonia | 9.95 | 4.37 |
| Fluoride | 4.44 | 1.97 |

(b) *Forging spent lubricants—subpart B—BAT.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged magnesium cooled with water | |
| Chromium | 0.127 | 0.052 |
| Zinc | 0.422 | 0.177 |
| Ammonia | 38.5 | 17.0 |
| Fluoride | 17.2 | 7.63 |

(d) *Forging equipment cleaning wastewater.*

SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium forged | |
| Chromium | 0.002 | 0.0007 |
| Zinc | 0.006 | 0.003 |
| Ammonia | 0.532 | 0.234 |
| Fluoride | 0.238 | 0.106 |

(e) *Direct chill casting contact cooling water.*

SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods | |
| Chromium | 1.74 | 0.711 |
| Zinc | 5.77 | 2.41 |
| Ammonia | 527 | 232 |
| Fluoride | 235 | 105 |

(f) *Surface treatment spent baths.*

SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.205 | 0.084 |
| Zinc | 0.681 | 0.285 |
| Ammonia | 62.1 | 27.3 |
| Fluoride | 27.8 | 12.3 |

(g) *Surface treatment rinse.*

SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.832 | 0.340 |
| Zinc | 2.76 | 1.16 |
| Ammonia | 252 | 111 |
| Fluoride | 113 | 49.9 |

(h) *Sawing or grinding spent emulsions.*

SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground | |
| Chromium | 0.009 | 0.004 |
| Zinc | 0.029 | 0.012 |
| Ammonia | 2.60 | 1.15 |
| Fluoride | 1.16 | 0.515 |

(i) *Degreasing spent solvents—subpart B—BAT.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged | |
| Chromium | 0.273 | 0.112 |
| Zinc | 0.904 | 0.378 |
| Ammonia | 82.5 | 36.3 |
| Fluoride | 36.9 | 16.4 |

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§ 471.23 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards. The mass of pollutants in the magnesium forming process wastewater shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of magnesium rolled with emulsions | |
| Chromium | 0.028 | 0.011 |
| Zinc | 0.076 | 0.032 |
| Ammonia | 9.95 | 4.37 |
| Fluoride | 4.44 | 1.97 |
| Oil and grease | 0.746 | 0.746 |
| TSS | 1.12 | 0.895 |
| pH | (¹) | (¹) |

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

(b) *Forging spent lubricants—subpart B—NSPS.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of forged magnesium cooled with water | |
| Chromium | 0.107 | 0.044 |
| Zinc | 0.295 | 0.122 |
| Ammonia | 38.5 | 17.0 |
| Fluoride | 17.2 | 7.63 |
| Oil and grease | 2.89 | 2.89 |
| TSS | 4.34 | 3.47 |
| pH | (¹) | (¹) |

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

(d) *Forging equipment cleaning wastewater.*

SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of magnesium forged | |
| Chromium | 0.002 | 0.006 |
| Zinc | 0.004 | 0.002 |
| Ammonia | 0.532 | 0.234 |
| Fluoride | 0.238 | 0.106 |
| Oil and grease | 0.040 | 0.040 |
| TSS | 0.060 | 0.048 |
| pH | (¹) | (¹) |

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

(e) *Direct chill casting contact cooling water.*

SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of magnesium cast with direct chill methods | |
| Chromium | 1.46 | 0.593 |
| Zinc | 4.03 | 1.66 |
| Ammonia | 527 | 232 |
| Fluoride | 235 | 105 |
| Oil and grease | 39.5 | 39.5 |
| TSS | 59.3 | 47.4 |
| pH | (¹) | (¹) |

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

(f) *Surface treatment spent baths.*

SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.173 | 0.070 |
| Zinc | 0.476 | 0.196 |
| Ammonia | 62.1 | 27.3 |
| Fluoride | 27.8 | 12.3 |
| Oil and grease | 4.66 | 4.66 |
| TSS | 6.99 | 5.60 |
| pH | (¹) | (¹) |

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

(g) *Surface treatment rinse.*

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SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pound pers million off-pounds) of magnesium surface treated | |
| Chromium | 0.700 | 0.284 |
| Zinc | 1.93 | 0.794 |
| Ammonia | 252 | 111 |
| Fluoride | 113 | 49 |
| Oil and grease | 18.9 | 18.9 |
| TSS | 28.4 | 22.7 |
| pH | (¹) | (¹) |

¹ Within the range of 7.5 to 10.0 at all times

(h) *Sawing or grinding spent emulsions.*

SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground | |
| Chromium | 0.007 | 0.003 |
| Zinc | 0.020 | 0.008 |
| Ammonia | 2.60 | 1.15 |
| Fluoride | 1.16 | 0.515 |
| Oil and grease | 0.195 | 0.195 |
| TSS | 0.293 | 0.234 |
| pH | (¹) | (¹) |

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

(i) *Degreasing spent Solvents—subpart B—NSPS.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged | |
| Chromium | 0.229 | 0.093 |
| Zinc | 0.632 | 0.260 |
| Ammonia | 82.5 | 36.3 |
| Fluoride | 36.9 | 16.4 |
| Oil and grease | 6.19 | 6.19 |
| TSS | 9.29 | 7.43 |
| pH | (¹) | (¹) |

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

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.24 Pretreatment standards for existing sources (PSES).

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 by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in magnesium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions | |
| Chromium | 0.033 | 0.014 |
| Zinc | 0.109 | 0.046 |
| Ammonia | 9.95 | 4.37 |
| Fluoride | 4.44 | 1.97 |

(b) *Forging spent lubricants—subpart B—PSE.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium cooled with water | |
| Chromium | 0.127 | 0.052 |
| Zinc | 0.422 | 0.177 |
| Ammonia | 38.5 | 17.0 |
| Fluoride | 17.2 | 7.63 |

(d) *Forging equipment cleaning wastewater.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium forged | |
| Chromium | 0.002 | 0.0007 |
| Zinc | 0.006 | 0.003 |
| Ammonia | 0.532 | 0.234 |
| Fluoride | 0.238 | 0.106 |

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(e) *Direct chill casting contact cooling water.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods | |
| Chromium | 1.74 | 0.711 |
| Zinc | 5.77 | 2.41 |
| Ammonia | 527 | 232 |
| Fluoride | 235 | 105 |

(f) *Surface treatment spent baths.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.205 | 0.084 |
| Zinc | 0.681 | 0.285 |
| Ammonia | 62.1 | 27.3 |
| Fluoride | 27.8 | 12.3 |

(g) *Surface treatment rinse.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.832 | 0.340 |
| Zinc | 2.76 | 1.16 |
| Ammonia | 252 | 111 |
| Fluoride | 113 | 49.9 |

(h) *Sawing or grinding spent emulsions.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground | |
| Chromium | 0.009 | 0.004 |
| Zinc | 0.029 | 0.012 |
| Ammonia | 2.60 | 1.15 |
| Fluoride | 1.16 | 0.515 |

(i) *Degreasing Spent Solvents—subpart B—PSES.* There shall be no discharge of process wastewater pollutants.

(j) *Wet air pollution control scrubber blowdown.*

SUBPART B—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged | |
| Chromium | 0.273 | 0.112 |
| Zinc | 0.904 | 0.378 |
| Ammonia | 8.25 | 36.3 |
| Fluoride | 36.9 | 16.4 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.25 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in magnesium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent emulsions.*

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium rolled with emulsions | |
| Chromium | 0.028 | 0.011 |
| Zinc | 0.076 | 0.032 |
| Ammonia | 9.95 | 4.37 |
| Fluoride | 4.44 | 1.97 |

(b) *Forging spent lubricants—subpart B—PSNS.* There shall be no discharge of process wastewater pollutants.

(c) *Forging contact cooling water.*

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged magnesium cooled with water | |
| Chromium | 0.107 | 0.044 |
| Zinc | 0.295 | 0.122 |
| Ammonia | 38.5 | 17.0 |
| Fluoride | 17.2 | 7.63 |

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(d) Forging equipment cleaning wastewater.

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium forged | |
| Chromium | 0.002 | 0.0006 |
| Zinc | 0.004 | 0.002 |
| Ammonia | 0.532 | 0.234 |
| Fluoride | 0.238 | 0.106 |

(e) Direct chill casting contact cooling water.

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium cast with direct chill methods | |
| Chromium | 1.46 | 0.593 |
| Zinc | 4.03 | 1.66 |
| Ammonia | 527 | 232 |
| Fluoride | 235 | 105 |

(f) Surface treatment spent baths.

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.173 | 0.070 |
| Zinc | 0.476 | 0.196 |
| Ammonia | 62.1 | 27.3 |
| Fluoride | 27.8 | 12.3 |

(g) Surface treatment rinse.

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium surface treated | |
| Chromium | 0.700 | 0.284 |
| Zinc | 1.93 | 0.794 |
| Ammonia | 252 | 111 |
| Fluoride | 113 | 49.9 |

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(h) Sawing or grinding spent emulsions.

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sawed or ground | |
| Chromium | 0.007 | 0.003 |
| Zinc | 0.020 | 0.008 |
| Ammonia | 2.60 | 1.15 |
| Fluoride | 1.16 | 0.515 |

(i) Degreasing spent solvents—subpart B—PSNS. There shall be no discharge of process wastewater pollutants.

(j) Wet air pollution control scrubber blowdown.

SUBPART B—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of magnesium sanded and repaired or forged | |
| Chromium | 0.229 | 0.093 |
| Zinc | 0.632 | 0.260 |
| Ammonia | 82.5 | 36.3 |
| Fluoride | 36.9 | 16.4 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986]

§ 471.26 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart C—Nickel-Cobalt Forming Subcategory

§ 471.30 Applicability; description of the nickel-cobalt forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the nickel-cobalt forming subcategory.

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

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

- (a) *Rolling spent neat oils—subpart C—BPT.* There shall be no discharge of process wastewater pollutants.
- (b) *Rolling spent emulsions.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions | |
| Chromium | 0.075 | 0.031 |
| Nickel | 0.327 | 0.216 |
| Fluoride | 10.1 | 4.49 |
| Oil and grease | 3.4 | 2.04 |
| TSS | 6.97 | 3.32 |
| pH | (¹) | (¹) |

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

- (c) *Rolling contact cooling water.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water | |
| Chromium | 1.66 | 0.679 |
| Nickel | 7.24 | 4.79 |
| Fluoride | 225 | 99.6 |
| Oil and grease | 75.4 | 45.3 |
| TSS | 155 | 73.5 |
| pH | (¹) | (¹) |

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

(d) *Tube Reducing Spent Lubricant—subpart C—BPT.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical

methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply

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at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—subpart C—BPT.* There shall be no discharge of process wastewater pollutants

(f) *Drawing spent emulsions.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions | |
| Chromium | 0.042 | 0.017 |
| Nickel | 0.183 | 0.121 |
| Fluoride | 5.68 | 2.52 |
| Oil and grease | 1.91 | 1.15 |
| TSS | 3.91 | 1.86 |
| pH | (¹) | (¹) |

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

(g) *Extrusion spent lubricants—subpart C—BPT.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt heat treated | |
| Chromium | 0.037 | 0.015 |
| Nickel | 0.160 | 0.106 |
| Fluoride | 4.95 | 2.20 |
| Oil and grease | 1.67 | 0.999 |
| TSS | 3.41 | 1.63 |
| pH | (¹) | (¹) |

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

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded | |
| Chromium | 0.102 | 0.042 |
| Nickel | 0.446 | 0.295 |
| Fluoride | 13.8 | 6.13 |
| Oil and grease | 4.64 | 2.79 |
| TSS | 9.51 | 4.53 |
| pH | (¹) | (¹) |

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

(j) *Forging equipment cleaning wastewater.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.018 | 0.007 |
| Nickel | 0.077 | 0.051 |
| Fluoride | 2.38 | 1.06 |
| Oil and grease | 0.800 | 0.480 |
| TSS | 1.640 | 0.780 |
| pH | (¹) | (¹) |

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

(k) *Forging contact cooling water.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water | |
| Chromium | 0.209 | 0.086 |
| Nickel | 0.910 | 0.602 |
| Fluoride | 28.2 | 12.5 |
| Oil and grease | 9.48 | 5.69 |
| TSS | 19.5 | 9.25 |
| pH | (¹) | (¹) |

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

(l) *Forging press hydraulic fluid leakage.*

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SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.083 | 0.034 |
| Nickel | 0.359 | 0.238 |
| Fluoride | 11.2 | 4.94 |
| Oil and grease | 3.74 | 2.25 |
| TSS | 7.67 | 3.65 |
| pH | (¹) | (¹) |

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

(m) *Forging spent lubricants—subpart C—BPT.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary casting methods | |
| Chromium | 5.33 | 2.18 |
| Nickel | 23.3 | 15.4 |
| Fluoride | 720 | 320 |
| Oil and grease | 242 | 145 |
| TSS | 496 | 236 |
| pH | (¹) | (¹) |

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

(o) *Vacuum melting steam condensate—subpart C—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized | |
| Chromium | 1.16 | 0.472 |
| Nickel | 5.03 | 3.33 |
| Fluoride | 156 | 69.2 |
| Oil and grease | 52.4 | 31.5 |
| TSS | 108 | 51.1 |
| pH | (¹) | (¹) |

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

(q) *Annealing and solution heat treatment contact cooling water—subpart C—*

BPT. There shall be no allowance for the discharge of process wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.357 | 0.146 |
| Nickel | 1.56 | 1.03 |
| Fluoride | 48.2 | 21.4 |
| Oil and grease | 16.2 | 9.72 |
| TSS | 33.2 | 15.8 |
| pH | (¹) | (¹) |

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

(s) *Surface treatment spent baths.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.412 | 0.169 |
| Nickel | 1.80 | 1.19 |
| Fluoride | 55.7 | 24.7 |
| Oil and grease | 18.7 | 11.2 |
| TSS | 38.4 | 18.3 |
| pH | (¹) | (¹) |

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

(t) *Surface treatment rinse.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 10.4 | 4.25 |
| Nickel | 45.3 | 30.0 |
| Fluoride | 1410 | 623 |
| Oil and grease | 472 | 283 |
| TSS | 968 | 460 |
| pH | (¹) | (¹) |

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

(u) *Alkaline cleaning spent baths.*

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SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.015 | 1.52 |
| Nickel | 16.2 | 10.7 |
| Fluoride | 502 | 223 |
| Oil and grease | 169 | 101 |
| TSS | 346 | 165 |
| pH | (¹) | (¹) |

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

(v) *Alkaline cleaning rinse.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 1.03 | 0.420 |
| Nickel | 4.48 | 2.96 |
| Fluoride | 139 | 61.5 |
| Oil and grease | 46.6 | 28.0 |
| TSS | 95.6 | 45.5 |
| pH | (¹) | (¹) |

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

(w) *Molten salt rinse.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt | |
| Chromium | 3.72 | 1.52 |
| Nickel | 16.2 | 10.7 |
| Fluoride | 502 | 223 |
| Oil and grease | 169 | 101 |
| TSS | 346 | 165 |
| pH | (¹) | (¹) |

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

(x) *Ammonia rinse.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution | |
| Chromium | 0.007 | 0.003 |
| Nickel | 0.029 | 0.019 |
| Fluoride | 0.881 | 0.391 |
| Oil and grease | 0.296 | 0.178 |
| TSS | 0.607 | 0.289 |
| pH | | (¹) |

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

(y) *Sawing or grinding spent emulsions.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions | |
| Chromium | 0.018 | 0.007 |
| Nickel | 0.076 | 0.050 |
| Fluoride | 2.35 | 1.04 |
| Oil and grease | 0.788 | 0.473 |
| TSS | 1.62 | 0.769 |
| pH | | (¹) |

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

(z) *Sawing or grinding rinse.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed | |
| Chromium | 0.797 | 0.326 |
| Nickel | 3.48 | 2.30 |
| Fluoride | 108 | 47.8 |
| Oil and grease | 36.2 | 21.7 |
| TSS | 74.2 | 35.3 |
| pH | | (¹) |

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

(a.a) *Steam Cleaning Condensate.*

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SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned | |
| Chromium | 0.013 | 0.006 |
| Nickel | 0.058 | 0.039 |
| Fluoride | 1.79 | 0.795 |
| Oil and grease | 0.602 | 0.361 |
| TSS | 1.24 | 0.587 |
| pH | | (¹) |

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

(bb) *Hydrostatic tube testing and ultrasonic testing wastewater—subpart C—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(cc) *Degreasing spent solvents—subpart C—BPT.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye penetrant testing wastewater.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method | |
| Chromium | 0.094 | 0.039 |
| Nickel | 0.409 | 0.271 |
| Fluoride | 12.7 | 5.63 |
| Oil and grease | 4.26 | 2.56 |
| TSS | 8.74 | 4.16 |
| pH | (¹) | (¹) |

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

(ee) *Electrocoating rinse.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated | |
| Chromium | 1.48 | 0.607 |
| Nickel | 6.47 | 4.28 |
| Fluoride | 201 | 89.0 |
| Oil and grease | 67.4 | 40.5 |
| TSS | 138 | 65.7 |
| pH | (¹) | (¹) |

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

(ff) *Miscellaneous wastewater sources.*

SUBPART C—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.108 | 0.044 |
| Nickel | 0.473 | 0.313 |
| Fluoride | 14.7 | 6.50 |
| Oil and grease | 4.92 | 2.95 |
| TSS | 10.1 | 4.80 |
| pH | (¹) | (¹) |

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

[50 FR 34270, Aug. 23, 1985; 51 FR 2884, Jan. 22, 1986, as amended at 54 FR 11348, Mar. 17, 1989]

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

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 (BAT):

(a) *Rolling spent neat oils—subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions | |
| Chromium | 0.063 | 0.026 |
| Nickel | 0.094 | 0.063 |
| Fluoride | 10.1 | 4.49 |

(c) *Rolling contact cooling water.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water | |
| Chromium | 0.028 | 0.011 |
| Nickel | 0.042 | 0.028 |
| Fluoride | 4.49 | 1.99 |

(d) *Tube Reducing Spent Lubricant—subpart C—BAT.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in subparagraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under subparagraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with

the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions | |
| Chromium | 0.036 | 0.015 |
| Nickel | 0.053 | 0.036 |
| Fluoride | 5.68 | 2.52 |

(g) *Extrusion spent lubricants—subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated | |
| Chromium | 0.031 | 0.013 |
| Nickel | 0.046 | 0.031 |
| Fluoride | 4.95 | 2.20 |

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(i) *Extrusion press hydraulic fluid leakage.*

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| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded | |
| Chromium | 0.086 | 0.034 |
| Nickel | 0.128 | 0.086 |
| Fluoride | 13.8 | 6.13 |

(j) *Forging equipment cleaning wastewater.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.002 | 0.0006 |
| Nickel | 0.002 | 0.002 |
| Fluoride | 0.238 | 0.106 |

(k) *Forging contact cooling water.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water | |
| Chromium | 0.018 | 0.007 |
| Nickel | 0.026 | 0.018 |
| Fluoride | 2.82 | 1.25 |

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.069 | 0.028 |
| Nickel | .103 | 0.069 |
| Fluoride | 11.2 | 4.94 |

(m) *Forging spent lubricants—subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary casting methods | |
| Chromium | 0.448 | 0.182 |
| Nickel | .666 | .448 |
| Fluoride | 72.0 | 32.0 |

(o) *Vacuum melting steam condensate—subpart C—BAT.* There shall be no allowance for the discharge of wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized | |
| Chromium | 0.970 | 0.393 |
| Nickel | 1.44 | .970 |
| Fluoride | 156 | 69.2 |

(q) *Annealing and solution heat treatment contact cooling water—subpart C—BAT.* There shall be no allowance for the discharge of wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.300 | 0.122 |
| Nickel | .446 | .300 |
| Fluoride | 48.2 | 21.4 |

(s) *Surface treatment spent baths.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.346 | 0.141 |
| Nickel | .514 | .346 |
| Fluoride | 55.7 | 24.7 |

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(t) *Surface treatment rinse.*

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| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.873 | 0.354 |
| Nickel | 1.30 | .873 |
| Fluoride | 141 | 62.3 |

(u) *Alkaline cleaning spent baths.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.013 | 0.005 |
| Nickel | 0.019 | 0.013 |
| Fluoride | 2.02 | 0.895 |

(v) *Alkaline cleaning rinse.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.086 | 0.035 |
| Nickel | 0.128 | 0.086 |
| Fluoride | 13.9 | 6.15 |

(w) *Molten salt rinse.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt | |
| Chromium | 0.312 | 0.127 |
| Nickel | 0.464 | 0.312 |
| Fluoride | 50.2 | 22.3 |

(x) *Ammonia rinse.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution | |
| Chromium | 0.006 | 0.002 |
| Nickel | 0.008 | 0.006 |
| Fluoride | 0.881 | 0.391 |

(y) *Sawing or grinding spent emulsions.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions | |
| Chromium | 0.015 | 0.006 |
| Nickel | 0.022 | 0.015 |
| Fluoride | 2.35 | 1.04 |

(z) *Sawing or grinding rinse.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed | |
| Chromium | 0.067 | 0.027 |
| Nickel | 0.100 | 0.067 |
| Fluoride | 10.8 | 4.78 |

(a.a) *Steam cleaning condensate.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned | |
| Chromium | 0.011 | 0.005 |
| Nickel | 0.017 | 0.011 |
| Fluoride | 1.79 | 0.795 |

(b) *Hydrostatic tube testing and ultrasonic testing wastewater—subpart C—BAT.* There shall be no allowance for the discharge of process wastewater pollutants.

