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# Title 40

## PART 433 - METAL FINISHING POINT SOURCE CATEGORY

**Authority:** Secs. 301, 304(b), (c), (e), and (g), 306(b) and (c), 307(b) and (c), 308 and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1971, as amended by the Clean Water Act of 1977) (the "Act"); 33 U.S.C. 1311, 1314(b), (c), (e), and (g), 1316(b) and (c), 1317(b) and (c), 1318 and 1361; 86 Stat. 816, Pub. L. 92-500; 91 Stat. 1567, Pub. L. 95-217.

**Source:** 48 FR 32485, July 15, 1983, unless otherwise noted.

### Subpart A - Metal Finishing Subcategory

#### § 433.10 Applicability; description of the metal finishing point source category.

- (a) Except as noted in paragraphs (b) and (c), of this section, the provisions of this subpart apply to plants which perform any of the following six metal finishing operations on any basis material: Electroplating, Electroless Plating, Anodizing, Coating (chromating, phosphating, and coloring), Chemical Etching and Milling, and Printed Circuit Board Manufacture. If any of those six operations are present, then this part applies to discharges from those operations and also to discharges from any of the following 40 process operations: Cleaning, Machining, Grinding, Polishing, Tumbling, Burnishing, Impact Deformation, Pressure Deformation, Shearing, Heat Treating, Thermal Cutting, Welding, Brazing, Soldering, Flame Spraying, Sand Blasting, Other Abrasive Jet Machining, Electric Discharge Machining, Electrochemical Machining, Electron Beam Machining, Laser Beam Machining, Plasma Arc Machining, Ultrasonic Machining, Sintering, Laminating, Hot Dip Coating, Sputtering, Vapor Plating, Thermal Infusion, Salt Bath Descaling, Solvent Degreasing, Paint Stripping, Painting, Electrostatic Painting, Electropainting, Vacuum Metalizing, Assembly, Calibration, Testing, and Mechanical Plating.
- (b) In some cases effluent limitations and standards for the following industrial categories may be effective and applicable to wastewater discharges from the metal finishing operations listed above. In such cases these part 433 limits shall not apply and the following regulations shall apply:

Nonferrous metal smelting and refining (40 CFR part 421)

Coil coating (40 CFR part 465)

Porcelain enameling (40 CFR part 466)

Battery manufacturing (40 CFR part 461)

Iron and steel (40 CFR part 420)

Metal casting foundries (40 CFR part 464)

Aluminum forming (40 CFR part 467)

Copper forming (40 CFR part 468)

Plastic molding and forming (40 CFR part 463)

Nonferrous forming (40 CFR part 471)

Electrical and electronic components (40 CFR part 469)

(c) This part does not apply to:

- (1) Metallic platemaking and gravure cylinder preparation conducted within or for printing and publishing facilities; and
- (2) Existing indirect discharging job shops and independent printed circuit board manufacturers which are covered by 40 CFR part 413.)

*[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983; 48 FR 45105, Oct. 3, 1983; 51 FR 40421, Nov. 7, 1986]*

#### **§ 433.11 Specialized definitions.**

The definitions set forth in 40 CFR part 401 and the chemical analysis methods set forth in 40 CFR part 136 are both incorporated here by reference. In addition, the following definitions apply to this part:

- (a) The term "T", as in "Cyanide, T", shall mean total.
- (b) The term "A", as in "Cyanide A", shall mean amenable to alkaline chlorination.
- (c) The term "job shop" shall mean a facility which owns not more than 50% (annual area basis) of the materials undergoing metal finishing.
- (d) The term "independent" printed circuit board manufacturer shall mean a facility which manufacturers printed circuit boards principally for sale to other companies.
- (e) The term "TTO" shall mean total toxic organics, which is the summation of all quantifiable values greater than .01 milligrams per liter for the following toxic organics:

Acenaphthene

Acrolein

Acrylonitrile

Benzene

Benzidine

Carbon tetrachloride (tetrachloromethane)