(c) *Degreasing spent solvents—subpart C—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Dye penetrant testing wastewater.*

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| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method | |
| Chromium | 0.079 | 0.032 |
| Nickel | 0.117 | 0.079 |
| Fluoride | 12.7 | 5.63 |

(ee) *Electrocoating rinse.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated | |
| Chromium | 1.25 | 0.506 |
| Nickel | 1.86 | 1.25 |
| Fluoride | 201 | 89.0 |

(ff) *Miscellaneous wastewater sources.*

SUBPART C—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.091 | 0.037 |
| Nickel | 0.136 | 0.091 |
| Fluoride | 14.7 | 6.50 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2885, Jan. 22, 1986, as amended at 54 FR 11348, Mar. 17, 1989; 54 FR 13606, Apr. 4, 1989]

§ 471.33 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutants in the nickel-cobalt forming process wastewater shall not exceed the following values:

(a) *Rolling spent neat oils—subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions | |
| Chromium | 0.063 | 0.026 |
| Nickel | 0.094 | 0.063 |
| Fluoride | 10.1 | 4.49 |
| Oil and grease | 1.70 | 1.70 |
| TSS | 2.55 | 2.04 |
| pH | (¹) | (¹) |

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

(c) *Rolling contact cooling water.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water | |
| Chromium | 0.028 | 0.012 |
| Nickel | 0.042 | 0.028 |
| Fluoride | 4.49 | 1.99 |
| Oil and grease | 0.754 | 0.754 |
| TSS | 1.13 | 0.905 |
| pH | (¹) | (¹) |

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

(d) *Tube Reducing Spent Lubricant—subpart C—NSPS.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than

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those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions | |
| Chromium | 0.036 | 0.015 |
| Nickel | 0.053 | 0.036 |
| Fluoride | 5.68 | 2.52 |
| Oil and grease | 0.954 | 0.954 |
| TSS | 1.43 | 1.15 |
| pH | (¹) | (¹) |

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

(g) *Extrusion spent lubricants—subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated | |
| Chromium | 0.031 | 0.013 |
| Nickel | 0.046 | 0.031 |
| Fluoride | 4.95 | 2.20 |
| Oil and grease | 0.832 | 0.832 |
| TSS | 1.25 | 0.999 |
| pH | (¹) | (¹) |

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

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded | |
| Chromium | 0.086 | 0.035 |
| Nickel | 0.128 | 0.086 |
| Fluoride | 13.8 | 6.13 |
| Oil and grease | 2.32 | 2.32 |
| TSS | 3.48 | 2.79 |
| pH | (¹) | (¹) |

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

(j) *Forging equipment cleaning wastewater.*

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SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.002 | 0.0006 |
| Nickel | 0.002 | 0.002 |
| Fluoride | 0.238 | 0.106 |
| Oil and grease | 0.040 | 0.040 |
| TSS | 0.060 | 0.048 |
| pH | (¹) | (¹) |

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

(k) *Forging contact cooling water.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water | |
| Chromium | 0.018 | 0.007 |
| Nickel | 0.026 | 0.018 |
| Fluoride | 2.82 | 1.25 |
| Oil and grease | 0.474 | 0.474 |
| TSS | 0.711 | 0.569 |
| pH | (¹) | (¹) |

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

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.069 | 0.028 |
| Nickel | 0.103 | 0.069 |
| Fluoride | 11.2 | 4.94 |
| Oil and grease | 1.87 | 1.87 |
| TSS | 2.81 | 2.25 |
| pH | (¹) | (¹) |

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

(m) *Forging spent lubricants—subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary casting methods | |
| Chromium | 0.448 | 0.182 |
| Nickel | 0.666 | 0.448 |
| Fluoride | 72.0 | 32.0 |
| Oil and grease | 12.1 | 12.1 |
| TSS | 18.2 | 14.5 |
| pH | (¹) | (¹) |

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

(o) *Vacuum melting steam condensate—subpart C—NSPS.* There shall be no allowance for the discharge of process wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized | |
| Chromium | 0.970 | 0.393 |
| Nickel | 1.44 | 0.970 |
| Fluoride | 156 | 69.2 |
| Oil and grease | 26.2 | 26.2 |
| TSS | 39.3 | 31.5 |
| pH | (¹) | (¹) |

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

(q) *Annealing and solution heat treatment contact cooling water—subpart C—NSPS.* There shall be no allowance for the discharge of process wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.300 | 0.122 |
| Nickel | 0.450 | 0.300 |
| Fluoride | 48.2 | 21.4 |
| Oil and grease | 8.1 | 8.1 |
| TSS | 12.2 | 9.72 |
| pH | (¹) | (¹) |

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

(s) *Surface treatment spent baths.*

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SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.346 | 0.141 |
| Nickel | 0.515 | 0.346 |
| Fluoride | 55.7 | 24.7 |
| Oil and grease | 9.35 | 9.35 |
| TSS | 14.1 | 11.2 |
| pH | (¹) | (¹) |

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

(t) *Surface treatment rinse.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.874 | 0.354 |
| Nickel | 1.30 | 0.873 |
| Fluoride | 141 | 62.3 |
| Oil and grease | 23.6 | 23.6 |
| TSS | 35.4 | 28.3 |
| pH | (¹) | (¹) |

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

(u) *Alkaline cleaning spent baths.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.013 | 0.005 |
| Nickel | 0.019 | 0.013 |
| Fluoride | 2.02 | 0.895 |
| Oil and grease | 0.339 | 0.339 |
| TSS | 0.509 | 0.407 |
| pH | (¹) | (¹) |

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

(v) *Alkaline cleaning rinse.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.086 | 0.035 |
| Nickel | .128 | .086 |
| Fluoride | 13.9 | 6.15 |
| Oil and grease | 2.33 | 2.33 |
| TSS | 3.50 | 2.80 |
| pH | (¹) | (¹) |

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

(w) *Molten salt rinse.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt | |
| Chromium | 0.312 | 0.127 |
| Nickel | 0.464 | 0.312 |
| Fluoride | 50.2 | 22.3 |
| Oil and grease | 8.44 | 8.44 |
| TSS | 12.7 | 10.1 |
| pH | (¹) | (¹) |

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

(x) *Ammonia rinse.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution | |
| Chromium | 0.006 | 0.002 |
| Nickel | .008 | .006 |
| Fluoride | .881 | .391 |
| Oil and grease | .148 | .148 |
| TSS | 222 | 178 |
| pH | (¹) | (¹) |

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

(y) *Sawing or grinding spent emulsions.*

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SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground | |
| Chromium | 0.015 | 0.006 |
| Nickel | .002 | .015 |
| Fluoride | 2.35 | 1.04 |
| Oil and grease | .394 | .394 |
| TSS | 591 | 473 |
| pH | (¹) | (¹) |

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

(z) *Sawing or grinding rinse.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed | |
| Chromium | 0.067 | 0.027 |
| Nickel | 0.100 | 0.067 |
| Fluoride | 10.8 | 4.78 |
| Oil and grease | 1.81 | 1.81 |
| TSS | 2.72 | 217 |
| pH | (¹) | (¹) |

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

(a.a) *Steam cleaning condensate.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned | |
| Chromium | 0.011 | 0.005 |
| Nickel | 0.017 | 0.011 |
| Fluoride | 1.79 | 0.795 |
| Oil and grease | 0.301 | 0.301 |
| TSS | 0.452 | 0.361 |
| pH | (¹) | (¹) |

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

(bb) *Hydrostatic tube testing and ultrasonic testing wastewater—subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(cc) *Degreasing spent solvents—subpart C—NSPS.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye penetrant testing wastewater.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method | |
| Chromium | 0.079 | 0.032 |
| Nickel | 0.117 | 0.079 |
| Fluoride | 12.7 | 5.63 |
| Oil and grease | 2.13 | 2.13 |
| TSS | 3.20 | 2.56 |
| pH | (¹) | (¹) |

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

(ee) *Electrocoating rinse.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated | |
| Chromium | 1.25 | 0.506 |
| Nickel | 1.86 | 1.25 |
| Fluoride | 201 | 89.0 |
| Oil and grease | 33.7 | 33.7 |
| TSS | 50.6 | 40.5 |
| pH | (¹) | (¹) |

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

(ff) *Miscellaneous wastewater sources.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.091 | 0.037 |
| Nickel | 0.136 | 0.091 |
| Fluoride | 14.7 | 6.50 |
| Oil and grease | 2.46 | 2.46 |
| TSS | 3.69 | 2.95 |
| pH | (¹) | (¹) |

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

[50 FR 34270, Aug. 23, 1985; 51 FR 2885, Jan. 22, 1986, as amended at 54 FR 11349, Mar. 17, 1989; 54 FR 13606, Apr. 4, 1989]

§ 471.34 Pretreatment standards for existing sources (PSES).

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 by August 23, 1988 achieve the following pretreatment standards

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for existing sources (PSES). The mass of wastewater pollutants in nickel-cobalt forming wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions | |
| Chromium | 0.063 | 0.026 |
| Nickel | 0.094 | 0.063 |
| Fluoride | 10.1 | 4.49 |

(c) *Rolling contact cooling water.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water | |
| Chromium | 0.028 | 0.011 |
| Nickel | 0.042 | 0.028 |
| Fluoride | 4.49 | 1.99 |

(d) *Tube Reducing Spent Lubricant—subpart C—PSES.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per

quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (d)(2) of this section and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

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(e) *Drawing spent neat oils—subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions | |
| Chromium | 0.036 | 0.014 |
| Nickel | 0.053 | 0.036 |
| Fluoride | 5.68 | 2.52 |

(g) *Extrusion spent lubricants—subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated | |
| Chromium | 0.031 | 0.013 |
| Nickel | 0.046 | 0.031 |
| Fluoride | 4.95 | 2.20 |

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded | |
| Chromium | 0.086 | 0.034 |
| Nickel | 0.128 | 0.086 |
| Fluoride | 13.8 | 6.13 |

(j) *Forging equipment cleaning wastewater.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.002 | 0.0006 |
| Nickel | 0.002 | 0.002 |
| Fluoride | 0.238 | 0.106 |

(k) *Forging contact cooling water.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water | |
| Chromium | 0.018 | 0.007 |
| Nickel | 0.026 | 0.018 |
| Fluoride | 2.82 | 1.25 |

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.069 | 0.028 |
| Nickel | 0.103 | 0.069 |
| Fluoride | 11.2 | 4.94 |

(m) *Forging spent lubricants—subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary methods | |
| Chromium | 0.448 | 0.182 |
| Nickel | 0.666 | 0.448 |
| Fluoride | 72.0 | 32.0 |

(o) *Vacuum melting steam condensate—subpart C—PSES.* There shall be no allowance for the discharge of wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

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| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized | |
| Chromium | 0.970 | 0.393 |
| Nickel | 1.44 | 0.970 |
| Fluoride | 156 | 69.2 |

(q) *Annealing and solution heat treatment contact cooling water—subpart C—PSES.* There shall be no allowance for the discharge of wastewater pollutants.

(r) *Wet air pollution control scrubber blowdown.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.300 | 0.122 |
| Nickel | 0.446 | 0.300 |
| Fluoride | 48.2 | 21.4 |

(s) *Surface treatment spent baths.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.346 | 0.141 |
| Nickel | 0.514 | 0.346 |
| Fluoride | 55.7 | 24.7 |

(t) *Surface treatment rinse.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.873 | 0.354 |
| Nickel | 1.30 | 0.873 |
| Fluoride | 141 | 62.3 |

(u) *Alkaline cleaning spent baths.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.013 | 0.005 |
| Nickel | 0.019 | 0.013 |
| Fluoride | 2.02 | 0.895 |

(v) *Alkaline cleaning rinse.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.086 | 0.035 |
| Nickel | 0.128 | 0.086 |
| Fluoride | 13.9 | 6.15 |

(w) *Molten salt rinse.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt | |
| Chromium | 0.312 | 0.127 |
| Nickel | 0.464 | 0.312 |
| Fluoride | 50.2 | 22.3 |

(x) *Ammonia rinse.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution | |
| Chromium | 0.006 | 0.002 |
| Nickel | 0.008 | 0.006 |
| Fluoride | 0.881 | 0.391 |

(y) *Sawing or grinding spent emulsions.*

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SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions | |
| Chromium | 0.015 | 0.006 |
| Nickel | 0.022 | 0.015 |
| Fluoride | 2.35 | 1.04 |

(z) *Sawing or grinding rinse.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed | |
| Chromium | 0.067 | 0.027 |
| Nickel | 0.100 | 0.067 |
| Fluoride | 10.8 | 4.78 |

(a.a) *Steam cleaning condensate.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned | |
| Chromium | 0.011 | 0.005 |
| Nickel | 0.017 | 0.011 |
| Fluoride | 1.79 | 0.795 |

(bb) *Hydrostatic Tube Testing and Ultrasonic Testing Wastewater—subpart C—PSES.* There shall be no allowance for the discharge of process wastewater pollutants.

(cc) *Degreasing Spent Solvents—subpart C—PSES.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye Penetrant Testing Wastewater.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method | |
| Chromium | 0.079 | 0.032 |
| Nickel | 0.117 | 0.079 |
| Fluoride | 12.7 | 5.63 |

(ee) *Electrocoating rinse.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated | |
| Chromium | 1.25 | 0.506 |
| Nickel | 1.86 | 1.25 |
| Fluoride | 201 | 89.0 |

(ff) *Miscellaneous wastewater sources.*

SUBPART C—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.091 | 0.037 |
| Nickel | 0.136 | 0.091 |
| Fluoride | 14.7 | 6.50 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2885, Jan. 22, 1986, as amended at 54 FR 11349, Mar. 17, 1989; 54 FR 13606, Apr. 4, 1989]

§ 471.35 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in nickel-cobalt forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with emulsions | |
| Chromium | 0.063 | 0.026 |
| Nickel | 0.094 | 0.063 |
| Fluoride | 10.1 | 4.49 |

(c) *Rolling contact cooling water.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt rolled with water | |
| Chromium | 0.028 | 0.012 |
| Nickel | 0.042 | 0.028 |
| Fluoride | 4.49 | 1.99 |

(d) *Tube Reducing Spent Lubricant—subpart C—PSNS.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (d)(2) of this section

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under subparagraph (d)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (d)(2) of this section, the actions described in paragraph (d)(4) of this section shall be taken, and the demonstration required

under paragraph (d)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (d)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (d)(2) of this section (2); or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (d)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in subparagraph (2) above and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (d)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(e) *Drawing spent neat oils—subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(f) *Drawing spent emulsions.*

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SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt drawn with emulsions | |
| Chromium | 0.036 | 0.015 |
| Nickel | 0.053 | 0.036 |
| Fluoride | 5.68 | 2.52 |

(g) *Extrusion spent lubricants—subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(h) *Extrusion press or solution heat treatment contact cooling water.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded nickel-cobalt heat treated | |
| Chromium | 0.031 | 0.013 |
| Nickel | 0.046 | 0.031 |
| Fluoride | 4.95 | 2.20 |

(i) *Extrusion press hydraulic fluid leakage.*

SUBPART C—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt extruded | |
| Chromium | 0.086 | 0.034 |
| Nickel | 0.128 | 0.086 |
| Fluoride | 13.8 | 6.13 |

(j) *Forging equipment cleaning wastewater.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.002 | 0.0006 |
| Nickel | 0.002 | 0.002 |
| Fluoride | 0.238 | 0.106 |

(k) *Forging contact cooling water.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged nickel-cobalt cooled with water | |
| Chromium | 0.018 | 0.007 |
| Nickel | 0.026 | 0.018 |
| Fluoride | 2.82 | 1.25 |

(l) *Forging press hydraulic fluid leakage.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt forged | |
| Chromium | 0.069 | 0.028 |
| Nickel | 0.103 | 0.069 |
| Fluoride | 11.2 | 4.94 |

(m) *Forging spent lubricants—subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(n) *Stationary casting contact cooling water.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt cast with stationary methods | |
| Chromium | 0.448 | 0.182 |
| Nickel | 0.666 | 0.448 |
| Fluoride | 72.0 | 32.0 |

(o) *Vacuum melting steam condensate—subpart C—PSNS.* There shall be no allowance for the discharge of process wastewater pollutants.

(p) *Metal powder production atomization wastewater.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt metal powder atomized | |
| Chromium | 0.970 | 0.393 |
| Nickel | 1.44 | 0.970 |
| Fluoride | 156 | 69.2 |

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(q) *Annealing and Solution Heat Treatment Contact Cooling Water—subpart C—PSNS.* There shall be no allowance for the discharge of process wastewater pollutant.

(r) *Wet Air Pollution Control Scrubber Blowdown.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.300 | 0.122 |
| Nickel | 0.450 | 0.300 |
| Fluoride | 48.2 | 21.4 |

(s) *Surface treatment spent baths.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.346 | 0.141 |
| Nickel | 0.515 | 0.346 |
| Fluoride | 55.7 | 24.7 |

(t) *Surface treatment rinse.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt surface treated | |
| Chromium | 0.874 | 0.354 |
| Nickel | 1.30 | 0.873 |
| Fluoride | 141 | 62.3 |

(u) *Alkaline cleaning spent baths.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.013 | 0.005 |
| Nickel | 0.019 | 0.013 |
| Fluoride | 2.02 | 0.895 |

(v) *Alkaline cleaning rinse.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt alkaline cleaned | |
| Chromium | 0.086 | 0.035 |
| Nickel | 0.128 | 0.086 |
| Fluoride | 13.9 | 6.15 |

(w) *Molten salt rinse.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with molten salt | |
| Chromium | 0.312 | 0.127 |
| Nickel | 0.464 | 0.312 |
| Fluoride | 50.2 | 22.3 |

(x) *Ammonia rinse.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt treated with ammonia solution | |
| Chromium | 0.006 | 0.002 |
| Nickel | 0.008 | 0.006 |
| Fluoride | 0.881 | 0.391 |

(y) *Sawing or grinding spent emulsions.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt sawed or ground with emulsions | |
| Chromium | 0.015 | 0.006 |
| Nickel | 0.022 | 0.015 |
| Fluoride | 2.35 | 1.04 |

(z) *Sawing or grinding rinse.*

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SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground nickel-cobalt rinsed | |
| Chromium | 0.067 | 0.027 |
| Nickel | 0.100 | 0.067 |
| Fluoride | 10.8 | 4.78 |

(aa) *Steam cleaning condensate.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt steam cleaned | |
| Chromium | 0.011 | 0.005 |
| Nickel | 0.017 | 0.011 |
| Fluoride | 1.79 | 0.795 |

(bb) *Hydrostatic tube testing and ultrasonic testing wastewater—subpart C—PSNS.* There shall be no allowance discharge of process wastewater pollutants.

(cc) *Degreasing spent solvents—subpart C—PSNS.* There shall be no discharge of process wastewater pollutants.

(dd) *Dye penetrant testing wastewater.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt tested with dye penetrant method | |
| Chromium | 0.079 | 0.032 |
| Nickel | 0.117 | 0.079 |
| Fluoride | 12.7 | 5.63 |

(ee) *Electrocoating rinse.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt electrocoated | |
| Chromium | 1.25 | 0.506 |
| Nickel | 1.86 | 0.125 |
| Fluoride | 201 | 89.0 |

(ff) *Miscellaneous wastewater sources.*

SUBPART C—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of nickel-cobalt formed | |
| Chromium | 0.091 | 0.037 |
| Nickel | 0.136 | 0.091 |
| Fluoride | 14.7 | 6.50 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986, as amended at 54 FR 11350, Mar. 17, 1989]

§ 471.36 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart D—Precious Metals Forming Subcategory

§ 471.40 Applicability; description of the precious metals forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the precious metals forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

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SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions | |
| Chromium | 0.026 | 0.012 |
| Copper | 0.147 | 0.077 |
| Cyanide | 0.023 | 0.010 |
| Silver | 0.032 | 0.013 |
| Oil and grease | 1.54 | 0.925 |
| TSS | 3.16 | 1.51 |
| pH | (¹) | (¹) |

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

(c) *Drawing spent neat oils—subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions | |
| Cadmium | 0.016 | 0.007 |
| Copper | 0.091 | 0.048 |
| Cyanide | 0.014 | 0.006 |
| Silver | 0.020 | 0.008 |
| Oil and grease | 0.950 | 0.570 |
| TSS | 1.95 | 0.926 |
| pH | (¹) | (¹) |

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

(e) *Drawing spent soap solutions.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions | |
| Cadmium | 0.001 | 0.0005 |
| Copper | 0.006 | 0.003 |
| Cyanide | 0.0009 | 0.0004 |
| Silver | 0.001 | 0.0006 |
| Oil and grease | 0.063 | 0.038 |
| TSS | 0.128 | 0.061 |
| pH | (¹) | (¹) |

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

(f) *Metal powder production wet atomization wastewater.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized | |
| Cadmium | 2.27 | 1.00 |
| Copper | 12.7 | 6.70 |
| Cyanide | 1.94 | 0.802 |
| Silver | 2.70 | 1.14 |
| Oil and grease | 134 | 80.2 |
| TSS | 274 | 130 |
| pH | (¹) | (¹) |

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

(g) *Heat treatment contact cooling water.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded precious metals heat treated | |
| Cadmium | 1.42 | 0.626 |
| Copper | 7.93 | 4.17 |
| Cyanide | 1.21 | 0.501 |
| Silver | 1.71 | 0.709 |
| Oil and grease | 83.4 | 50.1 |
| TSS | 171 | 81.3 |
| pH | (¹) | (¹) |

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

(h) *Semi-continuous or continuous casting contact cooling water.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method | |
| Cadmium | 3.50 | 1.55 |
| Copper | 19.6 | 10.3 |
| Cyanide | 2.99 | 1.24 |
| Silver | 4.23 | 1.75 |
| Oil and grease | 206 | 124 |
| TSS | 423 | 209 |
| pH | (¹) | (¹) |

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

(i) *Stationary casting contact cooling water—subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

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SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method | |
| Cadmium | 3.67 | 1.62 |
| Copper | 20.5 | 10.8 |
| Cyanide | 3.13 | 1.30 |
| Silver | 4.43 | 1.84 |
| Oil and grease | 216 | 130 |
| TSS | 443 | 211 |
| pH | (¹) | (¹) |

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

(k) *Shot casting contact cooling water.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals shot cast | |
| Cadmium | 1.25 | 0.551 |
| Copper | 6.98 | 3.67 |
| Cyanide | 1.07 | 0.441 |
| Silver | 1.51 | 0.624 |
| Oil and grease | 73.4 | 44.1 |
| TSS | 151 | 71.6 |
| pH | (¹) | (¹) |

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

(l) *Wet air pollution control scrubber blowdown—subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals and base metal pressure bonded | |
| Cadmium | 0.029 | 0.013 |
| Copper | 0.159 | 0.084 |
| Cyanide | 0.024 | 0.010 |
| Silver | 0.034 | 0.014 |
| Oil and grease | 1.67 | 1.00 |
| TSS | 3.43 | 1.63 |
| pH | (¹) | (¹) |

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

(n) *Surface treatment spent baths.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.033 | 0.015 |
| Copper | 0.183 | 0.097 |
| Cyanide | 0.028 | 0.012 |
| Silver | 0.040 | 0.017 |
| Oil and grease | 1.93 | 1.16 |
| TSS | 3.95 | 1.88 |
| pH | (¹) | (¹) |

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

(o) *Surface treatment rinse.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 2.10 | 0.924 |
| Copper | 11.7 | 5.16 |
| Cyanide | 1.79 | 0.739 |
| Silver | 2.53 | 1.05 |
| Oil and grease | 123 | 73.9 |
| TSS | 253 | 120 |
| pH | (¹) | (¹) |

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

(p) *Alkaline cleaning spent baths.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.021 | 0.009 |
| Copper | 0.114 | 0.060 |
| Cyanide | 0.018 | 0.007 |
| Silver | 0.025 | 0.010 |
| Oil and grease | 1.20 | 0.720 |
| TSS | 2.46 | 1.170 |
| pH | (¹) | (¹) |

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

(q) *Alkaline cleaning rinse.*

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SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 3.81 | 1.68 |
| Copper | 21.3 | 11.2 |
| Cyanide | 3.25 | 1.35 |
| Silver | 4.59 | 1.91 |
| Oil and grease | 224 | 135 |
| TSS | 459 | 219 |
| pH | (¹) | (¹) |

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

(r) *Alkaline cleaning prebonding wastewater.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding | |
| Cadmium | 3.95 | 1.74 |
| Copper | 22.1 | 11.6 |
| Cyanide | 3.37 | 1.39 |
| Silver | 4.76 | 1.97 |
| Oil and grease | 232 | 139 |
| TSS | 476 | 226 |
| pH | (¹) | (¹) |

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

(s) *Tumbling or burnishing wastewater.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished | |
| Cadmium | 4.12 | 1.82 |
| Copper | 23.0 | 12.1 |
| Cyanide | 3.51 | 1.45 |
| Silver | 4.96 | 2.06 |
| Oil and grease | 242 | 145 |
| TSS | 496 | 236 |
| pH | (¹) | (¹) |

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

(t) *Sawing or grinding spent neat oils—subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions | |
| Cadmium | 0.032 | 0.014 |
| Copper | 0.178 | 0.094 |
| Cyanide | 0.027 | 0.011 |
| Silver | 0.039 | 0.016 |
| Oil and grease | 1.87 | 1.12 |
| TSS | 3.83 | 1.82 |
| pH | (¹) | (¹) |

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

(v) *Degreasing spent solvents—subpart D—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

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

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 (BAT):

(a) *Rolling spent neat oils—subpart D—BAT.* There shall be no discharge of wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions | |
| Cadmium | 0.026 | 0.012 |
| Copper | 0.147 | 0.077 |
| Cyanide | 0.023 | 0.010 |
| Silver | 0.032 | 0.013 |

(c) *Drawing spent neat oils—subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

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SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions | |
| Cadmium | 0.016 | 0.007 |
| Copper | 0.091 | 0.048 |
| Cyanide | 0.014 | 0.006 |
| Silver | 0.020 | 0.008 |

(e) *Drawing spent soap solutions.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions | |
| Cadmium | 0.001 | 0.0005 |
| Copper | 0.006 | 0.003 |
| Cyanide | 0.0009 | 0.0004 |
| Silver | 0.002 | 0.0006 |

(f) *Metal powder production wet atomization wastewater.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized | |
| Cadmium | 2.27 | 1.00 |
| Copper | 12.7 | 6.68 |
| Cyanide | 1.94 | 0.802 |
| Silver | 2.74 | 1.14 |

(g) *Heat treatment contact cooling water.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals heat treated | |
| Cadmium | 0.142 | 0.063 |
| Copper | 0.793 | 0.417 |
| Cyanide | 0.121 | 0.050 |
| Silver | 0.171 | 0.071 |

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method | |
| Cadmium | 0.350 | 0.155 |
| Copper | 1.96 | 1.03 |
| Cyanide | 0.299 | 0.124 |
| Silver | 0.423 | 0.175 |

(i) *Stationary casting contact cooling water—subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method | |
| Cadmium | 0.3676 | 0.162 |
| Copper | 2.05 | 1.08 |
| Cyanide | 0.313 | 0.130 |
| Silver | 0.443 | 0.184 |

(k) *Shot casting contact cooling water.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals shot cast | |
| Cadmium | 0.125 | 0.055 |
| Copper | 0.698 | 0.367 |
| Cyanide | 0.107 | 0.044 |
| Silver | 0.151 | 0.063 |

(l) *Wet air pollution control scrubber blowdown—subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metal and base metal pressure bonded | |
| Cadmium | 0.0297 | 0.013 |
| Copper | 0.159 | 0.084 |
| Cyanide | 0.0247 | 0.010 |
| Silver | 0.0342 | 0.014 |

(n) *Surface treatment spent baths.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.033 | 0.015 |
| Copper | 0.183 | 0.097 |
| Cyanide | 0.028 | 0.012 |
| Silver | 0.040 | 0.017 |

(o) *Surface treatment rinse.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.210 | 0.093 |
| Copper | 1.17 | 0.616 |
| Cyanide | 0.179 | 0.074 |
| Silver | 0.253 | 0.105 |

(p) *Alkaline cleaning spent baths.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.021 | 0.009 |
| Copper | 0.114 | 0.060 |
| Cyanide | 0.018 | 0.007 |
| Silver | 0.025 | 0.010 |

(q) *Alkaline cleaning rinse.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.381 | 0.168 |
| Copper | 2.13 | 1.12 |
| Cyanide | 0.325 | 0.135 |
| Silver | 0.459 | 0.191 |

(r) *Alkaline cleaning prebonding wastewater.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metal and base metal cleaned prior to bonding | |
| Cadmium | 0.400 | 0.174 |
| Copper | 2.210 | 1.16 |
| Cyanide | 0.337 | 0.139 |
| Silver | 0.476 | 0.197 |

(s) *Tumbling or burnishing wastewater.*

SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished | |
| Cadmium | 0.412 | 0.182 |
| Copper | 2.300 | 1.21 |
| Cyanide | 0.351 | 0.145 |
| Silver | 0.496 | 0.206 |

(t) *Sawing or grinding spent neat oils—subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

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SUBPART D—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions | |
| Cadmium | 0.0327 | 0.014 |
| Copper | 0.178 | 0.094 |
| Cyanide | 0.0277 | 0.011 |
| Silver | 0.0381 | 0.016 |

(v) *Degreasing spent solvents—subpart D—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.43 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

(a) *Rolling Spent Neat Oils—subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions | |
| Cadmium | 0.026 | 0.012 |
| Copper | 0.147 | 0.077 |
| Cyanide | 0.023 | 0.010 |
| Silver | 0.032 | 0.013 |
| Oil and grease | 1.54 | 0.925 |
| TSS | 3.16 | 1.51 |
| pH | (¹) | (¹) |

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

(c) *Drawing spent neat oils—subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions | |
| Cadmium | 0.017 | 0.007 |
| Copper | 0.091 | 0.048 |
| Cyanide | 0.014 | 0.006 |
| Silver | 0.020 | 0.008 |
| Oil and grease | 0.950 | 0.570 |
| TSS | 1.95 | 0.927 |
| pH | (¹) | (¹) |

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

(e) *Drawing spent soap solutions.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions | |
| Cadmium | 0.001 | 0.0005 |
| Copper | 0.006 | 0.003 |
| Cyanide | 0.0009 | 0.0004 |
| Silver | 0.002 | 0.0006 |
| Oil and grease | 0.063 | 0.038 |
| TSS | 0.128 | 0.061 |
| pH | (¹) | (¹) |

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

(f) *Metal powder production atomization wastewater.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized | |
| Cadmium | 2.27 | 1.00 |
| Copper | 12.7 | 6.68 |
| Cyanide | 1.94 | 0.802 |
| Silver | 2.74 | 1.14 |
| Oil and grease | 134 | 80.2 |
| TSS | 274 | 131 |
| pH | (¹) | (¹) |

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

(g) *Heat treatment contact cooling water.*

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SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals heat treated | |
| Cadmium | 0.142 | 0.063 |
| Copper | 0.793 | 0.417 |
| Cyanide | 0.121 | 0.050 |
| Silver | 0.171 | 0.071 |
| Oil and grease | 8.34 | 5.01 |
| TSS | 17.1 | 8.13 |
| pH | (¹) | (¹) |

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

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method | |
| Cadmium | 0.350 | 0.155 |
| Copper | 1.96 | 1.03 |
| Cyanide | 0.299 | 0.124 |
| Silver | 0.423 | 0.175 |
| Oil and grease | 20.6 | 12.4 |
| TSS | 42.3 | 20.1 |
| pH | (¹) | (¹) |

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

(i) *Stationary casting contact cooling water—subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method | |
| Cadmium | 0.367 | 0.162 |
| Copper | 2.05 | 1.08 |
| Cyanide | 0.313 | 0.130 |
| Silver | 0.443 | 0.184 |
| Oil and grease | 21.6 | 13.0 |
| TSS | 44.3 | 21.1 |
| pH | (¹) | (¹) |

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

(k) *Shot casting contact cooling water.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals shot cast | |
| Cadmium | 0.125 | 0.055 |
| Copper | 0.698 | 0.367 |
| Cyanide | 0.107 | 0.044 |
| Silver | 0.151 | 0.063 |
| Oil and grease | 7.34 | 4.41 |
| TSS | 15.1 | 7.16 |
| pH | (¹) | (¹) |

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

(l) *Wet air pollution control scrubber blowdown—subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals and base metal pressure bonded | |
| Cadmium | 0.029 | 0.013 |
| Copper | 0.159 | 0.084 |
| Cyanide | 0.024 | 0.010 |
| Silver | 0.034 | 0.014 |
| Oil and grease | 1.67 | 1.00 |
| TSS | 3.43 | 1.63 |
| pH | (¹) | (¹) |

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

(n) *Surface treatment spent baths.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.033 | 0.015 |
| Copper | 0.183 | 0.097 |
| Cyanide | 0.028 | 0.012 |
| Silver | 0.040 | 0.017 |
| Oil and grease | 1.93 | 1.16 |
| TSS | 3.95 | 1.88 |
| pH | (¹) | (¹) |

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

(o) *Surface treatment rinse.*

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SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.210 | 0.093 |
| Copper | 1.17 | 0.616 |
| Cyanide | 0.179 | 0.074 |
| Silver | 0.253 | 0.105 |
| Oil and grease | 12.3 | 7.39 |
| TSS | 25.3 | 12.0 |
| pH | (¹) | (¹) |

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

(p) *Alkaline cleaning spent baths.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.021 | 0.009 |
| Copper | 0.114 | 0.060 |
| Cyanide | 0.018 | 0.007 |
| Silver | 0.025 | 0.010 |
| Oil and grease | 1.20 | 0.720 |
| TSS | 2.46 | 1.17 |
| pH | (¹) | (¹) |

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

(q) *Alkaline cleaning rinse.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.381 | 0.168 |
| Copper | 2.13 | 1.112 |
| Cyanide | 0.325 | 0.135 |
| Silver | 0.459 | 0.191 |
| Oil and grease | 22.4 | 13.5 |
| TSS | 45.9 | 21.9 |
| pH | (¹) | (¹) |

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

(r) *Alkaline cleaning pre-bonding wastewater.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding | |
| Cadmium | 0.400 | 0.174 |
| Copper | 2.21 | 1.16 |
| Cyanide | 0.337 | 0.139 |
| Silver | 0.476 | 0.197 |
| Oil and grease | 23.2 | 13.9 |
| TSS | 47.6 | 22.6 |
| pH | (¹) | (¹) |

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

(s) *Tumbling or burnishing wastewater.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished | |
| Cadmium | 0.412 | 0.182 |
| Copper | 2.30 | 1.21 |
| Cyanide | 0.351 | 0.145 |
| Silver | 0.496 | 0.206 |
| Oil and grease | 24.2 | 14.5 |
| TSS | 49.6 | 23.6 |
| pH | (¹) | (¹) |

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

(t) *Sawing or grinding spent neat oils—subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions | |
| Cadmium | 0.032 | 0.014 |
| Copper | 0.178 | 0.094 |
| Cyanide | 0.027 | 0.011 |
| Silver | 0.038 | 0.016 |
| Oil and grease | 1.87 | 1.12 |
| TSS | 3.83 | 1.82 |
| pH | (¹) | (¹) |

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

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(v) *Degreasing spent solvents—subpart D—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.44 Pretreatment standards for existing sources (PSES).

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 by August 23, 1985 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in precious metals forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions | |
| Cadmium | 0.026 | 0.012 |
| Copper | 0.147 | 0.077 |
| Cyanide | 0.023 | 0.010 |
| Silver | 0.032 | 0.013 |

(c) *Drawing spent neat oils—subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions | |
| Cadmium | 0.016 | 0.007 |
| Copper | 0.091 | 0.048 |
| Cyanide | 0.014 | 0.006 |
| Silver | 0.020 | 0.008 |

(e) *Drawing spent soap solutions.*

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| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions | |
| Cadmium | 0.001 | 0.0005 |
| Copper | 0.006 | 0.003 |
| Cyanide | 0.0009 | 0.0004 |
| Silver | 0.002 | 0.0006 |

(f) *Metal powder production atomization wastewater.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized | |
| Cadmium | 2.27 | 1.00 |
| Copper | 12.7 | 6.68 |
| Cyanide | 1.94 | 0.802 |
| Silver | 2.74 | 1.14 |

(g) *Heat treatment contact cooling water.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals heat treated | |
| Cadmium | 0.142 | 0.063 |
| Copper | 0.793 | 0.417 |
| Cyanide | 0.121 | 0.050 |
| Silver | 0.171 | 0.071 |

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method | |
| Cadmium | 0.350 | 0.155 |
| Copper | 1.96 | 1.03 |
| Cyanide | 0.299 | 0.124 |
| Silver | 0.423 | 0.175 |

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(i) *Stationary casting contact cooling water—subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any one day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method | |
| Cadmium | 0.367 | 0.162 |
| Copper | 2.05 | 1.08 |
| Cyanide | 0.313 | 0.130 |
| Silver | 0.443 | 0.184 |

(k) *Shot casting contact cooling water.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals shot cast | |
| Cadmium | 0.125 | 0.055 |
| Copper | 0.698 | 0.367 |
| Cyanide | 0.107 | 0.044 |
| Silver | 0.151 | 0.063 |

(l) *Wet air pollution control scrubber blowdown—subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metal and base metal pressure bonded | |
| Cadmium | 0.029 | 0.013 |
| Copper | 0.159 | 0.084 |
| Cyanide | 0.024 | 0.010 |
| Silver | 0.034 | 0.014 |

(n) *Surface treatment spent baths.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.033 | 0.015 |
| Copper | 0.183 | 0.097 |
| Cyanide | 0.028 | 0.012 |
| Silver | 0.040 | 0.017 |

(o) *Surface treatment rinse.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.210 | 0.093 |
| Copper | 1.17 | 0.616 |
| Cyanide | 0.179 | 0.074 |
| Silver | 0.253 | 0.105 |

(p) *Alkaline cleaning spent baths.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.021 | 0.009 |
| Copper | 0.114 | 0.060 |
| Cyanide | 0.018 | 0.007 |
| Silver | 0.025 | 0.010 |

(q) *Alkaline cleaning rinse.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.381 | 0.168 |
| Copper | 2.13 | 1.12 |
| Cyanide | 0.325 | 0.135 |
| Silver | 0.459 | 0.191 |

(r) *Alkaline cleaning prebonding wastewater.*

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SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding | |
| Cadmium | 0.400 | 0.174 |
| Copper | 2.210 | 1.16 |
| Cyanide | 0.337 | 0.139 |
| Silver | 0.476 | 0.197 |

(s) *Tumbling or burnishing wastewater.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished | |
| Cadmium | 0.412 | 0.182 |
| Copper | 2.300 | 1.21 |
| Cyanide | 0.351 | 0.145 |
| Silver | 0.496 | 0.206 |

(t) *Sawing or grinding spent neat oils—subpart D—PSES.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions | |
| Cadmium | 0.032 | 0.014 |
| Copper | 0.178 | 0.094 |
| Cyanide | 0.027 | 0.011 |
| Silver | 0.038 | 0.016 |

(v) *Degreasing spent solvents—subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.45 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment

standards for new sources (PSNS). The mass of wastewater pollutants in precious metals forming wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals rolled with emulsions | |
| Cadmium | 0.026 | 0.012 |
| Copper | 0.147 | 0.077 |
| Cyanide | 0.023 | 0.010 |
| Silver | 0.032 | 0.013 |

(c) *Drawing spent neat oils—subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Drawing spent emulsions.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with emulsions | |
| Cadmium | 0.016 | 0.007 |
| Copper | 0.091 | 0.048 |
| Cyanide | 0.014 | 0.006 |
| Silver | 0.020 | 0.008 |

(e) *Drawing spent soap solutions.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals drawn with soap solutions | |
| Cadmium | 0.001 | 0.0005 |
| Copper | 0.006 | 0.003 |
| Cyanide | 0.0009 | 0.0004 |
| Silver | 0.002 | 0.0006 |

(f) *Metal powder production wet atomization wastewater.*

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SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals powder wet atomized | |
| Cadmium | 2.27 | 1.00 |
| Copper | 12.7 | 6.68 |
| Cyanide | 1.94 | 0.802 |
| Silver | 2.74 | 1.14 |

(g) *Heat treatment contact cooling water.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extended precious metals heat treated | |
| Cadmium | 0.142 | 0.063 |
| Copper | 0.793 | 0.417 |
| Cyanide | 0.121 | 0.050 |
| Silver | 0.171 | 0.071 |

(h) *Semi-continuous and continuous casting contact cooling water.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the semi-continuous or continuous method | |
| Cadmium | 0.350 | 0.155 |
| Copper | 1.96 | 1.03 |
| Cyanide | 0.299 | 0.124 |
| Silver | 0.423 | 0.175 |

(i) *Stationary casting contact cooling water—subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(j) *Direct chill casting contact cooling water.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals cast by the direct chill method | |
| Cadmium | 0.367 | 0.162 |
| Copper | 2.05 | 1.08 |
| Cyanide | 0.313 | 0.130 |
| Silver | 0.443 | 0.184 |

(k) *Shot casting contact cooling water.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals shot cast | |
| Cadmium | 0.125 | 0.055 |
| Copper | 0.698 | 0.367 |
| Cyanide | 0.107 | 0.044 |
| Silver | 0.151 | 0.0631 |

(l) *Wet air pollution control scrubber blowdown—subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(m) *Pressure bonding contact cooling water.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals and base metal pressure bonded | |
| Cadmium | 0.029 | 0.013 |
| Copper | 0.159 | 0.084 |
| Cyanide | 0.024 | 0.010 |
| Silver | 0.034 | 0.014 |

(n) *Surface treatment spent baths.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.033 | 0.015 |
| Copper | 0.183 | 0.097 |
| Cyanide | 0.028 | 0.012 |
| Silver | 0.040 | 0.017 |

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(o) *Surface treatment rinse.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals surface treated | |
| Cadmium | 0.210 | 0.093 |
| Copper | 1.17 | 0.616 |
| Cyanide | 0.179 | 0.074 |
| Silver | 0.253 | 0.105 |

(p) *Alkaline cleaning spent baths.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.021 | 0.009 |
| Copper | 0.114 | 0.060 |
| Cyanide | 0.018 | 0.007 |
| Silver | 0.025 | 0.010 |

(q) *Alkaline cleaning rinse.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals alkaline cleaned | |
| Cadmium | 0.381 | 0.168 |
| Copper | 2.13 | 1.12 |
| Cyanide | 0.325 | 0.135 |
| Silver | 0.459 | 0.191 |

(r) *Alkaline cleaning pre-bonding wastewater.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals and base metal cleaned prior to bonding | |
| Cadmium | 0.400 | 0.174 |
| Copper | 2.21 | 1.16 |
| Cyanide | 0.337 | 0.139 |
| Silver | 0.476 | 0.197 |

(s) *Tumbling or burnishing wastewater.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals tumbled or burnished | |
| Cadmium | 0.412 | 0.182 |
| Copper | 2.30 | 1.21 |
| Cyanide | 0.351 | 0.145 |
| Silver | 0.496 | 0.206 |

(t) *Sawing or grinding spent neat oils—subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART D—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of precious metals sawed or ground with emulsions | |
| Cadmium | 0.032 | 0.014 |
| Copper | 0.178 | 0.094 |
| Cyanide | 0.027 | 0.011 |
| Silver | 0.038 | 0.016 |

(v) *Degreasing spent solvents—subpart D—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.46 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart E—Refractory Metals Forming Subcategory

§ 471.50 Applicability; description of the refractory metals forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the refractory metals forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils and graphite based lubricants—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions | |
| Copper | 0.815 | 0.429 |
| Nickel | 0.824 | 0.545 |
| Fluoride | 25.5 | 11.3 |
| Molybdenum | 2.84 | 1.47 |
| Oil and grease | 8.58 | 5.15 |
| TSS | 17.6 | 8.37 |
| pH | (¹) | (¹) |

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

(c) *Drawing spent lubricants—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals extruded | |
| Copper | 2.26 | 1.19 |
| Nickel | 2.29 | 1.51 |
| Fluoride | 70.8 | 31.4 |
| Molybdenum | 7.87 | 4.07 |
| Oil and grease | 23.8 | 14.3 |
| TSS | 48.8 | 23.2 |
| pH | (¹) | (¹) |

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

(f) *Forging spent lubricants—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water | |
| Copper | 0.614 | 0.323 |
| Nickel | 0.620 | 0.410 |
| Fluoride | 19.2 | 8.53 |
| Molybdenum | 2.14 | 1.11 |
| Oil and grease | 6.46 | 3.88 |
| TSS | 13.3 | 6.30 |
| pH | (¹) | (¹) |

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

(h) *Equipment cleaning wastewater.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 2.59 | 1.36 |
| Nickel | 2.61 | 1.73 |
| Fluoride | 80.9 | 35.9 |
| Molybdenum | 8.99 | 4.65 |
| Oil and grease | 27.2 | 16.3 |
| TSS | 55.8 | 26.5 |
| pH | (¹) | (¹) |

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

(i) *Metal powder production wastewater.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals powder produced | |
| Copper | 0.534 | 0.281 |
| Nickel | 0.540 | 0.357 |
| Fluoride | 16.70 | 7.42 |
| Molybdenum | 1.86 | 0.961 |
| Oil and grease | 5.62 | 3.37 |
| TSS | 11.5 | 5.48 |
| pH | (¹) | (¹) |

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

(j) *Metal powder production floor wash wastewater—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

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(k) *Metal powder pressing spent lubricants—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(1) *Surface treatment spent baths.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 0.739 | 0.389 |
| Nickel | 0.747 | 0.494 |
| Fluoride | 23.2 | 10.3 |
| Molybdenum | 2.57 | 1.33 |
| Oil and grease | 7.78 | 4.68 |
| TSS | 16.0 | 7.59 |
| pH | (¹) | (¹) |

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

(m) *Surface treatment rinse.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 230 | 121 |
| Nickel | 232 | 154 |
| Fluoride | 7,200 | 3,200 |
| Molybdenum | 800 | 414 |
| Oil and grease | 2,420 | 1,450 |
| TSS | 4,960 | 2,360 |
| pH | (¹) | (¹) |

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

(n) *Alkaline cleaning spent baths.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 0.635 | 0.334 |
| Nickel | 0.641 | 0.424 |
| Fluoride | 19.9 | 8.82 |
| Molybdenum | 2.21 | 1.14 |
| Oil and grease | 6.68 | 4.01 |
| TSS | 13.7 | 6.51 |
| pH | (¹) | (¹) |

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

(o) *Alkaline cleaning rinse.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 1,550 | 816 |
| Nickel | 1,570 | 1,040 |
| Fluoride | 48,600 | 21,600 |
| Molybdenum | 5,400 | 2,790 |
| Oil and grease | 16,300 | 9,790 |
| TSS | 33,500 | 15,900 |
| pH | (¹) | (¹) |

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

(p) *Molten salt rinse.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt | |
| Copper | 12.1 | 6.33 |
| Nickel | 12.2 | 8.04 |
| Fluoride | 377 | 167 |
| Molybdenum | 41.9 | 21.7 |
| Oil and grease | 127 | 76.0 |
| TSS | 260 | 124 |
| pH | (¹) | (¹) |

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

(q) *Tumbling or burnishing wastewater.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished | |
| Copper | 23.8 | 12.5 |
| Nickel | 24.0 | 15.9 |
| Fluoride | 744 | 330 |
| Molybdenum | 82.7 | 42.8 |
| Oil and grease | 250 | 150 |
| TSS | 513 | 244 |
| pH | (¹) | (¹) |

Within the range of 7.5 to 10.0 at all times.

(r) *Sawing or grinding spent neat oils—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

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SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions | |
| Copper | 0.565 | 0.297 |
| Nickel | 0.570 | 0.377 |
| Fluoride | 17.7 | 7.84 |
| Molybdenum | 1.97 | 1.02 |
| Oil and grease | 5.94 | 3.57 |
| TSS | 12.2 | 5.79 |
| pH | (¹) | (¹) |

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

(t) *Sawing or grinding contact cooling water.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water | |
| Copper | 46.2 | 24.3 |
| Nickel | 46.7 | 30.9 |
| Fluoride | 1450 | 642 |
| Molybdenum | 161 | 83.1 |
| Oil and grease | 486 | 292 |
| TSS | 997 | 474 |
| pH | (¹) | (¹) |

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

(u) *Sawing or grinding rinse.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed | |
| Copper | 0.257 | 0.135 |
| Nickel | 0.259 | 0.172 |
| Fluoride | 8.03 | 3.57 |
| Molybdenum | 0.893 | 0.462 |
| Oil and grease | 2.70 | 1.62 |
| TSS | 5.54 | 2.63 |
| pH | (¹) | (¹) |

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

(v) *Wet air pollution control scrubber blowdown.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground, surface coated or surface treated | |
| Copper | 1.50 | 0.787 |
| Nickel | 1.51 | 1.00 |
| Fluoride | 46.8 | 20.8 |
| Molybdenum | 5.20 | 2.69 |
| Oil and grease | 15.8 | 9.45 |
| TSS | 32.3 | 15.4 |
| pH | (¹) | (¹) |

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

(w) *Miscellaneous wastewater sources.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.656 | 0.345 |
| Nickel | 0.663 | 0.438 |
| Fluoride | 20.6 | 9.11 |
| Molybdenum | 2.28 | 1.18 |
| Oil and grease | 6.9 | 4.14 |
| TSS | 14.2 | 6.73 |
| pH | (¹) | (¹) |

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

(x) *Dye penetrant testing wastewater.*

SUBPART E—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals tested | |
| Copper | 0.150 | 0.078 |
| Nickel | 0.150 | 0.099 |
| Fluoride | 4.60 | 2.00 |
| Molybdenum | 0.513 | 0.266 |
| Oil and grease | 1.60 | 0.930 |
| TSS | 3.20 | 1.50 |
| pH | (¹) | (¹) |

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

(y) *Degreasing spent solvents—subpart E—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

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

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 (BAT):

(a) *Rolling spent neat oils and graphite based lubricants—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions | |
| Copper | 0.549 | 0.262 |
| Nickel | 0.236 | 0.157 |
| Fluoride | 25.5 | 11.3 |
| Molybdenum | 2.16 | 0.957 |

(c) *Drawing spent lubricants—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals extruded | |
| Copper | 1.5 | 0.730 |
| Nickel | 0.650 | 0.440 |
| Fluoride | 71.000 | 31.0 |
| Molybdenum | 5.99 | 2.66 |

(f) *Forging spent lubricants—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water | |
| Copper | 0.041 | 0.020 |
| Nickel | 0.018 | 0.012 |
| Fluoride | 1.92 | 0.853 |
| Molybdenum | 0.163 | 0.072 |

(h) *Equipment cleaning wastewater.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.174 | 0.083 |
| Nickel | 0.075 | 0.051 |
| Fluoride | 8.09 | 3.59 |
| Molybdenum | 0.684 | 0.303 |

(i) *Metal powder production wastewater.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals powder produced | |
| Copper | 0.360 | 0.172 |
| Nickel | 0.155 | 0.104 |
| Fluoride | 16.7 | 7.42 |
| Molybdenum | 1.42 | 0.627 |

(j) *Metal powder production floor wash wastewater—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

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SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 0.498 | 0.237 |
| Nickel | 0.214 | 0.144 |
| Fluoride | 23.2 | 10.3 |
| Molybdenum | 1.96 | 0.868 |

(m) *Surface treatment rinse.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 15.5 | 7.38 |
| Nickel | 6.66 | 4.48 |
| Fluoride | 720 | 320 |
| Molybdenum | 60.9 | 27.0 |

(n) *Alkaline cleaning spent baths.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 0.428 | 0.204 |
| Nickel | 0.184 | 0.124 |
| Fluoride | 19.9 | 8.82 |
| Molybdenum | 1.68 | 0.745 |

(o) *Alkaline cleaning rinse.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 10.5 | 4.98 |
| Nickel | 4.49 | 3.02 |
| Fluoride | 486 | 216 |
| Molybdenum | 41.1 | 18.2 |

(p) *Molten salt rinse.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt | |
| Copper | 0.810 | 0.386 |
| Nickel | 0.348 | 0.234 |
| Fluoride | 37.7 | 16.7 |
| Molybdenum | 3.19 | 1.41 |

(q) *Tumbling or burnishing wastewater.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished | |
| Copper | 1.60 | 0.763 |
| Nickel | 0.688 | 0.463 |
| Fluoride | 74.4 | 33.0 |
| Molybdenum | 6.29 | 2.79 |

(r) *Sawing or grinding spent neat oils—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions | |
| Copper | 0.380 | 0.181 |
| Nickel | 0.164 | 0.110 |
| Fluoride | 17.7 | 7.84 |
| Molybdenum | 1.50 | 0.663 |

(t) *Sawing or grinding contact cooling water.*

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SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water | |
| Copper | 3.11 | 1.48 |
| Nickel | 1.34 | 0.899 |
| Fluoride | 145.0 | 64.2 |
| Molybdenum | 12.2 | 5.42 |

(u) *Sawing or grinding rinse.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed | |
| Copper | 0.018 | 0.009 |
| Nickel | 0.008 | 0.005 |
| Fluoride | 0.803 | 0.357 |
| Molybdenum | 0.068 | 0.030 |

(v) *Wet air pollution control scrubber blowdown.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed, surface coated or surface treated | |
| Copper | 1.01 | 0.480 |
| Nickel | 0.433 | 0.291 |
| Fluoride | 46.8 | 20.8 |
| Molybdenum | 3.96 | 1.76 |

(w) *Miscellaneous wastewater sources.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.442 | 0.211 |
| Nickel | 0.190 | 0.128 |
| Fluoride | 20.6 | 9.11 |
| Molybdenum | 1.74 | 0.770 |

(x) *Dye penetrant testing wastewater.*

SUBPART E—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals product tested | |
| Copper | 0.100 | 0.048 |
| Nickel | 0.043 | 0.029 |
| Fluoride | 4.62 | 2.05 |
| Molybdenum | 0.391 | 0.173 |

(y) *Degreasing spent solvents—subpart E—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.53 **New source performance standards (NSPS).**

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

(a) *Rolling spent neat oils and graphite based lubricants—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions | |
| Copper | 0.549 | 0.262 |
| Nickel | 0.236 | 0.159 |
| Fluoride | 25.5 | 11.3 |
| Molybdenum | 2.16 | 0.957 |
| Oil and grease | 4.29 | 4.29 |
| TSS | 6.44 | 5.15 |
| pH | (¹) | (¹) |

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

(c) *Drawing spent lubricants—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

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SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals extruded | |
| Copper | 1.53 | 0.726 |
| Nickel | 0.655 | 0.441 |
| Fluoride | 70.8 | 31.4 |
| Molybdenum | 5.99 | 2.66 |
| Oil and grease | 11.9 | 11.9 |
| TSS | 17.9 | 14.3 |
| pH | (¹) | (¹) |

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

(f) *Forging spent lubricants—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water | |
| Copper | 0.041 | 0.020 |
| Nickel | 0.018 | 0.012 |
| Fluoride | 1.92 | 0.853 |
| Molybdenum | 0.163 | 0.072 |
| Oil and grease | 0.323 | 0.323 |
| TSS | 0.485 | 0.388 |
| pH | (¹) | (¹) |

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

(h) *Equipment cleaning wastewater.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.174 | 0.083 |
| Nickel | 0.075 | 0.051 |
| Fluoride | 8.09 | 3.59 |
| Molybdenum | 0.684 | 0.303 |
| Oil and grease | 1.36 | 1.36 |
| TSS | 2.04 | 1.63 |
| pH | (¹) | (¹) |

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

(i) *Metal powder production wastewater.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals powder produced | |
| Copper | 0.360 | 0.172 |
| Nickel | 0.155 | 0.104 |
| Fluoride | 16.7 | 7.42 |
| Molybdenum | 1.42 | 0.627 |
| Oil and grease | 2.81 | 2.81 |
| TSS | 4.22 | 3.37 |
| pH | (¹) | (¹) |

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

(j) *Metal powder production floor wash wastewater—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 0.498 | 0.237 |
| Nickel | 0.214 | 0.144 |
| Fluoride | 23.2 | 10.3 |
| Molybdenum | 1.96 | 0.868 |
| Oil and grease | 3.89 | 3.89 |
| TSS | 5.84 | 4.67 |
| pH | (¹) | (¹) |

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

(m) *Surface treatment rinse.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 15.5 | 7.38 |
| Nickel | 6.66 | 4.48 |
| Fluoride | 720 | 320 |
| Molybdenum | 69.9 | 27.0 |
| Oil and grease | 121 | 121 |
| TSS | 182 | 145 |
| pH | (¹) | (¹) |

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

(n) *Alkaline cleaning spent baths.*

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SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 0.428 | 0.204 |
| Nickel | .184 | 0.124 |
| Fluoride | 19.9 | 8.82 |
| Molybdenum | 1.68 | 0.745 |
| Oil and grease | 3.34 | 3.34 |
| TSS | 5.01 | 4.01 |
| pH | (¹) | (¹) |

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

(o) *Alkaline cleaning rinse.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 10.5 | 4.98 |
| Nickel | 4.49 | 3.02 |
| Fluoride | 486 | 216 |
| Molybdenum | 41.1 | 18.2 |
| Oil and grease | 81.6 | 81.6 |
| TSS | 123 | 97.9 |
| pH | (¹) | (¹) |

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

(p) *Molten salt rinse.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt | |
| Copper | 0.810 | 0.386 |
| Nickel | 0.348 | 0.234 |
| Fluoride | 37.7 | 16.7 |
| Molybdenum | 3.19 | 1.41 |
| Oil and grease | 6.33 | 6.33 |
| TSS | 9.5 | 7.6 |
| pH | (¹) | (¹) |

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

(q) *Tumbling or burnishing wastewater.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished | |
| Copper | 1.60 | 0.763 |
| Nickel | 0.688 | 0.463 |
| Fluoride | 74.4 | 33.0 |
| Molybdenum | 6.29 | 2.79 |
| Oil and grease | 12.5 | 12.5 |
| TSS | 18.8 | 15.0 |
| pH | (¹) | (¹) |

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

(r) *Sawing or grinding spent neat oils—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions | |
| Copper | 0.380 | 0.181 |
| Nickel | 0.164 | 0.110 |
| Fluoride | 17.7 | 7.84 |
| Molybdenum | 1.5 | 0.663 |
| Oil and grease | 2.97 | 2.97 |
| TSS | 4.46 | 3.57 |
| pH | (¹) | (¹) |

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

(t) *Sawing or grinding contact cooling water.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water | |
| Copper | 3.11 | 1.48 |
| Nickel | 1.34 | 0.899 |
| Fluoride | 145 | 64.2 |
| Molybdenum | 12.2 | 5.42 |
| Oil and grease | 24.3 | 24.3 |
| TSS | 36.5 | 29.2 |
| pH | (¹) | (¹) |

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

(u) *Sawing or grinding rinse.*

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SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed | |
| Copper | 0.018 | 0.009 |
| Nickel | 0.008 | 0.005 |
| Fluoride | 0.803 | 0.357 |
| Molybdenum | 0.068 | 0.030 |
| Oil and grease | 0.135 | 0.135 |
| TSS | 0.203 | 0.162 |
| pH | (¹) | (¹) |

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

(v) *Wet air pollution control scrubber blowdown.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed, ground, surface coated or surface treated | |
| Copper | 1.01 | 0.480 |
| Nickel | 0.433 | 0.291 |
| Fluoride | 46.8 | 20.8 |
| Molybdenum | 3.96 | 1.76 |
| Oil and grease | 7.87 | 7.87 |
| TSS | 11.8 | 9.45 |
| pH | (¹) | (¹) |

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

(w) *Miscellaneous wastewater sources.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.442 | 0.211 |
| Nickel | 0.190 | 0.128 |
| Fluoride | 20.6 | 9.11 |
| Molybdenum | 1.74 | 0.770 |
| Oil and grease | 3.45 | 3.45 |
| TSS | 5.18 | 4.14 |
| pH | (¹) | (¹) |

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

(x) *Dye penetrant testing wastewater.*

SUBPART E—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals product tested | |
| Copper | 0.100 | 0.048 |
| Nickel | 0.043 | 0.029 |
| Fluoride | 4.62 | 2.05 |
| Molybdenum | 0.391 | 0.173 |
| Oil and grease | 0.776 | 0.776 |
| TSS | 1.17 | 0.931 |
| pH | (¹) | (¹) |

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

(y) *Degreasing spent solvents—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2886, Jan. 22, 1986]

§ 471.54 Pretreatment standards for existing sources (PSES).

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 by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in refractory metals forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils and graphite based lubricants—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions | |
| Copper | 0.815 | 0.429 |
| Nickel | 0.824 | 0.545 |
| Fluoride | 25.5 | 11.4 |
| Molybdenum | 2.84 | 1.47 |

(c) *Drawing spent lubricants—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

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(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals extruded | |
| Copper | 2.26 | 1.19 |
| Nickel | 2.29 | 1.51 |
| Fluoride | 70.8 | 31.4 |
| Molybdenum | 7.87 | 4.07 |

(f) *Forging spent lubricants—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water | |
| Copper | 0.062 | 0.033 |
| Nickel | 0.062 | 0.041 |
| Fluoride | 1.92 | 0.853 |
| Molybdenum | 0.214 | 0.111 |

(h) *Equipment cleaning wastewater.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.259 | 0.136 |
| Nickel | 0.261 | 0.173 |
| Fluoride | 8.09 | 3.59 |
| Molybdenum | 0.899 | 0.465 |

(i) *Metal powder production wastewater.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals powder produced | |
| Copper | 0.534 | 0.281 |
| Nickel | 0.540 | 0.357 |
| Fluoride | 16.7 | 7.42 |
| Molybdenum | 1.86 | 0.961 |

(j) *Metal powder production floor wash wastewater—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 0.739 | 0.389 |
| Nickel | 0.747 | 0.494 |
| Fluoride | 23.2 | 10.3 |
| Molybdenum | 2.57 | 1.33 |

(m) *Surface treatment rinse.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 23.0 | 12.1 |
| Nickel | 23.3 | 15.4 |
| Fluoride | 720 | 320 |
| Molybdenum | 80.0 | 41.4 |

(n) *Alkaline cleaning spent baths.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 0.635 | 0.334 |
| Nickel | 0.642 | 0.424 |
| Fluoride | 19.9 | 8.82 |
| Molybdenum | 2.21 | 1.14 |

(o) *Alkaline cleaning rinse.*

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SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 15.5 | 8.16 |
| Nickel | 15.7 | 10.4 |
| Fluoride | 486. | 216.0 |
| Molybdenum | 54.0 | 27.9 |

(p) *Molten salt rinse.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt | |
| Copper | 1.20 | 0.633 |
| Nickel | 1.22 | 0.804 |
| Fluoride | 37.7 | 16.7 |
| Molybdenum | 4.19 | 2.17 |

(q) *Tumbling or burnishing wastewater.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished | |
| Copper | 2.38 | 1.25 |
| Nickel | 2.40 | 1.59 |
| Fluoride | 74.4 | 33.0 |
| Molybdenum | 8.27 | 4.28 |

(r) *Sawing or grinding spent neat oils—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions | |
| Copper | 0.565 | 0.297 |
| Nickel | 0.570 | 0.377 |
| Fluoride | 17.7 | 7.84 |
| Molybdenum | 1.97 | 1.02 |

(t) *Sawing or grinding contact cooling water.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water | |
| Copper | 4.62 | 2.43 |
| Nickel | 4.67 | 3.09 |
| Fluoride | 145. | 64.2 |
| Molybdenum | 16.1 | 8.31 |

(u) *Sawing or grinding rinse.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed | |
| Copper | 0.026 | 0.014 |
| Nickel | 0.026 | 0.017 |
| Fluoride | 0.804 | 0.357 |
| Molybdenum | 0.089 | 0.046 |

(v) *Wet air pollution control blowdown.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed, surface coated or surface treated | |
| Copper | 1.50 | 0.787 |
| Nickel | 1.51 | 1.00 |
| Fluoride | 46.9 | 20.8 |
| Molybdenum | 5.20 | 2.69 |

(w) *Miscellaneous wastewater sources.*

SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.656 | 0.345 |
| Nickel | 0.663 | 0.438 |
| Fluoride | 20.6 | 9.11 |
| Molybdenum | 2.28 | 1.18 |

(x) *Dye penetrant testing wastewater.*

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SUBPART E—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals product tested | |
| Copper | 0.148 | 0.078 |
| Nickel | 0.149 | 0.099 |
| Fluoride | 4.62 | 2.05 |
| Molybdenum | 0.513 | 0.266 |

(y) *Degreasing spent solvents—subpart E—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.55 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in the refractory metals forming process wastewater shall not exceed the values set forth below:

(a) *Rolling spent neat oils and graphite based lubricants—subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals rolled with emulsions | |
| Copper | 0.549 | 0.262 |
| Nickel | 0.236 | 0.159 |
| Fluoride | 25.5 | 11.3 |
| Molybdenum | 2.16 | 0.957 |

(c) *Drawing spent lubricants—subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent lubricants—subpart E—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion press hydraulic fluid leakage.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals extruded | |
| Copper | 1.53 | 0.726 |
| Nickel | 0.655 | 0.441 |
| Fluoride | 70.8 | 31.4 |
| Molybdenum | 5.99 | 2.66 |

(f) *Forging spent lubricants—subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(g) *Forging contact cooling water.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged refractory metals cooled with water | |
| Copper | 0.041 | 0.320 |
| Nickel | 0.018 | 0.021 |
| Fluoride | 1.92 | 0.853 |
| Molybdenum | 0.163 | 0.072 |

(h) *Equipment cleaning wastewater.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.174 | 0.083 |
| Nickel | 0.075 | 0.051 |
| Fluoride | 8.09 | 3.59 |
| Molybdenum | 0.684 | 0.303 |

(i) *Metal powder production wastewater.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals powder produced | |
| Copper | 0.360 | 0.172 |
| Nickel | 0.155 | 0.104 |
| Fluoride | 16.7 | 7.42 |
| Molybdenum | 1.42 | 0.627 |

(j) *Metal powder production floor wash wastewater—subpart E—PSNS.* There

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shall be no discharge of process wastewater pollutants.

(k) *Metal powder pressing spent lubricants—subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

(l) *Surface treatment spent baths.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 0.498 | 0.237 |
| Nickel | 0.214 | 0.144 |
| Fluoride | 23.2 | 10.3 |
| Molybdenum | 1.96 | 0.868 |

(m) *Surface treatment rinse.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals surface treated | |
| Copper | 15.5 | 7.38 |
| Nickel | 6.66 | 4.48 |
| Fluoride | 720 | 320 |
| Molybdenum | 60.9 | 27.0 |

(n) *Alkaline cleaning spent baths.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 0.428 | 0.204 |
| Nickel | 0.184 | 0.124 |
| Fluoride | 19.9 | 8.82 |
| Molybdenum | 1.68 | 0.745 |

(o) *Alkaline cleaning rinse.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals alkaline cleaned | |
| Copper | 10.5 | 4.98 |
| Nickel | 4.49 | 3.02 |
| Fluoride | 48.6 | 216 |
| Molybdenum | 41.1 | 18.2 |

(p) *Molten salt rinse.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals treated with molten salt | |
| Copper | 0.810 | 0.386 |
| Nickel | 0.348 | 0.234 |
| Fluoride | 37.7 | 16.7 |
| Molybdenum | 3.19 | 1.41 |

(q) *Tumbling or burnishing wastewater.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals tumbled or burnished | |
| Copper | 1.60 | 0.763 |
| Nickel | 0.688 | 0.463 |
| Fluoride | 74.4 | 33.0 |
| Molybdenum | 6.29 | 2.79 |

(r) *Sawing or grinding spent neat oils—subpart E—PSNS.* There shall be no discharge or process wastewater pollutants.

(s) *Sawing or grinding spent emulsions.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with emulsions | |
| Copper | 0.380 | 0.181 |
| Nickel | 0.164 | 0.110 |
| Fluoride | 17.7 | 7.84 |
| Molybdenum | 1.50 | 0.663 |

(t) *Sawing or grinding contact cooling water.*

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SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed or ground with contact cooling water | |
| Copper | 3.11 | 1.48 |
| Nickel | 1.34 | 0.899 |
| Fluoride | 145 | 64.2 |
| Molybdenum | 12.2 | 5.42 |

(u) *Sawing or grinding rinse.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground refractory metals rinsed | |
| Copper | 0.018 | 0.009 |
| Nickel | 0.008 | 0.005 |
| Fluoride | 0.803 | 0.357 |
| Molybdenum | 0.068 | 0.030 |

(v) *Wet air pollution control blowdown.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals sawed, ground, surface coated or surface treated | |
| Copper | 1.01 | 0.480 |
| Nickel | 0.433 | 0.291 |
| Fluoride | 46.8 | 20.8 |
| Molybdenum | 3.96 | 1.76 |

(w) *Miscellaneous wastewater source.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals formed | |
| Copper | 0.442 | 0.211 |
| Nickel | 0.192 | 0.128 |
| Fluoride | 20.6 | 9.11 |
| Molybdenum | 1.74 | 0.770 |

(x) *Dye penetrant testing wastewater.*

SUBPART E—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals product tested | |
| Copper | 0.100 | 0.048 |
| Nickel | 0.043 | 0.029 |
| Fluoride | 4.62 | 2.05 |
| Molybdenum | 0.391 | 0.173 |

(y) *Degreasing spend solvents—subpart E—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.56 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart F—Titanium Forming Subcategory

§ 471.60 Applicability; description of the titanium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the titanium forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

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SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water | |
| Cyanide | 1.4 | 0.586 |
| Lead | 2.05 | 0.976 |
| Zinc | 7.13 | 2.98 |
| Ammonia | 651 | 286 |
| Fluoride | 291 | 129 |
| Oil and grease | 97.0 | 58.0 |
| TSS | 200.0 | 95.0 |
| pH | (¹) | (¹) |

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

(c) *Drawing spent neat oils—subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.021 | 0.009 |
| Lead | 0.030 | 0.015 |
| Zinc | 0.105 | 0.044 |
| Ammonia | 9.59 | 4.22 |
| Fluoride | 4.28 | 1.9 |
| Oil and grease | 1.44 | 0.863 |
| TSS | 2.95 | 1.4 |
| pH | (¹) | (¹) |

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

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.052 | 0.022 |
| Lead | 0.075 | 0.036 |
| Zinc | 0.260 | 0.109 |
| Ammonia | 23.7 | 10.5 |
| Fluoride | 10.6 | 4.70 |
| Oil and grease | 3.56 | 2.14 |
| TSS | 7.30 | 3.47 |
| pH | (¹) | (¹) |

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

(g) *Forging spent lubricants—subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water | |
| Cyanide | 0.580 | 0.240 |
| Lead | 0.840 | 0.400 |
| Zinc | 2.92 | 1.22 |
| Ammonia | 267 | 117 |
| Fluoride | 119 | 52.8 |
| Oil and grease | 40.0 | 24.0 |
| TSS | 82.0 | 39.0 |
| pH | (¹) | (¹) |

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

(i) *Forging equipment cleaning wastewater.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals forged | |
| Cyanide | 0.012 | 0.005 |
| Lead | 0.017 | 0.008 |
| Zinc | 0.059 | 0.025 |
| Ammonia | 5.33 | 2.35 |
| Fluoride | 2.38 | 1.06 |
| Oil and grease | 0.800 | 0.480 |
| TSS | 1.64 | 0.780 |
| pH | (¹) | (¹) |

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

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of refractory metals forged | |
| Cyanide | 0.293 | 0.121 |
| Lead | 0.424 | 0.202 |
| Zinc | 1.48 | 0.616 |
| Ammonia | 135 | 59.2 |
| Fluoride | 60.1 | 26.7 |
| Oil and grease | 20.2 | 12.1 |
| TSS | 41.4 | 19.7 |
| pH | (¹) | (¹) |

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

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(k) *Tube reducing spent lubricants—subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—subpart F—BPT.* There shall be no allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.061 | 0.025 |
| Lead | 0.088 | 0.042 |
| Zinc | 0.304 | 0.127 |
| Ammonia | 27.7 | 12.2 |
| Fluoride | 12.4 | 5.49 |
| Oil and grease | 4.16 | 2.50 |
| TSS | 8.53 | 4.06 |
| pH | (¹) | (¹) |

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

(n) *Surface treatment rinse.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 8.47 | 3.51 |
| Lead | 12.3 | 5.84 |
| Zinc | 42.7 | 17.8 |
| Ammonia | 3,890 | 1,710 |
| Fluoride | 1,740 | 771 |
| Oil and grease | 584 | 351 |
| TSS | 1,200 | 570 |
| pH | (¹) | (¹) |

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

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged | |
| Cyanide | 0.621 | 0.257 |
| Lead | 0.899 | 0.428 |
| Zinc | 3.13 | 1.31 |
| Ammonia | 285 | 126 |
| Fluoride | 128 | 56.5 |
| Oil and grease | 42.8 | 25.7 |
| TSS | 87.8 | 41.8 |
| pH | (¹) | (¹) |

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

(p) *Alkaline cleaning spent baths.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.070 | 0.029 |
| Lead | 0.101 | 0.048 |
| Zinc | 0.351 | 0.147 |
| Ammonia | 32.0 | 14.1 |
| Fluoride | 14.3 | 6.34 |
| Oil and grease | 4.80 | 2.88 |
| TSS | 9.84 | 4.68 |
| pH | (¹) | (¹) |

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

(q) *Alkaline cleaning rinse.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.801 | 0.331 |
| Lead | 1.16 | 0.552 |
| Zinc | 4.03 | 1.69 |
| Ammonia | 370 | 160 |
| Fluoride | 164 | 72.9 |
| Oil and grease | 55.2 | 33.1 |
| TSS | 113 | 53.8 |
| pH | (¹) | (¹) |

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

(r) *Molten salt rinse.*

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SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt | |
| Cyanide | 0.277 | 0.115 |
| Lead | 0.401 | 0.191 |
| Zinc | 1.40 | 0.583 |
| Ammonia | 128 | 56.0 |
| Fluoride | 56.8 | 25.2 |
| Oil and grease | 19.1 | 11.5 |
| TSS | 39.2 | 18.6 |
| pH | (¹) | (¹) |

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

(s) *Tumbling wastewater.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium tumbled | |
| Cyanide | 0.229 | 0.095 |
| Lead | 0.332 | 0.158 |
| Zinc | 1.16 | 0.482 |
| Ammonia | 110 | 46 |
| Fluoride | 47.0 | 20.9 |
| Oil and grease | 15.8 | 9.48 |
| TSS | 32.4 | 15.4 |
| pH | (¹) | (¹) |

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

(t) *Sawing or grinding spent neat oils—subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding of spent emulsions.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with an emulsion | |
| Cyanide | 0.053 | 0.022 |
| Lead | 0.077 | 0.037 |
| Zinc | 0.267 | 0.112 |
| Ammonia | 24.4 | 10.7 |
| Fluoride | 10.9 | 4.83 |
| Oil and grease | 3.66 | 2.20 |
| TSS | 7.51 | 3.57 |
| pH | (¹) | (¹) |

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

(v) *Sawing or grinding contact cooling water.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water | |
| Cyanide | 1.38 | 0.571 |
| Lead | 2.00 | 0.952 |
| Zinc | 6.95 | 2.91 |
| Ammonia | 635 | 279 |
| Fluoride | 283 | 126 |
| Oil and grease | 95.2 | 57.1 |
| TSS | 195 | 92.8 |
| pH | (¹) | (¹) |

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

(w) *Dye penetrant testing wastewater.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium tested with dye penetrant methods | |
| Cyanide | 0.325 | 0.135 |
| Lead | 0.471 | 0.224 |
| Zinc | 1.64 | 0.683 |
| Ammonia | 149 | 65.7 |
| Fluoride | 66.7 | 29.6 |
| Oil and grease | 22.4 | 13.5 |
| TSS | 45.9 | 21.9 |
| pH | (¹) | (¹) |

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

(x) *Miscellaneous wastewater sources.*

SUBPART F—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium formed | |
| Cyanide | 0.010 | 0.004 |
| Lead | 0.014 | 0.007 |
| Zinc | 0.048 | 0.020 |
| Ammonia | 4.32 | 1.90 |
| Fluoride | 1.93 | 0.856 |
| Oil and grease | 0.648 | 0.389 |
| TSS | 1.33 | 0.632 |
| pH | (¹) | (¹) |

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

(y) *Degreasing spent solvents—subpart F—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

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

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 (BAT):

- (a) *Rolling spent neat oils—subpart F—BAT.* There shall be no discharge of process wastewater pollutants.
- (b) *Rolling contact cooling water.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water | |
| Cyanide | 0.142 | 0.059 |
| Lead | 0.205 | 0.098 |
| Zinc | 0.713 | 0.298 |
| Ammonia | 65.1 | 28.6 |
| Fluoride | 29.1 | 12.90 |

(c) *Drawing spent neat oils—subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent lubricants.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.021 | 0.009 |
| Lead | 0.030 | 0.015 |
| Zinc | 0.105 | 0.044 |
| Ammonia | 9.59 | 4.22 |
| Fluoride | 4.28 | 1.90 |

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.052 | 0.022 |
| Lead | 0.075 | 0.036 |
| Zinc | 0.260 | 0.109 |
| Ammonia | 23.7 | 10.5 |
| Fluoride | 10.6 | 4.70 |

(g) *Forging spent lubricants—subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water | |
| Cyanide | 0.029 | 0.012 |
| Lead | 0.042 | 0.020 |
| Zinc | 0.146 | 0.061 |
| Ammonia | 13.3 | 5.86 |
| Fluoride | 5.95 | 2.64 |

(i) *Forging equipment cleaning wastewater.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged cyanide | |
| Cyanide | 0.012 | 0.005 |
| Lead | 0.017 | 0.008 |
| Zinc | 0.059 | 0.025 |
| Ammonia | 5.33 | 2.35 |
| Fluoride | 2.38 | 1.06 |

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged | |
| Cyanide | 0.293 | 0.121 |
| Lead | 0.424 | 0.202 |
| Zinc | 1.48 | 0.616 |
| Ammonia | 135 | 59.2 |
| Fluoride | 60.1 | 26.7 |

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(k) *Tube reducing spent lubricants—subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—subpart F—BAT.* There shall be no discharge allowance for process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.061 | 0.025 |
| Lead | 0.088 | 0.042 |
| Zinc | 0.304 | 0.127 |
| Ammonia | 27.7 | 12.2 |
| Fluoride | 12.4 | 5.49 |

(n) *Surface treatment rinse.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.847 | 0.351 |
| Lead | 1.23 | 0.584 |
| Zinc | 4.27 | 1.78 |
| Ammonia | 389 | 171 |
| Fluoride | 174 | 77.1 |

(o) *Wet air pollutant control scrubber blowdown.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged | |
| Cyanide | 0.062 | 0.026 |
| Lead | 0.090 | 0.043 |
| Zinc | 0.313 | 0.131 |
| Ammonia | 28.5 | 12.6 |
| Fluoride | 12.8 | 5.68 |

(p) *Alkaline cleaning spent baths.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.070 | 0.029 |
| Lead | 0.101 | 0.048 |
| Zinc | 0.351 | 0.147 |
| Ammonia | 32 | 14.1 |
| Fluoride | 14.3 | 6.34 |

(q) *Alkaline cleaning rinse.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.080 | 0.033 |
| Lead | 0.116 | 0.055 |
| Zinc | 0.403 | 0.169 |
| Ammonia | 36.8 | 16.2 |
| Fluoride | 16.4 | 7.29 |

(r) *Molten salt rinse.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt | |
| Cyanide | 0.277 | 0.115 |
| Lead | 0.401 | 0.191 |
| Zinc | 1.40 | 0.583 |
| Ammonia | 128 | 56 |
| Fluoride | 56.8 | 25.2 |

(s) *Tumbling wastewater.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium tumbled | |
| Cyanide | 0.022 | 0.010 |
| Lead | 0.033 | 0.016 |
| Zinc | 0.116 | 0.048 |
| Ammonia | 11.0 | 4.60 |
| Fluoride | 4.70 | 2.09 |

(t) *Sawing or grinding spent neat oils—subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

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(u) *Sawing or grinding spent emulsions.*

| SUBPART F—BAT | | |
|---------------------------------|--|-----------------------------|
| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions | |
| Cyanide | 0.053 | 0.022 |
| Lead | 0.077 | 0.037 |
| Zinc | 0.267 | 0.112 |
| Ammonia | 24.4 | 10.7 |
| Fluoride | 10.9 | 4.83 |

(v) *Sawing or grinding contact cooling water.*

| SUBPART F—BAT | | |
|---------------------------------|--|-----------------------------|
| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
| | mg/off-kg (pounds per million off-pounds) to titanium sawed or ground with contact cooling water | |
| Cyanide | 0.138 | 0.057 |
| Lead | 0.200 | 0.095 |
| Zinc | 0.695 | 0.291 |
| Ammonia | 63.5 | 27.9 |
| Fluoride | 28.3 | 12.6 |

(w) *Dye penetrant testing wastewater.*

| SUBPART F—BAT | | |
|---------------------------------|---|-----------------------------|
| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
| | mg/off-kg (pounds per million off-pounds) of titanium tested with dye penetrant methods | |
| Cyanide | 0.325 | 0.135 |
| Lead | 0.471 | 0.224 |
| Zinc | 1.64 | 0.683 |
| Ammonia | 149 | 65.7 |
| Fluoride | 66.7 | 29.6 |

(x) *Miscellaneous wastewater sources.*

SUBPART F—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium formed | |
| Cyanide | 0.010 | 0.004 |
| Lead | 0.014 | 0.007 |
| Zinc | 0.048 | 0.020 |
| Ammonia | 4.32 | 1.90 |
| Fluoride | 1.93 | 0.856 |

(y) *Degreasing spent solvents—subpart F—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.63 **New source performance standards (NSPS).**

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The discharge of wastewater pollutants from titanium process wastewater shall not exceed the values set forth below:

(a) *Rolling spent neat oils—subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water | |
| Cyanide | 0.142 | 0.059 |
| Lead | 0.205 | 0.098 |
| Zinc | 0.713 | 0.298 |
| Ammonia | 65.1 | 28.6 |
| Fluoride | 29.1 | 12.9 |
| Oil and grease | 9.76 | 5.86 |
| TSS | 20.0 | 9.52 |
| pH | (¹) | (¹) |

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

(c) *Drawing spent neat oils—subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

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SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.021 | 0.009 |
| Lead | 0.030 | 0.015 |
| Zinc | 0.105 | 0.044 |
| Ammonia | 9.59 | 4.22 |
| Fluoride | 4.28 | 1.9 |
| Oil and grease | 1.44 | 0.863 |
| TSS | 2.95 | 1.40 |
| pH | (¹) | (¹) |

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

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.052 | 0.022 |
| Lead | 0.075 | 0.036 |
| Zinc | 0.260 | 0.109 |
| Ammonia | 23.7 | 10.5 |
| Fluoride | 10.6 | 4.70 |
| Oil and grease | 3.56 | 2.14 |
| TSS | 7.30 | 3.47 |
| pH | (¹) | (¹) |

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

(g) *Forging spent lubricants—subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water | |
| Cyanide | 0.029 | 0.012 |
| Lead | 0.0420 | 0.020 |
| Zinc | 0.146 | 0.061 |
| Ammonia | 13.3 | 5.86 |
| Fluoride | 5.95 | 2.64 |
| Oil and grease | 2.00 | 1.20 |
| TSS | 4.10 | 1.95 |
| pH | (¹) | (¹) |

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

(i) *Forging equipment cleaning wastewater.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged | |
| Cyanide | 0.012 | 0.005 |
| Lead | 0.017 | 0.008 |
| Zinc | 0.059 | 0.025 |
| Ammonia | 5.33 | 2.35 |
| Fluoride | 2.38 | 1.06 |
| Oil and grease | 0.800 | 0.490 |
| TSS | 1.64 | 0.780 |
| pH | (¹) | (¹) |

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

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged | |
| Cyanide | 0.293 | 0.121 |
| Lead | 0.424 | 0.202 |
| Zinc | 1.48 | 0.616 |
| Ammonia | 135 | 59.2 |
| Fluoride | 60.1 | 26.7 |
| Oil and grease | 20.2 | 12.1 |
| TSS | 41.4 | 19.7 |
| pH | (¹) | (¹) |

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

(k) *Tube reducing spent lubricants—subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—subpart F—NSPS.* There shall be no discharge allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.061 | 0.025 |
| Lead | 0.088 | 0.042 |
| Zinc | 0.304 | 0.127 |
| Ammonia | 27.7 | 12.2 |
| Fluoride | 12.4 | 5.49 |
| Oil and grease | 4.16 | 2.50 |
| TSS | 8.53 | 4.06 |
| pH | (¹) | (¹) |

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

(n) *Surface treatment rinse.*

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SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.847 | 0.351 |
| Lead | 1.23 | 0.584 |
| Zinc | 4.27 | 1.78 |
| Ammonia | 389 | 171 |
| Fluoride | 174 | 77.1 |
| Oil and grease | 58.4 | 35.1 |
| TSS | 120 | 57.0 |
| pH | (¹) | (¹) |

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

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged | |
| Cyanide | 0.062 | 0.026 |
| Lead | 0.090 | 0.043 |
| Zinc | 0.313 | 0.131 |
| Ammonia | 28.5 | 12.6 |
| Fluoride | 12.8 | 5.65 |
| Oil and grease | 4.28 | 2.57 |
| TSS | 8.78 | 4.18 |
| pH | (¹) | (¹) |

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

(p) *Alkaline cleaning spent baths.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.070 | 0.030 |
| Lead | 0.101 | 0.048 |
| Zinc | 0.351 | 0.147 |
| Ammonia | 32.0 | 14.1 |
| Fluoride | 14.3 | 6.34 |
| Oil and grease | 4.80 | 2.88 |
| TSS | 9.84 | 4.68 |
| pH | (¹) | (¹) |

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

(q) *Alkaline cleaning rinse.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.080 | 0.033 |
| Lead | 0.116 | 0.055 |
| Zinc | 0.403 | 0.169 |
| Ammonia | 36.8 | 16.2 |
| Fluoride | 16.4 | 7.29 |
| Oil and grease | 5.52 | 3.31 |
| TSS | 11.3 | 5.38 |
| pH | (¹) | (¹) |

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

(r) *Molten salt rinse.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt | |
| Cyanide | 0.277 | 0.115 |
| Lead | 0.401 | 0.191 |
| Zinc | 1.40 | 0.583 |
| Ammonia | 128 | 56.0 |
| Fluoride | 56.8 | 25.2 |
| Oil and grease | 19.1 | 11.5 |
| TSS | 39.2 | 18.6 |
| pH | (¹) | (¹) |

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

(s) *Tumbling wastewater.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium tumbled | |
| Cyanide | 0.023 | 0.010 |
| Lead | 0.033 | 0.016 |
| Zinc | 0.116 | 0.048 |
| Ammonia | 10.6 | 4.63 |
| Fluoride | 4.70 | 2.09 |
| Oil and grease | 1.58 | 0.948 |
| TSS | 3.24 | 1.54 |
| pH | (¹) | (¹) |

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

(t) *Sawing or grinding spent neat oils—subpart F—NSPS.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

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SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions | |
| Cyanide | 0.053 | 0.022 |
| Lead | 0.077 | 0.037 |
| Zinc | 0.267 | 0.112 |
| Ammonia | 24.4 | 10.7 |
| Fluoride | 10.9 | 4.83 |
| Oil and grease | 3.66 | 2.20 |
| TSS | 7.51 | 3.57 |
| pH | (¹) | (¹) |

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

(v) *Sawing or grinding contact cooling water.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water | |
| Cyanide | 0.138 | 0.057 |
| Lead | 0.200 | 0.095 |
| Zinc | 0.695 | 0.291 |
| Ammonia | 63.5 | 27.9 |
| Fluoride | 28.3 | 12.6 |
| Oil and grease | 9.52 | 5.71 |
| TSS | 19.5 | 9.28 |
| pH | (¹) | (¹) |

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

(w) *Dye penetrant testing wastewater.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium tested using dye penetrant methods | |
| Cyanide | 0.325 | 0.135 |
| Lead | 0.471 | 0.224 |
| Zinc | 1.64 | 0.683 |
| Ammonia | 149 | 65.7 |
| Fluoride | 66.7 | 29.6 |
| Oil and grease | 22.4 | 13.5 |
| TSS | 45.9 | 21.9 |
| pH | (¹) | (¹) |

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

(x) *Miscellaneous wastewater sources.*

SUBPART F—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium formed | |
| Cyanide | 0.010 | 0.004 |
| Lead | 0.014 | 0.007 |
| Zinc | 0.048 | 0.020 |
| Ammonia | 4.32 | 1.90 |
| Fluoride | 1.93 | 0.856 |
| Oil and grease | 0.648 | 0.389 |
| TSS | 1.33 | 0.63 |
| pH | (¹) | (¹) |

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

(y) *Degreasing spent solvents—subpart F—NSPS.* There shall be no discharge of process wastewater pollutant.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.64 Pretreatment standards for existing sources (PSES).

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 by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in titanium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water | |
| Cyanide | 0.142 | 0.059 |
| Lead | 0.205 | 0.098 |
| Zinc | 0.713 | 0.298 |
| Ammonia | 65.1 | 28.6 |
| Fluoride | 29.1 | 12.9 |

(c) *Drawing spent neat oils—subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

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(d) *Extrusion spent neat oils—subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.021 | 0.009 |
| Lead | 0.030 | 0.015 |
| Zinc | 0.105 | 0.044 |
| Ammonia | 9.59 | 4.22 |
| Fluoride | 4.28 | 1.90 |

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.052 | 0.022 |
| Lead | 0.75 | 0.036 |
| Zinc | 0.260 | 0.109 |
| Ammonia | 23.7 | 10.5 |
| Fluoride | 10.6 | 4.70 |

(g) *Forging spent lubricants—subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(h) *Forging contact cooling water.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water | |
| Cyanide | 0.029 | 0.012 |
| Lead | 0.042 | 0.020 |
| Zinc | 0.146 | 0.061 |
| Ammonia | 13.3 | 5.86 |
| Fluoride | 5.95 | 2.64 |

(i) *Forging equipment cleaning wastewater.*

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SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged | |
| Cyanide | 0.012 | 0.005 |
| Lead | 0.017 | 0.008 |
| Zinc | 0.059 | 0.025 |
| Ammonia | 5.33 | 2.35 |
| Fluoride | 2.38 | 1.06 |

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged | |
| Cyanide | 0.293 | 0.121 |
| Lead | 0.424 | 0.202 |
| Zinc | 1.48 | 0.616 |
| Ammonia | 135 | 59.2 |
| Fluoride | 60.1 | 26.7 |

(k) *Tube reducing spent lubricants—subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—subpart F—PSES.* There shall be no discharge allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.061 | 0.025 |
| Lead | 0.088 | 0.042 |
| Zinc | 0.304 | 0.127 |
| Ammonia | 27.7 | 12.2 |
| Fluoride | 12.4 | 5.49 |

(n) *Surface treatment rinse.*

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SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.847 | 0.351 |
| Lead | 1.23 | 0.584 |
| Zinc | 4.27 | 1.78 |
| Ammonia | 389 | 171 |
| Fluoride | 174 | 77.1 |

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged | |
| Cyanide | 0.062 | 0.026 |
| Lead | 0.090 | 0.043 |
| Zinc | 0.313 | 0.131 |
| Ammonia | 28.5 | 12.6 |
| Fluoride | 12.8 | 5.65 |

(p) *Alkaline cleaning spent baths.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.070 | 0.029 |
| Lead | 0.101 | 0.048 |
| Zinc | 0.351 | 0.147 |
| Ammonia | 32.0 | 14.1 |
| Fluoride | 14.3 | 6.34 |

(q) *Alkaline cleaning rinse.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.080 | 0.033 |
| Lead | 0.116 | 0.055 |
| Zinc | 0.403 | 0.169 |
| Ammonia | 36.8 | 16.2 |
| Fluoride | 16.4 | 7.29 |

(r) *Molten salt rinse.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt | |
| Cyanide | 0.277 | 0.115 |
| Lead | 0.401 | 0.191 |
| Zinc | 1.40 | 0.583 |
| Ammonia | 128 | 56.0 |
| Fluoride | 56.8 | 25.2 |

(s) *Tumbling wastewater.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium tumbled | |
| Cyanide | 0.023 | 0.010 |
| Lead | 0.033 | 0.016 |
| Zinc | 0.116 | 0.048 |
| Ammonia | 10.6 | 4.63 |
| Fluoride | 4.70 | 2.09 |

(t) *Sawing or grinding spent neat oils—subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

(u) *Sawing or grinding spent emulsions.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions | |
| Cyanide | 0.053 | 0.022 |
| Lead | 0.077 | 0.037 |
| Zinc | 0.267 | 0.112 |
| Ammonia | 24.4 | 10.7 |
| Fluoride | 10.9 | 4.83 |

(v) *Sawing or grinding contact cooling water.*

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SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water | |
| Cyanide | 0.138 | 0.057 |
| Lead | 0.200 | 0.095 |
| Zinc | 0.695 | 0.291 |
| Ammonia | 63.5 | 27.9 |
| Fluoride | 28.3 | 12.6 |

(w) *Dye penetrant testing wastewater.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium treated using dye penetrant methods | |
| Cyanide | 0.325 | 0.135 |
| Lead | 0.471 | 0.224 |
| Zinc | 1.64 | 0.638 |
| Ammonia | 149 | 65.7 |
| Fluoride | 66.7 | 29.6 |

(x) *Miscellaneous wastewater sources.*

SUBPART F—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium formed | |
| Cyanide | 0.010 | 0.004 |
| Lead | 0.014 | 0.007 |
| Zinc | 0.048 | 0.020 |
| Ammonia | 4.32 | 1.90 |
| Fluoride | 1.93 | 0.856 |

(y) *Degreasing spent solvents—subpart F—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

§ 471.65 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in the

titanium forming process wastewater shall not exceed the values set forth below:

(a) *Rolling spent neat oils—subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling contact cooling water.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium rolled with contact cooling water | |
| Cyanide | 0.142 | 0.059 |
| Lead | 0.205 | 0.098 |
| Zinc | 0.713 | 0.298 |
| Ammonia | 65.1 | 28.6 |
| Fluoride | 29.1 | 12.9 |

(c) *Drawing spent neat oils—subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion spent neat oils—subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(e) *Extrusion spent emulsions.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.021 | 0.009 |
| Lead | 0.030 | 0.015 |
| Zinc | 0.105 | 0.044 |
| Ammonia | 9.59 | 4.22 |
| Fluoride | 4.28 | 1.90 |

(f) *Extrusion press hydraulic fluid leakage.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium extruded | |
| Cyanide | 0.052 | 0.022 |
| Lead | 0.075 | 0.036 |
| Zinc | 0.260 | 0.109 |
| Ammonia | 23.7 | 10.5 |
| Fluoride | 10.6 | 4.70 |

(g) *Forging spent lubricants—subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

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(h) *Forging contact cooling water.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of forged titanium cooled with water | |
| Cyanide | 0.029 | 0.012 |
| Lead | 0.042 | 0.020 |
| Zinc | 0.146 | 0.061 |
| Ammonia | 13.3 | 5.86 |
| Fluoride | 5.95 | 2.64 |

(i) *Forging equipment cleaning wastewater.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged | |
| Cyanide | 0.012 | 0.005 |
| Lead | 0.017 | 0.008 |
| Zinc | 0.059 | 0.025 |
| Ammonia | 5.33 | 2.35 |
| Fluoride | 2.38 | 1.06 |

(j) *Forging press hydraulic fluid leakage.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium forged | |
| Cyanide | 0.293 | 0.121 |
| Lead | 0.424 | 0.202 |
| Zinc | 1.48 | 0.616 |
| Ammonia | 135 | 59.2 |
| Fluoride | 60.1 | 26.7 |

(k) *Tube reducing spent lubricants—subpart F—PSNS.* There shall be no discharge of process wastewater pollutants.

(l) *Heat treatment contact cooling water—subpart F—PSNS.* There shall be no discharge allowance for the discharge of process wastewater pollutants.

(m) *Surface treatment spent baths.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.061 | 0.025 |
| Lead | 0.088 | 0.042 |
| Zinc | 0.304 | 0.127 |
| Ammonia | 27.7 | 12.2 |
| Fluoride | 12.4 | 5.49 |

(n) *Surface treatment rinse.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated | |
| Cyanide | 0.847 | 0.351 |
| Lead | 1.23 | 0.584 |
| Zinc | 4.27 | 1.78 |
| Ammonia | 389 | 171 |
| Fluoride | 174 | 77.1 |

(o) *Wet air pollution control scrubber blowdown.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium surface treated or forged | |
| Cyanide | 0.062 | 0.026 |
| Lead | 0.090 | 0.043 |
| Zinc | 0.313 | 0.131 |
| Ammonia | 28.5 | 12.6 |
| Fluoride | 12.8 | 5.65 |

(p) *Alkaline cleaning spent baths.*

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.070 | 0.029 |
| Lead | 0.101 | 0.048 |
| Zinc | 0.351 | 0.147 |
| Ammonia | 32.0 | 14.1 |
| Fluoride | 14.3 | 6.34 |

(q) *Alkaline cleaning rinse.*

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SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium alkaline cleaned | |
| Cyanide | 0.080 | 0.033 |
| Lead | 0.116 | 0.055 |
| Zinc | 0.403 | 0.169 |
| Ammonia | 36.8 | 16.2 |
| Fluoride | 16.4 | 7.29 |

(r) Molten salt rinse.

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium treated with molten salt | |
| Cyanide | 0.277 | 0.115 |
| Lead | 0.401 | 0.191 |
| Zinc | 1.40 | 0.583 |
| Ammonia | 128 | 56.0 |
| Fluoride | 56.8 | 25.2 |

(s) Tumbling wastewater.

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium tumbled | |
| Cyanide | 0.023 | 0.010 |
| Lead | 0.033 | 0.016 |
| Zinc | 0.116 | 0.048 |
| Ammonia | 10.6 | 4.63 |
| Fluoride | 4.70 | 2.09 |

(t) Sawing or grinding spent neat oils—subpart F—PSNS. There shall be no discharge of process wastewater pollutants.

(u) Sawing or grinding spent emulsions.

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with emulsions | |
| Cyanide | 0.053 | 0.022 |
| Lead | 0.077 | 0.037 |
| Zinc | 0.267 | 0.112 |
| Ammonia | 24.4 | 10.7 |
| Fluoride | 10.9 | 4.83 |

(v) Sawing or grinding contact cooling water.

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium sawed or ground with contact cooling water | |
| Cyanide | 0.138 | 0.057 |
| Lead | 0.200 | 0.095 |
| Zinc | 0.695 | 0.291 |
| Ammonia | 63.5 | 27.9 |
| Fluoride | 28.3 | 12.6 |

(w) Dye penetrant testing wastewater.

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium treated using dye penetrant methods | |
| Cyanide | 0.325 | 0.135 |
| Lead | 0.471 | 0.224 |
| Zinc | 1.64 | 0.683 |
| Ammonia | 149 | 65.7 |
| Fluoride | 66.7 | 29.6 |

(x) Miscellaneous wastewater sources.

SUBPART F—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of titanium formed | |
| Cyanide | 0.010 | 0.004 |
| Lead | 0.014 | 0.007 |
| Zinc | 0.048 | 0.020 |
| Ammonia | 4.32 | 1.90 |
| Fluoride | 1.93 | 0.856 |

(y) Degreasing spent solvents—subpart F—PSNS. There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2887, Jan. 22, 1986]

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§ 471.66 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart G—Uranium Forming Subcategory

§ 471.70 Applicability; description of the uranium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the uranium forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Extrusion spent lubricants—subpart G—BPT.* There shall be no discharge process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium extruded | |
| Cadmium | 0.117 | 0.052 |
| Chromium | 0.152 | 0.062 |
| Copper | 0.654 | 0.344 |
| Lead | 0.145 | 0.069 |
| Nickel | 0.661 | 0.437 |
| Fluoride | 20.5 | 9.08 |
| Molybdenum | 2.28 | 1.18 |
| Oil and grease | 6.88 | 4.13 |
| TSS | 14.1 | 6.71 |
| pH | (¹) | (¹) |

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

(c) *Heat treatment contact cooling water.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated | |
| Cadmium | 0.646 | 0.285 |
| Chromium | 0.836 | 0.342 |
| Copper | 3.61 | 1.90 |
| Lead | 0.798 | 0.380 |
| Nickel | 3.65 | 2.42 |
| Fluoride | 113 | 50.2 |
| Molybdenum | 12.6 | 6.5 |
| Oil and grease | 38 | 22.8 |
| TSS | 77.9 | 37.1 |
| pH | (¹) | (¹) |

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

(d) *Forging spent lubricants—subpart G—BPT.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.010 | 0.004 |
| Chromium | 0.012 | 0.005 |
| Copper | 0.052 | 0.027 |
| Lead | 0.012 | 0.006 |
| Nickel | 0.052 | 0.035 |
| Fluoride | 1.62 | 0.718 |
| Molybdenum | 0.180 | 0.093 |
| Oil and grease | 0.544 | 0.327 |
| TSS | 1.12 | 0.531 |
| pH | (¹) | (¹) |

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

(f) *Surface treatment rinse.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.115 | 0.050 |
| Chromium | 0.149 | 0.061 |
| Copper | 0.641 | 0.337 |
| Lead | 0.142 | 0.068 |
| Nickel | 0.647 | 0.428 |
| Fluoride | 20.1 | 8.90 |
| Molybdenum | 2.23 | 1.16 |
| Oil and grease | 6.74 | 4.05 |
| TSS | 13.8 | 6.57 |
| pH | (¹) | (¹) |

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

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(g) *Wet air pollution control scrubber blowdown.*

(j) *Sawing or grinding rinse.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.00 | 0.0006 |
| Chromium | 0.002 | 0.0007 |
| Copper | 0.007 | 0.004 |
| Lead | 0.002 | 0.0007 |
| Nickel | 0.007 | 0.005 |
| Fluoride | 0.208 | 0.092 |
| Molybdenum | 0.023 | 0.012 |
| Oil and grease | 0.070 | 0.042 |
| TSS | 0.143 | 0.068 |
| pH | (¹) | (¹) |

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

(h) *Sawing or grinding spent emulsions.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions | |
| Cadmium | 0.002 | 0.0009 |
| Chromium | 0.003 | 0.001 |
| Copper | 0.011 | 0.006 |
| Lead | 0.003 | 0.001 |
| Nickel | 0.011 | 0.007 |
| Fluoride | 0.338 | 0.150 |
| Molybdenum | 0.038 | 0.020 |
| Oil and grease | 0.114 | 0.068 |
| TSS | 0.233 | 0.111 |
| pH | (¹) | (¹) |

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

(i) *Sawing or grinding contact cooling water.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling water | |
| Cadmium | 0.561 | 0.248 |
| Chromium | 0.726 | 0.297 |
| Copper | 3.14 | 1.65 |
| Lead | 0.693 | 0.330 |
| Nickel | 3.17 | 2.1 |
| Fluoride | 98.2 | 43.6 |
| Molybdenum | 10.9 | 5.65 |
| Oil and grease | 33.0 | 19.8 |
| TSS | 67.7 | 32.2 |
| pH | (¹) | (¹) |

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

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinses | |
| Cadmium | 0.002 | 0.0007 |
| Chromium | 0.002 | 0.0009 |
| Copper | 0.009 | 0.005 |
| Lead | 0.002 | 0.001 |
| Nickel | 0.009 | 0.006 |
| Fluoride | 0.277 | 0.123 |
| Molybdenum | 0.031 | 0.016 |
| Oil and grease | 0.093 | 0.056 |
| TSS | 0.191 | 0.091 |
| pH | (¹) | (¹) |

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

(k) *Area cleaning rinse.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.015 | 0.007 |
| Chromium | 0.019 | 0.008 |
| Copper | 0.082 | 0.043 |
| Lead | 0.018 | 0.009 |
| Nickel | 0.083 | 0.055 |
| Fluoride | 2.56 | 1.14 |
| Molybdenum | 0.284 | 0.147 |
| Oil and grease | 0.858 | 0.515 |
| TSS | 1.76 | 0.837 |
| pH | (¹) | (¹) |

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

(l) *Drum washwater.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.015 | 0.007 |
| Chromium | 0.020 | 0.008 |
| Copper | 0.084 | 0.045 |
| Lead | 0.019 | 0.009 |
| Nickel | 0.085 | 0.057 |
| Fluoride | 2.64 | 1.17 |
| Molybdenum | 0.293 | 0.152 |
| Oil and grease | 0.886 | 0.532 |
| TSS | 1.82 | 0.864 |
| pH | (¹) | (¹) |

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

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(m) *Laundry washwater.*

SUBPART G—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|-----------------------|-----------------------------|
| | mg/employee—day | |
| Cadmium | 17.8 | 7.86 |
| Chromium | 23.1 | 9.43 |
| Copper | 99.6 | 52.4 |
| Lead | 22.0 | 10.5 |
| Nickel | 101 | 66.6 |
| Fluoride | 3,120 | 1,390 |
| Molybdenum | 347 | 179 |
| Oil and grease | 1,050 | 629 |
| TSS | 2,150 | 1,020 |
| pH | (¹) | (¹) |

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

(n) *Degreasing spent solvents—subpart G—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

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

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 (BAT):

(a) *Extrusion spent lubricants—subpart G—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium extruded | |
| Cadmium | 0.007 | 0.003 |
| Chromium | 0.013 | 0.005 |
| Copper | 0.044 | 0.021 |
| Lead | 0.010 | 0.005 |
| Nickel | 0.019 | 0.013 |
| Fluoride | 2.05 | 0.908 |
| Molybdenum | 0.173 | 0.077 |

(c) *Heat treatment contact cooling water.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated | |
| Cadmium | 0.006 | 0.003 |
| Chromium | 0.012 | 0.005 |
| Copper | 0.040 | 0.019 |
| Lead | 0.009 | 0.004 |
| Nickel | 0.017 | 0.012 |
| Fluoride | 1.86 | 0.827 |
| Molybdenum | 0.158 | 0.070 |

(d) *Forging spent lubricants—subpart G—BAT.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.006 | 0.002 |
| Chromium | 0.010 | 0.004 |
| Copper | 0.035 | 0.017 |
| Lead | 0.008 | 0.004 |
| Nickel | 0.015 | 0.010 |
| Fluoride | 1.62 | 0.718 |
| Molybdenum | 0.137 | 0.061 |

(f) *Surface treatment rinse.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.068 | 0.027 |
| Chromium | 0.125 | 0.051 |
| Copper | 0.432 | 0.260 |
| Lead | 0.095 | 0.044 |
| Nickel | 0.186 | 0.125 |
| Fluoride | 20.1 | 8.90 |
| Molybdenum | 1.70 | 0.752 |

(g) *Wet air pollution control scrubber blowdown.*

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SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.0007 | 0.0003 |
| Chromium | 0.001 | 0.0005 |
| Copper | 0.005 | 0.002 |
| Lead | 0.001 | 0.0005 |
| Nickel | 0.002 | 0.001 |
| Fluoride | 0.208 | 0.092 |
| Molybdenum | 0.018 | 0.008 |

(h) *Sawing or grinding spent emulsions.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions | |
| Cadmium | 0.001 | 0.0005 |
| Chromium | 0.002 | 0.0009 |
| Copper | 0.007 | 0.004 |
| Lead | 0.002 | 0.001 |
| Nickel | 0.003 | 0.002 |
| Fluoride | 0.338 | 0.150 |
| Molybdenum | 0.029 | 0.013 |

(i) *Sawing or grinding contact cooling water.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling water | |
| Cadmium | 0.033 | 0.013 |
| Chromium | 0.061 | 0.025 |
| Copper | 0.211 | 0.101 |
| Lead | 0.046 | 0.022 |
| Nickel | 0.091 | 0.061 |
| Fluoride | 9.82 | 4.36 |
| Molybdenum | 0.830 | 0.368 |

(j) *Sawing or grinding rinse.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinse | |
| Cadmium | 0.001 | 0.0004 |
| Chromium | 0.002 | 0.0007 |
| Copper | 0.006 | 0.003 |
| Lead | 0.002 | 0.0006 |
| Nickel | 0.003 | 0.002 |
| Fluoride | 0.277 | 0.123 |
| Molybdenum | 0.024 | 0.011 |

(k) *Area cleaning rinse.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.009 | 0.004 |
| Chromium | 0.016 | 0.007 |
| Copper | 0.055 | 0.026 |
| Lead | 0.012 | 0.006 |
| Nickel | 0.024 | 0.016 |
| Fluoride | 2.56 | 1.14 |
| Molybdenum | 0.216 | 0.096 |

(l) *Drum, washwater.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.009 | 0.004 |
| Chromium | 0.017 | 0.007 |
| Copper | 0.057 | 0.027 |
| Lead | 0.013 | 0.006 |
| Nickel | 0.025 | 0.017 |
| Fluoride | 2.64 | 1.17 |
| Molybdenum | 0.223 | 0.099 |

(m) *Laundry washwater.*

SUBPART G—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|-----------------------|-----------------------------|
| | mg/employee—day | |
| Cadmium | 5.24 | 2.10 |
| Chromium | 9.70 | 3.93 |
| Copper | 33.6 | 16.0 |
| Lead | 7.34 | 3.41 |
| Nickel | 14.4 | 9.70 |
| Fluoride | 1.560 | 692 |
| Molybdenum | 132 | 58.4 |

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(n) *Degreasing spent solvents—subpart G—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.73 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutants in the uranium forming process wastewater shall not exceed the following values:

(a) *Extrusion spent lubricants—subpart G—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium extruded | |
| Cadmium | 0.007 | 0.003 |
| Chromium | 0.013 | 0.005 |
| Copper | 0.044 | 0.021 |
| Lead | 0.010 | 0.005 |
| Nickel | 0.019 | 0.013 |
| Fluoride | 2.05 | 0.908 |
| Molybdenum | 0.173 | 0.077 |
| Oil and grease | 0.344 | 0.344 |
| TSS | 0.516 | 0.413 |
| pH | (¹) | (¹) |

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

(c) *Heat treatment contact cooling water.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated | |
| Cadmium | 0.006 | 0.003 |
| Chromium | 0.012 | 0.005 |
| Copper | 0.040 | 0.019 |
| Lead | 0.009 | 0.004 |
| Nickel | 0.017 | 0.012 |
| Fluoride | 1.86 | 0.827 |
| Molybdenum | 0.158 | 0.070 |
| Oil and grease | 0.313 | 0.313 |
| TSS | 0.470 | 0.376 |
| pH | (¹) | (¹) |

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

(d) *Forging spent lubricants—subpart G—NSPS.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.006 | 0.002 |
| Chromium | 0.010 | 0.004 |
| Copper | 0.035 | 0.017 |
| Lead | 0.008 | 0.004 |
| Nickel | 0.015 | 0.010 |
| Fluoride | 1.62 | 0.718 |
| Molybdenum | 0.137 | 0.061 |
| Oil and grease | 0.272 | 0.272 |
| TSS | 0.408 | 0.327 |
| pH | (¹) | (¹) |

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

(f) *Surface treatment rinse.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.068 | 0.027 |
| Chromium | 0.125 | 0.051 |
| Copper | 0.432 | 0.206 |
| Lead | 0.095 | 0.044 |
| Nickel | 0.186 | 0.125 |
| Fluoride | 20.1 | 8.90 |
| Molybdenum | 1.70 | 0.752 |
| Oil and grease | 3.37 | 3.37 |
| TSS | 5.06 | 4.05 |
| pH | (¹) | (¹) |

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

(g) *Wet air pollution control scrubber blowdown.*

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SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.0007 | 0.0003 |
| Chromium | 0.001 | 0.0005 |
| Copper | 0.005 | 0.002 |
| Lead | 0.001 | 0.0005 |
| Nickel | 0.002 | 0.001 |
| Fluoride | 0.208 | 0.092 |
| Molybdenum | 0.018 | 0.008 |
| Oil and grease | 0.035 | 0.035 |
| TSS | 0.053 | 0.042 |
| pH | (¹) | (¹) |

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

(h) *Sawing or grinding spent emulsions.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions | |
| Cadmium | 0.001 | 0.0005 |
| Chromium | 0.002 | 0.0009 |
| Copper | 0.007 | 0.004 |
| Lead | 0.002 | 0.0008 |
| Nickel | 0.003 | 0.002 |
| Fluoride | 0.338 | 0.150 |
| Molybdenum | 0.029 | 0.013 |
| Oil and grease | 0.057 | 0.057 |
| TSS | 0.085 | 0.068 |
| pH | (¹) | (¹) |

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

(i) *Sawing or grinding contact cooling water.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling water | |
| Cadmium | 0.033 | 0.013 |
| Chromium | 0.061 | 0.025 |
| Copper | 0.211 | 0.101 |
| Lead | 0.046 | 0.022 |
| Nickel | 0.091 | 0.061 |
| Fluoride | 9.82 | 4.36 |
| Molybdenum | 0.830 | 0.368 |
| Oil and grease | 1.65 | 1.65 |
| TSS | 2.48 | 1.98 |
| pH | (¹) | (¹) |

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

(j) *Sawing or grinding rinse.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinsed | |
| Cadmium | 0.001 | 0.0004 |
| Chromium | 0.002 | 0.0007 |
| Copper | 0.006 | 0.003 |
| Lead | 0.002 | 0.0006 |
| Nickel | 0.003 | 0.002 |
| Fluoride | 0.277 | 0.123 |
| Molybdenum | 0.024 | 0.011 |
| Oil and grease | 0.047 | 0.047 |
| TSS | 0.070 | 0.056 |
| pH | (¹) | (¹) |

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

(k) *Area cleaning rinse.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.009 | 0.004 |
| Chromium | 0.016 | 0.007 |
| Copper | 0.055 | 0.026 |
| Lead | 0.012 | 0.006 |
| Nickel | 0.024 | 0.016 |
| Fluoride | 2.56 | 1.14 |
| Molybdenum | 0.216 | 0.096 |
| Oil and grease | 0.429 | 0.429 |
| TSS | 0.644 | 0.515 |
| pH | (¹) | (¹) |

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

(l) *Drum washwater.*

SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.009 | 0.004 |
| Chromium | 0.017 | 0.007 |
| Copper | 0.057 | 0.027 |
| Lead | 0.013 | 0.006 |
| Nickel | 0.025 | 0.017 |
| Fluoride | 2.64 | 1.17 |
| Molybdenum | 0.223 | 0.099 |
| Oil and grease | 0.443 | 0.443 |
| TSS | 0.665 | 0.532 |
| pH | (¹) | (¹) |

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

(m) *Laundry washwater.*

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SUBPART G—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|-----------------------|-----------------------------|
| | mg/employee—day | |
| Cadmium | 5.24 | 2.10 |
| Chromium | 9.70 | 3.93 |
| Copper | 33.6 | 16.0 |
| Lead | 7.34 | 3.41 |
| Nickel | 14.4 | 9.70 |
| Fluoride | 1,560 | 692 |
| Molybdenum | 132 | 58.4 |
| Oil and grease | 262 | 262 |
| TSS | 393 | 315 |
| pH | (¹) | (¹) |

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

(n) *Degreasing spent solvents—subpart G—NSPS.* There shall be no discharge of process waster pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.74 Pretreatment standards for existing sources (PSES). [Reserved]

§ 471.75 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater pollutants in uranium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Extrusion spent lubricants—subpart G—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Extrusion tool contact cooling water.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium extruded | |
| Cadmium | 0.007 | 0.003 |
| Chromium | 0.013 | 0.005 |
| Copper | 0.044 | 0.021 |
| Lead | 0.010 | 0.005 |
| Nickel | 0.019 | 0.013 |
| Fluoride | 2.05 | 0.908 |
| Molybdenum | 0.173 | 0.077 |

(c) *Heat treatment contact cooling water.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of extruded or forged uranium heat treated | |
| Cadmium | 0.006 | 0.003 |
| Chromium | 0.012 | 0.005 |
| Copper | 0.040 | 0.019 |
| Lead | 0.009 | 0.004 |
| Nickel | 0.017 | 0.012 |
| Fluoride | 1.86 | 0.827 |
| Molybdenum | 0.158 | 0.070 |

(d) *Forging spent lubricants—subpart G—PSNS.* There shall be no discharge of process wastewater pollutants.

(e) *Surface treatment spent baths.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.006 | 0.002 |
| Chromium | 0.010 | 0.004 |
| Copper | 0.035 | 0.017 |
| Lead | 0.008 | 0.004 |
| Nickel | 0.015 | 0.010 |
| Fluoride | 1.62 | 0.718 |
| Molybdenum | 0.137 | 0.061 |

(f) *Surface treatment rinse.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.068 | 0.027 |
| Chromium | 0.125 | 0.051 |
| Copper | 0.432 | 0.206 |
| Lead | 0.095 | 0.044 |
| Nickel | 0.186 | 0.125 |
| Fluoride | 20.1 | 8.90 |
| Molybdenum | 1.70 | 0.752 |

(g) *Wet air pollution control scrubber blowdown.*

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SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium surface treated | |
| Cadmium | 0.0007 | 0.0003 |
| Chromium | 0.001 | 0.0005 |
| Copper | 0.005 | 0.002 |
| Lead | 0.001 | 0.0005 |
| Nickel | 0.002 | 0.001 |
| Fluoride | 0.208 | 0.092 |
| Molybdenum | 0.018 | 0.008 |

(h) *Sawing or grinding spent emulsions.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with emulsions | |
| Cadmium | 0.001 | 0.0005 |
| Chromium | 0.002 | 0.0009 |
| Copper | 0.007 | 0.004 |
| Lead | 0.002 | 0.0008 |
| Nickel | 0.003 | 0.002 |
| Fluoride | 0.338 | 0.150 |
| Molybdenum | 0.029 | 0.013 |

(i) *Sawing or grinding contact cooling water.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium sawed or ground with contact cooling water | |
| Cadmium | 0.033 | 0.013 |
| Chromium | 0.061 | 0.025 |
| Copper | 0.211 | 0.101 |
| Lead | 0.046 | 0.022 |
| Nickel | 0.091 | 0.061 |
| Fluoride | 9.82 | 4.36 |
| Molybdenum | 0.830 | 0.368 |

(j) *Sawing or grinding rinse.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground uranium rinsed | |
| Cadmium | 0.001 | 0.0004 |
| Chromium | 0.002 | 0.0007 |
| Copper | 0.006 | 0.003 |
| Lead | 0.002 | 0.0006 |
| Nickel | 0.003 | 0.002 |
| Fluoride | 0.277 | 0.123 |
| Molybdenum | 0.024 | 0.011 |

(k) *Area cleaning rinse.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.009 | 0.004 |
| Chromium | 0.016 | 0.007 |
| Copper | 0.055 | 0.026 |
| Lead | 0.012 | 0.006 |
| Nickel | 0.024 | 0.016 |
| Fluoride | 2.56 | 1.14 |
| Molybdenum | 0.216 | 0.096 |

(1) *Drum washwater.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of uranium formed | |
| Cadmium | 0.009 | 0.004 |
| Chromium | 0.017 | 0.007 |
| Copper | 0.057 | 0.027 |
| Lead | 0.013 | 0.006 |
| Nickel | 0.025 | 0.017 |
| Fluoride | 2.64 | 1.17 |
| Molybdenum | 0.223 | 0.099 |

(m) *Laundry washwater.*

SUBPART G—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|-----------------------|-----------------------------|
| | mg/employee—day | |
| Cadmium | 5.24 | 2.10 |
| Chromium | 9.70 | 3.93 |
| Copper | 33.6 | 16.0 |
| Lead | 7.34 | 3.41 |
| Nickel | 14.4 | 9.70 |
| Fluoride | 1,560 | 692 |
| Molybdenum | 132 | 58.4 |

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(n) *Degreasing spent solvents—subpart G—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.76 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart H—Zinc Forming Subcategory

§ 471.80 Applicability; description of the zinc forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the zinc forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—subpart H—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions | |
| Chromium | 0.0006 | 0.0003 |
| Copper | 0.003 | 0.002 |
| Cyanide | 0.0004 | 0.0002 |
| Zinc | 0.002 | 0.0009 |
| Oil and grease | 0.028 | 0.017 |
| TSS | 0.057 | 0.027 |
| pH | (¹) | (¹) |

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

(c) *Rolling contact cooling water.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water | |
| Chromium | 0.236 | 0.0097 |
| Copper | 1.02 | 0.536 |
| Cyanide | 0.156 | 0.065 |
| Zinc | 0.783 | 0.327 |
| Oil and grease | 10.7 | 6.43 |
| TSS | 22.0 | 10.5 |
| pH | (¹) | (¹) |

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

(d) *Drawing spent emulsions.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions | |
| Chromium | 0.003 | 0.001 |
| Copper | 0.011 | 0.006 |
| Cyanide | 0.002 | 0.0007 |
| Zinc | 0.009 | 0.004 |
| Oil and grease | 0.116 | 0.070 |
| TSS | 0.238 | 0.113 |
| pH | (¹) | (¹) |

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

(e) *Direct chill casting contact cooling water.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method | |
| Chromium | 0.222 | 0.091 |
| Copper | 0.960 | 0.505 |
| Cyanide | 0.147 | 0.061 |
| Zinc | 0.738 | 0.308 |
| Oil and grease | 10.1 | 6.06 |
| TSS | 20.7 | 9.85 |
| pH | (¹) | (¹) |

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

(f) *Stationary casting contact cooling water—subpart H—BPT.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

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SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc heat treated | |
| Chromium | 0.336 | 0.138 |
| Copper | 1.45 | 0.763 |
| Cyanide | 0.221 | 0.092 |
| Zinc | 1.12 | 0.466 |
| Oil and grease | 15.3 | 9.16 |
| TSS | 31.3 | 14.9 |
| pH | (¹) | (¹) |

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

(h) *Surface treatment spent baths.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 0.039 | 0.016 |
| Copper | 0.169 | 0.089 |
| Cyanide | 0.026 | 0.011 |
| Zinc | 0.130 | 0.054 |
| Oil and grease | 1.78 | 1.07 |
| TSS | 3.64 | 1.73 |
| pH | (¹) | (¹) |

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

(i) *Surface treatment rinse.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 1.58 | 0.645 |
| Copper | 6.80 | 3.58 |
| Cyanide | 1.04 | 0.430 |
| Zinc | 5.23 | 2.19 |
| Oil and grease | 71.6 | 43.0 |
| TSS | 147 | 69.8 |
| pH | (¹) | (¹) |

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

(j) *Alkaline cleaning spent baths.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.002 | 0.0007 |
| Copper | 0.007 | 0.004 |
| Cyanide | 0.001 | 0.0004 |
| Zinc | 0.005 | 0.002 |
| Oil and grease | 0.071 | 0.043 |
| TSS | 0.146 | 0.069 |
| pH | (¹) | (¹) |

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

(k) *Alkaline cleaning rinse.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.744 | 0.304 |
| Copper | 3.21 | 1.69 |
| Cyanide | 0.490 | 0.203 |
| Zinc | 2.47 | 1.03 |
| Oil and grease | 33.8 | 20.3 |
| TSS | 69.3 | 33.0 |
| pH | (¹) | (¹) |

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

(l) *Sawing or grinding spent emulsions.*

SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions | |
| Chromium | 0.011 | 0.005 |
| Copper | 0.045 | 0.024 |
| Cyanide | 0.007 | 0.003 |
| Zinc | 0.035 | 0.015 |
| Oil and grease | 0.476 | 0.286 |
| TSS | 0.976 | 0.464 |
| pH | (¹) | (¹) |

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

(m) *Electrocoating rinse.*

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SUBPART H—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc electrocoated | |
| Chromium | 1.01 | 0.412 |
| Copper | 4.35 | 2.29 |
| Cyanide | 0.664 | 0.275 |
| Zinc | 3.35 | 1.40 |
| Oil and grease | 45.8 | 27.5 |
| TSS | 93.9 | 44.7 |
| pH | (¹) | (¹) |

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

(n) *Degreasing spent solvents—subpart H—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

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

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 (BAT):

(a) *Rolling spent neat oils—subpart H—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions | |
| Chromium | 0.0005 | 0.0002 |
| Copper | 0.002 | 0.0009 |
| Cyanide | 0.0003 | 0.0001 |
| Zinc | 0.002 | 0.0006 |

(c) *Rolling contact cooling water.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water | |
| Chromium | 0.020 | 0.009 |
| Copper | 0.069 | 0.033 |
| Cyanide | 0.011 | 0.004 |
| Zinc | 0.055 | 0.023 |

(d) *Drawing spent emulsions.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions | |
| Chromium | 0.002 | 0.0009 |
| Copper | 0.008 | 0.004 |
| Cyanide | 0.001 | 0.0005 |
| Zinc | 0.006 | 0.003 |

(e) *Direct chill casting contact cooling water.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method | |
| Chromium | 0.019 | 0.008 |
| Copper | 0.065 | 0.031 |
| Cyanide | 0.010 | 0.004 |
| Zinc | 0.052 | 0.021 |

(f) *Stationary casting contact cooling water—subpart H—BAT.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc heat treated | |
| Chromium | 0.029 | 0.012 |
| Copper | 0.098 | 0.047 |
| Cyanide | 0.016 | 0.006 |
| Zinc | 0.078 | 0.032 |

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(h) *Surface treatment spent baths.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 0.033 | 0.014 |
| Copper | 0.114 | 0.054 |
| Cyanide | 0.018 | 0.007 |
| Zinc | 0.091 | 0.038 |

(i) *Surface treatment rinse.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 0.133 | 0.054 |
| Copper | 0.457 | 0.219 |
| Cyanide | 0.072 | 0.029 |
| Zinc | 0.365 | 0.151 |

(j) *Alkaline cleaning spent baths.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.002 | 0.0006 |
| Copper | 0.005 | 0.002 |
| Cyanide | 0.0007 | 0.0003 |
| Zinc | 0.004 | 0.002 |

(k) *Alkaline cleaning rinse.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.626 | 0.254 |
| Copper | 2.17 | 1.03 |
| Cyanide | 0.338 | 0.135 |
| Zinc | 1.73 | 0.710 |

(l) *Sawing or grinding spent emulsions.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions | |
| Chromium | 0.009 | 0.004 |
| Copper | 0.031 | 0.015 |
| Cyanide | 0.005 | 0.002 |
| Zinc | 0.025 | 0.010 |

(m) *Electrocoating rinse.*

SUBPART H—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc electrocoated | |
| Chromium | 0.085 | 0.035 |
| Copper | 0.293 | 0.140 |
| Cyanide | 0.046 | 0.019 |
| Zinc | 0.234 | 0.096 |

(n) *Degreasing spent solvents—subpart H—BAT.* There shall be no discharge or process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.83 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

(a) *Rolling spent neat oils—subpart H—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions | |
| Chromium | 0.0005 | 0.0002 |
| Copper | 0.002 | 0.0009 |
| Cyanide | 0.0003 | 0.0001 |
| Zinc | 0.002 | 0.0006 |
| Oil and grease | 0.014 | 0.014 |
| TSS | 0.021 | 0.017 |
| pH | (¹) | (¹) |

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

(c) *Rolling contact cooling water.*

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SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water | |
| Chromium | 0.020 | 0.009 |
| Copper | 0.069 | 0.037 |
| Cyanide | 0.011 | 0.004 |
| Zinc | 0.055 | 0.023 |
| Oil and grease | 0.536 | 0.536 |
| TSS | 0.804 | 0.643 |
| pH | (¹) | (¹) |

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

(d) *Drawing spent emulsions.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions | |
| Chromium | 0.002 | 0.0009 |
| Copper | 0.008 | 0.004 |
| Cyanide | 0.001 | 0.0005 |
| Zinc | 0.006 | 0.003 |
| Oil and grease | 0.058 | 0.058 |
| TSS | 0.087 | 0.070 |
| pH | (¹) | (¹) |

¹ Within the range of 7.5 to 10.0 at all times

(e) *Direct chill casting contact cooling water.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any one day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method | |
| Chromium | 0.019 | 0.008 |
| Copper | 0.065 | 0.031 |
| Cyanide | 0.010 | 0.004 |
| Zinc | 0.052 | 0.021 |
| Oil and grease | 0.505 | 0.505 |
| TSS | 0.758 | 0.606 |
| pH | (¹) | (¹) |

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

(f) *Stationary casting contact cooling water—subpart H—NSPS.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc heat treated | |
| Chromium | 0.029 | 0.012 |
| Copper | 0.098 | 0.047 |
| Cyanide | 0.016 | 0.006 |
| Zinc | 0.078 | 0.032 |
| Oil and grease | 0.763 | 0.763 |
| TSS | 1.15 | 0.916 |
| pH | (¹) | (¹) |

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

(h) *Surface treatment spent baths.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 0.033 | 0.014 |
| Copper | 0.114 | 0.054 |
| Cyanide | 0.018 | 0.007 |
| Zinc | 0.091 | 0.038 |
| Oil and grease | 0.887 | 0.887 |
| TSS | 1.33 | 1.07 |
| pH | (¹) | (¹) |

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

(i) *Surface treatment rinse.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 0.133 | 0.054 |
| Copper | 0.459 | 0.219 |
| Cyanide | 0.072 | 0.029 |
| Zinc | 0.365 | 0.151 |
| Oil and grease | 3.58 | 3.58 |
| TSS | 5.37 | 4.30 |
| pH | (¹) | (¹) |

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

(j) *Alkaline cleaning spent baths.*

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SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.002 | 0.0006 |
| Copper | 0.005 | 0.002 |
| Cyanide | 0.0007 | 0.0003 |
| Zinc | 0.004 | 0.002 |
| Oil and grease | 0.036 | 0.036 |
| TSS | 0.054 | 0.043 |
| pH | (¹) | (¹) |

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

(k) *Alkaline cleaning rinse.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.626 | 0.259 |
| Copper | 2.17 | 1.03 |
| Cyanide | 0.338 | 0.135 |
| Zinc | 1.73 | 0.710 |
| Oil and grease | 16.9 | 16.9 |
| TSS | 25.4 | 20.3 |
| pH | (¹) | (¹) |

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

(l) *Sawing or grinding spent emulsions.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions | |
| Chromium | 0.009 | 0.004 |
| Copper | 0.031 | 0.015 |
| Cyanide | 0.005 | 0.002 |
| Zinc | 0.025 | 0.010 |
| Oil and grease | 0.235 | 0.235 |
| TSS | 0.357 | 0.286 |
| pH | (¹) | (¹) |

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

(m) *Electrocoating rinse.*

SUBPART H—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc electrocoated | |
| Chromium | 0.085 | 0.035 |
| Copper | 0.293 | 0.140 |
| Cyanide | 0.046 | 0.019 |
| Zinc | 0.234 | 0.096 |
| Oil and grease | 2.29 | 2.29 |
| TSS | 3.44 | 2.75 |
| pH | (¹) | (¹) |

¹ Within the range of 7.5 to 10.0 at all times

(n) *Degreasing spent solvents—subpart H—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.84 Pretreatment standards for existing sources (PSES). [Reserved]

§ 471.85 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of the wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—subpart H—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Rolling spent emulsions.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with emulsions | |
| Chromium | 0.0005 | 0.0002 |
| Copper | 0.002 | 0.0009 |
| Cyanide | 0.0003 | 0.0001 |
| Zinc | 0.002 | 0.0006 |

(c) *Rolling contact cooling water.*

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SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc rolled with contact cooling water | |
| Chromium | 0.020 | 0.008 |
| Copper | 0.069 | 0.033 |
| Cyanide | 0.011 | 0.004 |
| Zinc | 0.055 | 0.023 |

(d) *Drawing spent emulsions.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc drawn with emulsions | |
| Chromium | 0.002 | 0.0009 |
| Copper | 0.008 | 0.004 |
| Cyanide | 0.001 | 0.0005 |
| Zinc | 0.006 | 0.003 |

(e) *Direct chill casting contact cooling water.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc cast by the direct chill method | |
| Chromium | 0.019 | 0.008 |
| Copper | 0.065 | 0.031 |
| Cyanide | 0.010 | 0.004 |
| Zinc | 0.052 | 0.021 |

(f) *Stationary casting contact cooling water—subpart H—PSNS.* There shall be no discharge of process wastewater pollutants.

(g) *Heat treatment contact cooling water.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc heat treated | |
| Chromium | 0.029 | 0.012 |
| Copper | 0.098 | 0.047 |
| Cyanide | 0.016 | 0.006 |
| Zinc | 0.078 | 0.032 |

(h) *Surface treatment spent baths.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 0.033 | 0.014 |
| Copper | 0.114 | 0.054 |
| Cyanide | 0.018 | 0.007 |
| Zinc | 0.091 | 0.038 |

(i) *Surface treatment rinse.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc surface treated | |
| Chromium | 0.133 | 0.054 |
| Copper | 0.459 | 0.219 |
| Cyanide | 0.072 | 0.029 |
| Zinc | 0.365 | 0.151 |

(j) *Alkaline cleaning spent baths.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.002 | 0.0006 |
| Copper | 0.005 | 0.002 |
| Cyanide | 0.0007 | 0.0003 |
| Zinc | 0.004 | 0.002 |

(k) *Alkaline cleaning rinse.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc alkaline cleaned | |
| Chromium | 0.626 | 0.254 |
| Copper | 2.17 | 1.03 |
| Cyanide | 0.338 | 0.134 |
| Zinc | 1.73 | 0.710 |

(l) *Sawing or grinding spent emulsions.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc sawed or ground with emulsions | |
| Chromium | 0.009 | 0.004 |
| Copper | 0.031 | 0.015 |
| Cyanide | 0.005 | 0.002 |
| Zinc | 0.025 | 0.010 |

(m) *Electrocoating rinse.*

SUBPART H—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zinc electrocoated | |
| Chromium | 0.085 | 0.035 |
| Copper | 0.293 | 0.140 |
| Cyanide | 0.046 | 0.019 |
| Zinc | 0.234 | 0.096 |

(n) *Decreasing spent solvents—subpart H—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986]

§ 471.86 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart I—Zirconium-Hafnium Forming Subcategory

§ 471.90 Applicability; description of the zirconium-hafnium forming subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the zirconium-hafnium forming subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Rolling spent neat oils—subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spend emulsions—subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded | |
| Chromium | 0.104 | 0.043 |
| Cyanide | 0.069 | 0.029 |
| Nickel | 0.455 | 0.301 |
| Ammonia | 31.6 | 13.9 |
| Fluoride | 14.1 | 6.26 |
| Oil and grease | 4.74 | 2.85 |
| TSS | 9.72 | 4.62 |
| pH | (¹) | (¹) |

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

(e) *Swaging spent neat oils—subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated | |
| Chromium | 0.151 | 0.062 |
| Cyanide | 0.100 | 0.041 |
| Nickel | 0.659 | 0.436 |
| Ammonia | 45.7 | 20.1 |
| Fluoride | 20.4 | 9.06 |
| Oil and grease | 6.86 | 4.12 |
| TSS | 14.1 | 6.69 |
| pH | (¹) | (¹) |

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

(g) *Tube Reducing Spent Lubricant—subpart I—BPT.* (1) There shall be no

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discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under subparagraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in subparagraph (g)(2) of this section, the actions described in paragraph (g)(4), of this section shall be taken, and the demonstration required under paragraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.150 | 0.61 |
| Cyanide | 0.099 | 0.041 |
| Nickel | 0.653 | 0.432 |
| Ammonia | 45.3 | 20 |
| Fluoride | 20.3 | 8.98 |
| Oil and grease | 6.80 | 4.08 |
| TSS | 14 | 6.63 |
| pH | (¹) | (¹) |

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

(i) *Surface treatment rinse.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 3.91 | 1.60 |
| Cyanide | 2.58 | 1.07 |
| Nickel | 17.1 | 11.3 |
| Ammonia | 1,190 | 521 |
| Fluoride | 529 | 235 |
| Oil and grease | 178 | 107 |
| TSS | 364 | 173 |
| pH | (¹) | (¹) |

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

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(j) *Alkaline cleaning spent baths.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 0.704 | 0.288 |
| Cyanide | 0.464 | 0.192 |
| Nickel | 3.07 | 2.03 |
| Ammonia | 214 | 93.8 |
| Fluoride | 95.2 | 42.3 |
| Oil and grease | 32 | 19.2 |
| TSS | 65.6 | 31.2 |
| pH | (¹) | (¹) |

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

(k) *Alkaline cleaning rinse.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 13.8 | 5.65 |
| Cyanide | 9.11 | 3.77 |
| Nickel | 60.3 | 39.9 |
| Ammonia | 4,190 | 1,840 |
| Fluoride | 1,870 | 829 |
| Oil and grease | 628 | 377 |
| TSS | 1,290 | 613 |
| pH | (¹) | (¹) |

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

(l) *Sawing or grinding spent emulsions.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions | |
| Chromium | 0.124 | 0.051 |
| Cyanide | 0.082 | 0.034 |
| Nickel | 0.540 | 0.357 |
| Ammonia | 37.5 | 16.5 |
| Fluoride | 16.7 | 7.42 |
| Oil and grease | 5.62 | 3.37 |
| TSS | 11.5 | 5.48 |
| pH | (¹) | (¹) |

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

(m) *Wet air pollution control scrubber blowdown—subpart I—BPT.* There shall

be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—subpart I—BPT.* There shall be no discharge or process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium treated with molten salt | |
| Chromium | 3.33 | 1.360 |
| Cyanide | 2.20 | 0.907 |
| Nickel | 14.5 | 9.60 |
| Ammonia | 1,010 | 443 |
| Fluoride | 450 | 200 |
| Oil and grease | 151 | 90.7 |
| TSS | 310 | 148 |
| pH | (¹) | (¹) |

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

(q) *Sawing or grinding contact cooling water.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water | |
| Chromium | 0.142 | 0.058 |
| Cyanide | 0.093 | 0.039 |
| Nickel | 0.617 | 0.408 |
| Ammonia | 42.8 | 18.8 |
| Fluoride | 19.1 | 8.48 |
| Oil and grease | 6.42 | 3.85 |
| TSS | 13.2 | 6.26 |
| pH | (¹) | (¹) |

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

(r) *Sawing on grinding rinse.*

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SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium hafnium rinsed | |
| Chromium | 0.792 | 0.324 |
| Cyanide | 0.522 | 0.216 |
| Nickel | 3.46 | 2.29 |
| Ammonia | 240 | 106 |
| Fluoride | 107 | 47.5 |
| Oil and grease | 36 | 21.6 |
| TSS | 73.8 | 35.1 |
| pH | (¹) | (¹) |

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

(s) *Sawing or grinding spent neat oils—subpart I—BPT.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested | |
| Chromium | 0.007 | 0.003 |
| Cyanide | 0.005 | 0.002 |
| Nickel | 0.030 | 0.020 |
| Ammonia | 2.06 | 0.903 |
| Fluoride | 0.917 | 0.407 |
| Oil and grease | 0.308 | 0.185 |
| TSS | 0.632 | 0.301 |
| pH | (¹) | (¹) |

¹ Within the range of 7.05 to 10.0 at all times.

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986, as amended at 54 FR 11350, Mar. 17, 1989]

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

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 (BAT):

(a) *Rolling spent neat oils—subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsions—subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded | |
| Chromium | 0.104 | 0.043 |
| Cyanide | 0.069 | 0.029 |
| Nickel | 0.455 | 0.301 |
| Ammonia | 31.6 | 13.9 |
| Fluoride | 14.1 | 6.26 |

(e) *Swaging spent neat oils.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated | |
| Chromium | 0.015 | 0.006 |
| Cyanide | 0.010 | 0.004 |
| Nickel | 0.066 | 0.044 |
| Ammonia | 4.57 | 2.01 |
| Fluoride | 2.04 | 0.906 |

(g) *Tube Reducing Spent Lubricant—subpart I—BAT.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under paragraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.150 | 0.061 |
| Cyanide | 0.099 | 0.041 |
| Nickel | 0.653 | 0.432 |
| Ammonia | 45.3 | 20 |
| Fluoride | 20.3 | 8.98 |

(i) *Surface treatment rinse.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.391 | 0.160 |
| Cyanide | 0.258 | 0.107 |
| Nickel | 1.71 | 1.13 |
| Ammonia | 119 | 52.1 |
| Fluoride | 52.9 | 23.5 |

(j) *Alkaline cleaning spent baths.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 0.704 | 0.288 |
| Cyanide | 0.464 | 0.192 |
| Nickel | 3.07 | 2.03 |
| Ammonia | 214 | 93.8 |
| Fluoride | 95.2 | 42.3 |

(k) *Alkaline cleaning rinse.*

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SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 1.380 | 0.565 |
| Cyanide | 0.911 | 0.377 |
| Nickel | 6.03 | 3.99 |
| Ammonia | 419 | 184 |
| Fluoride | 187 | 82.9 |

(l) *Sawing or grinding spent emulsions.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions | |
| Chromium | 0.124 | 0.051 |
| Cyanide | 0.082 | 0.034 |
| Nickel | 0.540 | 0.357 |
| Ammonia | 37.5 | 16.5 |
| Fluoride | 16.7 | 7.42 |

(m) *Wet air pollution control scrubber blowdown—Subpart I—BAT.* There shall be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium treated with molten salt | |
| Chromium | 0.333 | 0.136 |
| Cyanide | 0.220 | 0.091 |
| Nickel | 1.45 | 0.960 |
| Ammonia | 101 | 44.3 |
| Fluoride | 45.0 | 20.0 |

(q) *Sawing or grinding contact cooling water.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water | |
| Chromium | 0.142 | 0.058 |
| Cyanide | 0.093 | 0.039 |
| Nickel | 0.617 | 0.408 |
| Ammonia | 42.8 | 18.8 |
| Fluoride | 19.1 | 8.48 |

(r) *Sawing or grinding rinse.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed | |
| Chromium | 0.079 | 0.033 |
| Cyanide | 0.052 | 0.022 |
| Nickel | 0.346 | 0.229 |
| Ammonia | 24.0 | 10.6 |
| Fluoride | 10.7 | 4.75 |

(s) *Sawing or grinding spent neat oils—subpart I—BAT.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested | |
| Chromium | 0.007 | 0.003 |
| Cyanide | 0.005 | 0.002 |
| Nickel | 0.030 | 0.020 |
| Ammonia | 2.06 | 0.903 |
| Fluoride | 0.917 | 0.407 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986, as amended at 54 FR 11351, Mar. 17, 1989]

§ 471.93 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutant in the zirconium-hafnium process wastewater shall not exceed the following values:

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(a) *Rolling spent neat oils—subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsions—subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded | |
| Chromium | 0.104 | 0.043 |
| Cyanide | 0.069 | 0.029 |
| Nickel | 0.455 | 0.301 |
| Ammonia | 31.6 | 13.9 |
| Fluoride | 14.1 | 6.26 |
| Oil and grease | 4.74 | 2.85 |
| TSS | 9.72 | 4.62 |
| pH | (¹) | (¹) |

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

(e) *Swaging spent neat oils—subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated | |
| Chromium | 0.015 | 0.006 |
| Cyanide | 0.010 | 0.004 |
| Nickel | 0.066 | 0.044 |
| Ammonia | 4.57 | 2.01 |
| Fluoride | 2.04 | 0.906 |
| Oil and grease | 0.686 | 0.412 |
| TSS | 1.41 | 0.669 |
| pH | (¹) | (¹) |

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

(g) *Tube Reducing Spent Lubricant—subpart I—NSPS:* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursu-

ant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in paragraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under paragraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in paragraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the NPDES issuing authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube

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reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.150 | 0.061 |
| Cyanide | 0.099 | 0.041 |
| Nickel | 0.653 | 0.432 |
| Ammonia | 45.3 | 20.0 |
| Fluoride | 20.0 | 8.98 |
| Oil and grease | 6.80 | 4.08 |
| TSS | 14.0 | 6.63 |
| pH | (¹) | (¹) |

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

(i) *Surface treatment rinse.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.391 | 0.160 |
| Cyanide | 0.258 | 0.107 |
| Nickel | 1.71 | 1.13 |
| Ammonia | 119 | 52.1 |
| Fluoride | 52.9 | 23.5 |
| Oil and grease | 17.8 | 10.7 |
| TSS | 36.4 | 17.3 |
| pH | (¹) | (¹) |

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

(j) *Alkaline cleaning spent baths.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 0.704 | 0.288 |
| Cyanide | 0.464 | 0.192 |
| Nickel | 3.07 | 2.03 |
| Ammonia | 214 | 93.8 |
| Fluoride | 95.2 | 42.3 |
| Oil and grease | 32.0 | 19.2 |
| TSS | 65.6 | 31.2 |
| pH | (¹) | (¹) |

¹ Within the range of 7.5 to 10.0 at all times

(k) *Alkaline cleaning rinse.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 1.38 | 0.565 |
| Cyanide | 0.911 | 0.377 |
| Nickel | 6.03 | 3.99 |
| Ammonia | 419 | 184 |
| Fluoride | 187 | 82.9 |
| Oil and grease | 62.8 | 37.7 |
| TSS | 129 | 61.3 |
| pH | (¹) | (¹) |

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

(l) *Sawing or grinding spent emulsions.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions | |
| Chromium | 0.124 | 0.051 |
| Cyanide | 0.082 | 0.034 |
| Nickel | 0.540 | 0.357 |
| Ammonia | 37.5 | 16.50 |
| Fluoride | 16.7 | 7.42 |
| Oil and grease | 5.62 | 3.37 |
| TSS | 11.5 | 5.48 |
| pH | (¹) | (¹) |

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

(m) *Wet air pollution control scrubber blowdown—subpart I—NSPS.* There shall be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—subpart I—NSPS.* There shall be no discharge of process wastewater pollutants.

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(o) *Degreasing rinse—subpart I—NSPS.* There shall be no discharge of process wastewater pollutants
 (p) *Molten salt rinse.*

(s) *Sawing or grinding spent neat oils—subpart I—NSPS.* There shall be no discharge or process wastewater pollutants.
 (t) *Inspection and testing wastewater.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium treated with molten salt | |
| Chromium | 0.333 | 0.136 |
| Cyanide | 0.220 | 0.091 |
| Nickel | 1.45 | 0.960 |
| Ammonia | 101 | 44.3 |
| Fluoride | 45.0 | 20.0 |
| Oil and grease | 15.1 | 9.07 |
| TSS | 31.0 | 14.8 |
| pH | (¹) | (¹) |

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

(q) *Sawing or grinding contact cooling water.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water | |
| Chromium | 0.142 | 0.058 |
| Cyanide | 0.093 | 0.039 |
| Nickel | 0.617 | 0.408 |
| Ammonia | 42.8 | 18.8 |
| Fluoride | 19.1 | 8.48 |
| Oil and grease | 6.42 | 3.85 |
| TSS | 13.2 | 6.26 |
| pH | (¹) | (¹) |

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

(r) *Sawing or grinding rinse.*

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed | |
| Chromium | 0.079 | 0.033 |
| Cyanide | 0.052 | 0.022 |
| Nickel | 0.346 | 0.229 |
| Ammonia | 24.0 | 10.6 |
| Fluoride | 10.7 | 4.75 |
| Oil and Grease | 3.60 | 2.16 |
| TSS | 7.38 | 3.51 |
| pH | (¹) | (¹) |

¹ Within range of 7.5 to 10.0 at all times.

SUBPART I—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested | |
| Chromium | 0.007 | 0.003 |
| Cyanide | 0.005 | 0.002 |
| Nickel | 0.030 | 0.020 |
| Ammonia | 2.06 | 0.903 |
| Fluoride | 0.917 | 0.407 |
| Oil and grease | 0.308 | 0.185 |
| TSS | 0.632 | 0.301 |
| pH | (¹) | (¹) |

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

[50 FR 34270, Aug. 23, 1985; 51 FR 2888, Jan. 22, 1986, as amended at 54 FR 11351, Mar. 17, 1989]

§ 471.94 Pretreatment standards for existing sources (PSES).

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 by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in zirconium-hafnium forming process wastewater introduced into a POTW shall not exceed the following values:

(a) *Rolling spent neat oils—subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsion—subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

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SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded | |
| Chromium | 0.104 | 0.043 |
| Cyanide | 0.069 | 0.029 |
| Nickel | 0.455 | 0.301 |
| Ammonia | 31.6 | 13.9 |
| Fluoride | 14.1 | 6.26 |

(e) *Swaging spent neat oils—subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium heat treated | |
| Chromium | 0.015 | 0.006 |
| Cyanide | 0.010 | 0.004 |
| Nickel | 0.066 | 0.044 |
| Ammonia | 4.57 | 2.01 |
| Fluoride | 2.04 | 0.906 |

(g) *Tube Reducing Spent Lubricant—subpart I—PSES.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under paragraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine com-

pounds at concentrations greater than those specified in subparagraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under subparagraph (g)(2) of this section shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.150 | 0.061 |
| Cyanide | 0.099 | 0.041 |
| Nickel | 0.653 | 0.432 |
| Ammonia | 45.3 | 20.0 |
| Fluoride | 20.0 | 8.98 |

(i) *Surface treatment rinse.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.391 | 0.160 |
| Cyanide | 0.258 | 0.107 |
| Nickel | 1.71 | 1.13 |
| Ammonia | 119 | 52.1 |
| Fluoride | 52.9 | 23.5 |

(j) *Alkaline cleaning spent baths.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 0.704 | 0.288 |
| Cyanide | 0.464 | 0.192 |
| Nickel | 3.07 | 2.03 |
| Ammonia | 214 | 93.8 |
| Fluoride | 95.2 | 42.3 |

(k) *Alkaline cleaning rinse.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 1.38 | 0.565 |
| Cyanide | 0.911 | 0.377 |
| Nickel | 6.03 | 3.99 |
| Ammonia | 419 | 184 |
| Fluoride | 187 | 82.9 |

(l) *Sawing or grinding spent emulsions.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions | |
| Chromium | 0.124 | 0.051 |
| Cyanide | 0.082 | 0.034 |
| Nickel | 0.540 | 0.357 |
| Ammonia | 37.5 | 16.50 |
| Fluoride | 16.7 | 7.42 |

(m) *Wet air pollution control scrubber blowdown—subpart I—PSES.* There shall be no allowance for the discharge or process wastewater pollutants.

(n) *Degreasing spent solvents—subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium treated with molten salt | |
| Chromium | 0.333 | 0.136 |
| Cyanide | 0.220 | 0.091 |
| Nickel | 1.45 | 0.960 |
| Ammonia | 101 | 44.3 |
| Fluoride | 45 | 20 |

(q) *Sawing or grinding contact cooling water.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water | |
| Chromium | 0.142 | 0.058 |
| Cyanide | 0.093 | 0.039 |
| Nickel | 0.617 | 0.408 |
| Ammonia | 42.8 | 18.8 |
| Fluoride | 19.1 | 8.48 |

(r) *Sawing or grinding rinse.*

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SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed | |
| Chromium | 0.079 | 0.033 |
| Cyanide | 0.052 | 0.022 |
| Nickel | 0.346 | 0.229 |
| Ammonia | 24 | 10.6 |
| Fluoride | 10.7 | 4.75 |

(s) *Sawing or grinding spent neat oils—subpart I—PSES.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested | |
| Chromium | 0.007 | 0.003 |
| Cyanide | 0.005 | 0.002 |
| Nickel | 0.030 | 0.020 |
| Ammonia | 2.06 | 0.903 |
| Fluoride | 0.917 | 0.407 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986, as amended at 54 FR 11352, Mar. 17, 1989]

§ 471.95 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of zirconium-hafnium heat treated | |
| Chromium | 0.015 | 0.006 |
| Cyanide | 0.010 | 0.004 |
| Nickel | 0.066 | 0.044 |
| Ammonia | 4.57 | 2.01 |
| Fluoride | 2.04 | 0.906dash;Subpart |

(g) *Tube Reducing Spent Lubricant—subpart I—PSNS.* (1) There shall be no discharge of process wastewater pollutants except as provided under paragraph (g)(2) of this section.

(2) Process wastewater pollutants may be discharged, with no allowance

which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS). The mass of wastewater shall not exceed the following:

(a) *Rolling spent neat oils—subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(b) *Drawing spent lubricants—subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(c) *Extrusion spent emulsions—subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Extrusion press hydraulic fluid leakage.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium extruded | |
| Chromium | 0.104 | 0.043 |
| Cyanide | 0.069 | 0.029 |
| Nickel | 0.455 | 0.301 |
| Ammonia | 31.6 | 13.9 |
| Fluoride | 14.1 | 6.26 |

(e) *Swaging spent neat oils—subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(f) *Heat treatment contact cooling water.*

for any pollutants discharged, provided the facility owner or operator demonstrates, on the basis of analytical methods set forth in or approved pursuant to 40 CFR part 136, that the concentrations of nitrosamine compounds in the wastewater discharged from the

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tube reducing process do not exceed 0.050 mg/l of N-nitrosodimethylamine, 0.020 mg/l of N-nitrosodiphenylamine, and 0.020 mg/l of N-nitrosodi-n-propylamine.

(3) The demonstration required under subparagraph (g)(2) of this section shall be made once per month until the demonstration has been made for all three nitrosamine compounds for six consecutive months, after which time the demonstration may be made once per quarter. If a sample is found to contain any of the foregoing nitrosamine compounds at concentrations greater than those specified in subparagraph (g)(2) of this section, the actions described in paragraph (g)(4) of this section shall be taken, and the demonstration required under paragraph (g)(2) shall be made once per month until it has been made for all three nitrosamine compounds for six consecutive months.

(4) If sampling results show that any of the foregoing nitrosamine compounds is present in the process wastewater at concentrations greater than those specified in subparagraph (g)(2) of this section, the facility owner or operator shall ensure that, within thirty days of receiving written notification of the sampling results, there is no further discharge of tube reducing spent lubricant wastewater until the owner or operator:

(i) Performs a subsequent analysis which demonstrates that the concentrations of the foregoing nitrosamine compounds do not exceed the levels specified in paragraph (g)(2) of this section; or

(ii) Substitutes a new tube reducing lubricant and thereafter complies with the requirements of paragraph (g)(3) of this section; or

(iii) Determines the source of the pollutant whose concentration exceeded the level specified in paragraph (g)(2) of this section and demonstrates to the satisfaction of the POTW control authority that such source has been eliminated.

(5) The concentration limits specified in paragraph (g)(2) of this section apply at the point of discharge from the tube reducing process. However, sampling after the tube reducing wastewater has been commingled with other wastewaters is permitted if:

(i) Any dilution caused by the other wastewaters is taken into account in determining the appropriate (*i.e.*, lower) allowable discharge concentration; and

(ii) An analytical method of sufficient sensitivity is used to measure the levels of each of the foregoing nitrosamine compounds in the wastewaters being sampled.

(h) *Surface treatment spent baths.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.150 | 0.061 |
| Cyanide | 0.099 | 0.041 |
| Nickel | 0.653 | 0.432 |
| Ammonia | 45.3 | 20 |
| Fluoride | 20 | 8.98 |

(i) *Surface treatment rinse.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of zirconium-hafnium surface treated | |
| Chromium | 0.391 | 0.160 |
| Cyanide | 0.258 | 0.107 |
| Nickel | 1.71 | 1.13 |
| Ammonia | 119 | 52.1 |
| Fluoride | 52.9 | 23.5 |

(j) *Alkaline cleaning spent baths.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off/kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 0.704 | 0.288 |
| Cyanide | 0.464 | 0.192 |
| Nickel | 3.07 | 2.03 |
| Ammonia | 214 | 93.8 |
| Fluoride | 95.2 | 42.3 |

(k) *Alkaline cleaning rinse.*

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SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium alkaline cleaned | |
| Chromium | 1.38 | 0.565 |
| Cyanide | 0.911 | 0.377 |
| Nickel | 6.03 | 3.99 |
| Ammonia | 419 | 184 |
| Fluoride | 187 | 82.9 |

(1) *Sawing or grinding spent emulsions.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with emulsions | |
| Chromium | 0.124 | 0.051 |
| Cyanide | 0.082 | 0.034 |
| Nickel | 0.540 | 0.357 |
| Ammonia | 37.5 | 16.50 |
| Fluoride | 16.7 | 7.42 |

(m) *Wet air pollution control scrubber blowdown—subpart I—PSNS.* There shall be no allowance for the discharge of process wastewater pollutants.

(n) *Degreasing spent solvents—subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(o) *Degreasing rinse—subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(p) *Molten salt rinse.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium rinsed following molten salt treatment | |
| Chromium | 0.333 | 0.136 |
| Cyanide | 0.220 | 0.091 |
| Nickel | 1.45 | 0.960 |
| Ammonia | 101 | 44.3 |
| Fluoride | 45.0 | 20.0 |

(q) *Sawing or grinding contact cooling water.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium sawed or ground with contact cooling water | |
| Chromium | 0.142 | 0.058 |
| Cyanide | 0.093 | 0.039 |
| Nickel | 0.617 | 0.408 |
| Ammonia | 42.8 | 18.8 |
| Fluoride | 19.1 | 8.48 |

(r) *Sawing or grinding rinse.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of sawed or ground zirconium-hafnium rinsed | |
| Chromium | 0.079 | 0.033 |
| Cyanide | 0.052 | 0.022 |
| Nickel | 0.346 | 0.229 |
| Ammonia | 24.0 | 10.6 |
| Fluoride | 10.7 | 4.75 |

(s) *Sawing or grinding spent neat oils—subpart I—PSNS.* There shall be no discharge of process wastewater pollutants.

(t) *Inspection and testing wastewater.*

SUBPART I—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of zirconium-hafnium tested | |
| Chromium | 0.007 | 0.003 |
| Cyanide | 0.005 | 0.002 |
| Nickel | 0.030 | 0.020 |
| Ammonia | 2.06 | 0.903 |
| Fluoride | 0.917 | 0.407 |

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986, as amended at 54 FR 11352, Mar. 17, 1989]

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§ 471.96 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart J—Metals Powders Subcategory

§ 471.100 Applicability; description of the powder metals subcategory.

This subpart applies to discharges of pollutants to waters of the United States, and introductions of pollutants into publicly owned treatment works from the process operations of the metal powders subcategory.

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

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 for the process operations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) *Metal powder production atomization wastewater.*

SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder wet atomized | |
| Copper | 9.58 | 5.04 |
| Cyanide | 1.46 | 0.605 |
| Lead | 2.12 | 1.01 |
| Oil and grease | 101 | 60.5 |
| TSS | 207 | 98.3 |
| pH | (¹) | (¹) |

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

(b) *Sizing spent emulsion.*

SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sized | |
| Copper | 0.028 | 0.015 |
| Cyanide | 0.004 | 0.002 |
| Lead | 0.006 | 0.003 |
| Oil and grease | 0.292 | 0.175 |
| TSS | 0.599 | 0.285 |
| pH | (¹) | (¹) |

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

(c) *Oil-resin impregnation wastewater—subpart J—BPT.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of power metallurgy parts steam treated | |
| Copper | 1.51 | 0.792 |
| Cyanide | 0.230 | 0.095 |
| Lead | 0.333 | 0.159 |
| Oil and grease | 15.9 | 9.51 |
| TSS | 32.5 | 15.5 |
| pH | (¹) | (¹) |

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

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned | |
| Copper | 8.36 | 4.40 |
| Cyanide | 1.28 | 0.528 |
| Lead | 1.85 | 0.880 |
| Oil and grease | 88.0 | 52.800 |
| TSS | 181 | 85.8 |
| pH | (¹) | (¹) |

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

(f) *Sawing or grinding spent neat oils—subpart J—BPT.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsion.*

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SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsion | |
| Copper | 0.035 | 0.018 |
| Cyanide | 0.005 | 0.002 |
| Lead | 0.008 | 0.004 |
| Oil and grease | 0.362 | 0.217 |
| TSS | 0.742 | 0.353 |
| pH | (¹) | (¹) |

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

(h) *Sawing or grinding contact cooling water.*

SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with contact cooling | |
| Copper | 3.08 | 1.62 |
| Cyanide | 0.470 | 0.195 |
| Lead | 0.681 | 0.324 |
| Oil and grease | 32.4 | 19.5 |
| TSS | 66.4 | 31.6 |
| pH | (¹) | (¹) |

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

(i) *Hot pressing contact cooling water.*

SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder cooled after pressing | |
| Copper | 16.7 | 8.80 |
| Cyanide | 2.55 | 1.06 |
| Lead | 3.70 | 1.76 |
| Oil and grease | 176 | 106 |
| TSS | 361 | 172 |
| pH | (¹) | (¹) |

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

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—BPT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder mixed | |
| Copper | 15.0 | 7.90 |
| Cyanide | 2.29 | 0.948 |
| Lead | 3.32 | 1.58 |
| Oil and grease | 158 | 94.8 |
| TSS | 324 | 154 |
| pH | (¹) | (¹) |

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

(k) *Degreasing spent solvents—subpart J—BPT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

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

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 (BAT):

(a) *Metal powder production atomization wastewater.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder wet atomized | |
| Copper | 9.58 | 5.04 |
| Cyanide | 1.46 | 0.605 |
| Lead | 2.12 | 1.01 |

(b) *Sizing spent emulsions.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) or powder sized | |
| Copper | 0.028 | 0.015 |
| Cyanide | 0.004 | 0.002 |
| Lead | 0.006 | 0.003 |

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(c) *Oil-resin impregnation wastewater—subpart J—BAT.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts steam treated | |
| Copper | 1.51 | 0.792 |
| Cyanide | 0.230 | 0.095 |
| Lead | 0.333 | 0.159 |

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) or powder metallurgy parts tumbled, burnished, or cleaned | |
| Copper | 8.36 | 4.40 |
| Cyanide | 1.28 | 0.528 |
| Lead | 1.850 | 0.880 |

(f) *Sawing or grinding spent neat oils—subpart J—BAT.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsions.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions | |
| Copper | 0.0035 | 0.018 |
| Cyanide | 0.005 | 0.002 |
| Lead | 0.008 | 0.004 |

(h) *Sawing or grinding contact cooling water.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling | |
| Copper | 3.08 | 1.62 |
| Cyanide | 0.470 | 0.195 |
| Lead | 0.681 | 0.324 |

(i) *Hot pressing contact cooling water.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder cooled after pressing | |
| Copper | 16.7 | 8.80 |
| Cyanide | 2.55 | 1.06 |
| Lead | 3.70 | 1.760 |

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—BAT

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder mixed | |
| Copper | 15.0 | 7.90 |
| Cyanide | 2.29 | 0.948 |
| Lead | 3.32 | 1.58 |

(k) *Degreasing spent solvents—subpart J—BAT.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.103 **New source performance standards (NSPS).**

Any new source subject to this subpart must achieve the following new source performance standards (NSPS). The mass of pollutants in the metal powder process wastewater shall not exceed the following values:

(a) *Metal powder production atomization wastewater.*

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SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder wet atomized | |
| Copper | 9.58 | 5.04 |
| Cyanide | 1.46 | 0.605 |
| Lead | 2.12 | 1.01 |
| Oil and grease | 101 | 60.5 |
| TSS | 207 | 98.3 |
| pH | (¹) | (¹) |

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

(b) *Sizing spent emulsions.*

SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sized | |
| Copper | 0.028 | 0.015 |
| Cyanide | 0.004 | 0.002 |
| Lead | 0.006 | 0.003 |
| Oil and grease | 0.292 | 0.175 |
| TSS | 0.599 | 0.285 |
| pH | (¹) | (¹) |

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

(c) *Oil-resin impregnation wastewater—subpart J—NSPS.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts steam treated | |
| Copper | 0.151 | 0.079 |
| Cyanide | 0.023 | 0.010 |
| Lead | 0.033 | 0.016 |
| Oil and grease | 1.59 | 0.951 |
| TSS | 3.25 | 1.55 |
| pH | (¹) | (¹) |

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

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned | |
| Copper | 0.836 | 0.440 |
| Cyanide | 0.128 | 0.053 |
| Lead | 0.185 | 0.088 |
| Oil and grease | 8.80 | 5.28 |
| TSS | 18.1 | 8.58 |
| pH | (¹) | (¹) |

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

(f) *Sawing or grinding spent neat oils—subpart J—NSPS.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsions.*

SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions | |
| Copper | 0.035 | 0.018 |
| Cyanide | 0.005 | 0.002 |
| Lead | 0.008 | 0.004 |
| Oil and grease | 0.362 | 0.217 |
| TSS | 0.742 | 0.353 |
| pH | (¹) | (¹) |

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

(h) *Sawing or grinding contact cooling water.*

SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling water | |
| Copper | 3.08 | 1.62 |
| Cyanide | 0.470 | 0.195 |
| Lead | 0.681 | 0.324 |
| Oil and grease | 32.4 | 19.5 |
| TSS | 66.4 | 31.6 |
| pH | (¹) | (¹) |

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

(i) *Hot pressing contact cooling water.*

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SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder cooled after pressing | |
| Copper | 1.67 | 0.880 |
| Cyanide | 0.255 | 0.106 |
| Lead | 0.370 | 0.176 |
| Oil and grease | 17.6 | 10.6 |
| TSS | 36.1 | 17.2 |
| pH | (¹) | (¹) |

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

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—NSPS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder mixed | |
| Copper | 15.0 | 7.90 |
| Cyanide | 2.29 | 0.948 |
| Lead | 3.32 | 1.58 |
| Oil and grease | 158 | 94.8 |
| TSS | 324 | 154 |
| pH | (¹) | (¹) |

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

(k) *Degreasing spent solvents—subpart J—NSPS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.104 Pretreatment standards for existing sources (PSES).

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 by August 23, 1988 achieve the following pretreatment standards for existing sources (PSES). The mass of wastewater pollutants in metal powders process wastewater introduced into a POTW shall not exceed the following values:

(a) *Metal powder production atomization wastewater.*

SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder wet atomized | |
| Copper | 9.58 | 5.040 |
| Cyanide | 1.46 | 0.605 |
| Lead | 2.12 | 1.01 |

(b) *Sizing spent emulsions.*

SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sized | |
| Copper | 0.028 | 0.015 |
| Cyanide | 0.004 | 0.002 |
| Lead | 0.006 | 0.003 |

(c) *Oil-resin impregnation wastewater—subpart J—PSES.*

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy part steam treated | |
| Copper | 1.51 | 0.792 |
| Cyanide | 0.230 | 0.095 |
| Lead | 0.333 | 0.159 |

(e) *Tumbling, burnishing and cleaning wastewater.*

SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned | |
| Copper | 8.36 | 4.40 |
| Cyanide | 1.28 | 0.528 |
| Lead | 1.85 | 0.880 |

(f) *Sawing or grinding spent neat oils—subpart J—PSES.* There shall be no discharge of process wastewater pollutants.

(g) *Sawing or grinding spent emulsions.*

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SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions | |
| Copper | 0.035 | 0.018 |
| Cyanide | 0.005 | 0.002 |
| Lead | 0.008 | 0.004 |

(h) *Sawing or grinding contact cooling water.*

SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling water | |
| Copper | 3.08 | 1.62 |
| Cyanide | 0.470 | 0.195 |
| Lead | 0.681 | 0.324 |

(i) *Hot pressing contact cooling water.*

SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder cooled after pressing | |
| Copper | 16.7 | 8.80 |
| Cyanide | 2.55 | 1.06 |
| Lead | 3.70 | 1.76 |

(j) *Mixing wet air pollution control scrubber blowdown.*

SUBPART J—PSES

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder mixed | |
| Copper | 15.0 | 7.90 |
| Cyanide | 2.29 | 0.948 |
| Lead | 3.32 | 1.58 |

(k) *Degreasing spent solvents—subpart J—PSES.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

§ 471.105 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subject which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources. The mass of wastewater pollutants in metal powders process wastewater introduced into a POTW shall not exceed the following values:

(a) *Metal powder production atomization wastewater.*

SUBPART J—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder wet atomized | |
| Copper | 9.58 | 5.04 |
| Cyanide | 1.46 | 0.605 |
| Lead | 2.12 | 1.01 |

(b) *Sizing spent emulsions.*

SUBPART J—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sized | |
| Copper | 0.028 | 0.015 |
| Cyanide | 0.004 | 0.002 |
| Lead | 0.006 | 0.003 |

(c) *Oil-resin impregnation wastewater—subpart J—PSNS.* There shall be no discharge of process wastewater pollutants.

(d) *Steam treatment wet air pollution control scrubber blowdown.*

SUBPART J—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts steam treated | |
| Copper | 0.151 | 0.079 |
| Cyanide | 0.023 | 0.010 |
| Lead | 0.033 | 0.016 |

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(e) *Tumbling, burnishing and cleaning wastewater.*

(i) *Hot pressing contact cooling water.*

SUBPART J—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts tumbled, burnished, or cleaned | |
| Copper | 0.836 | 0.440 |
| Cyanide | 0.128 | 0.053 |
| Lead | 0.185 | 0.088 |

SUBPART J—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder cooled after pressing | |
| Copper | 1.67 | 0.880 |
| Cyanide | 0.255 | 0.106 |
| Lead | 0.370 | 0.176 |

(f) *Sawing or grinding spent neat oils—subpart J—PSNS.* There shall be no discharge of process wastewater pollutants.

(j) *Mixing wet air pollution control scrubber blowdown.*

(g) *Sawing or grinding spent emulsions.*

SUBPART J—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder metallurgy parts sawed or ground with emulsions | |
| Copper | 0.035 | 0.018 |
| Cyanide | 0.005 | 0.002 |
| Lead | 0.008 | 0.004 |

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|---|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder mixed | |
| Copper | 15.0 | 7.90 |
| Cyanide | 2.29 | 0.948 |
| Lead | 3.32 | 1.58 |

(h) *Sawing or grinding contact cooling water.*

(k) *Degreasing spent solvents—subpart J—PSNS.* There shall be no discharge of process wastewater pollutants.

[50 FR 34270, Aug. 23, 1985; 51 FR 2889, Jan. 22, 1986]

SUBPART J—PSNS

| Pollutant or pollutant property | Maximum for any 1 day | Maximum for monthly average |
|---------------------------------|--|-----------------------------|
| | mg/off-kg (pounds per million off-pounds) of powder sawed or ground with contact cooling water | |
| Copper | 3.08 | 1.620 |
| Cyanide | 0.470 | 0.195 |
| Lead | 0.681 | 0.324 |

§ 471.106 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]