Chlorobenzene

1,2,4-Trichlorobenzene

Hexachlorobenzene

1,2-Dichloroethane

1,1,1-Trichloroethane

Hexachloroethane

1,1-Dichloroethane

1,1,2-Trichloroethane

1,1,2,2-Tetrachloroethane

Chloroethane

Bis (2-chloroethyl) ether

2-Chloroethyl vinyl ether (mixed)

2-Chloronaphthalene

2,4,6-Trichlorophenol

Parachlorometa cresol

Chloroform (trichloromethane)

2-Chlorophenol

1,2-Dichlorobenzene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

3,3-Dichlorobenzidine

1,1-Dichloroethylene

1,2-Trans-dichloroethylene

2,4-Dichlorophenol

1,2-Dichloropropane

1,3-Dichloropropylene (1,3-dichloropropene)

2,4-Dimethylphenol

2,4-Dinitrotoluene

2,6-Dinitrotoluene

1,2-Diphenylhydrazine

Ethylbenzene

Fluoranthene

4-Chlorophenyl phenyl ether

4-Bromophenyl phenyl ether

Bis (2-chloroisopropyl) ether

Bis (2-chloroethoxy) methane

Methylene chloride (dichloromethane)

Methyl chloride (chloromethane)

Methyl bromide (bromomethane)

Bromoform (tribromomethane)

Dichlorobromomethane

Chlorodibromomethane

Hexachlorobutadiene

Hexachlorocyclopentadiene

Isophorone

Naphthalene

Nitrobenzene

2-Nitrophenol

4-Nitrophenol

2,4-Dinitrophenol

4,6-Dinitro-o-cresol

N-nitrosodimethylamine

N-nitrosodiphenylamine

N-nitrosodi-n-propylamine

Pentachlorophenol

Phenol

Bis (2-ethylhexyl) phthalate

Butyl benzyl phthalate

Di-n-butyl phthalate

Di-n-octyl phthalate

Diethyl phthalate

Dimethyl phthalate

1,2-Benzanthracene

(benzo(a)anthracene)

Benzo(a)pyrene (3,4-benzopyrene)

3,4-Benzofluoranthene (benzo(b)fluoranthene)

11,12-Benzofluoranthene (benzo(k)fluoranthene)

Chrysene

Acenaphthylene

Anthracene

1,12-Benzoperylene (benzo(ghi)perylene)

Fluorene

Phenanthrene

1,2,5,6-Dibenzanthracene (dibenzo(a,h)anthracene)

Indeno(1,2,3-cd) pyrene (2,3-o-phenylene pyrene)

Pyrene

Tetrachloroethylene

Toluene

Trichloroethylene

Vinyl chloride (chloroethylene)

Aldrin

Dieldrin

Chlordane (technical mixture and metabolites)

4,4-DDT

4,4-DDE (p,p-DDX)

4,4-DDD (p,p-TDE)

Alpha-endosulfan

Beta-endosulfan

Endosulfan sulfate

Endrin

Endrin aldehyde

Heptachlor

Heptachlor epoxide

(BHC-hexachloro-

cyclohexane)

Alpha-BHC

Beta-BHC

Gamma-BHC

Delta-BHC

(PCB-polychlorinated biphenyls)

PCB-1242 (Arochlor 1242)

PCB-1254 (Arochlor 1254)

PCB-1221 (Arochlor 1221)

PCB-1232 (Arochlor 1232)

PCB-1248 (Arochlor 1248)

PCB-1260 (Arochlor 1260)

PCB-1016 (Arochlor 1016)

Toxaphene

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

*[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983, as amended at 51 FR 40421, Nov. 7, 1986]*

#### **§ 433.12 Monitoring requirements.**

- (a) In lieu of requiring monitoring for TTO, the permitting authority (or, in the case of indirect dischargers, the control authority) may allow dischargers to make the following certification statement: "Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation [or pretreatment standard] for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the permitting [or control] authority." For direct dischargers, this statement is to be included as a "comment" on the Discharge Monitoring Report required by 40 CFR 122.44(i), formerly 40 CFR 122.62(i). For indirect dischargers, the statement is to be included as a comment to the periodic reports required by 40 CFR 403.12(e). If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyse for only those pollutants which would reasonably be expected to be present.
- (b) In requesting the certification alternative, a discharger shall submit a solvent management plan that specifies to the satisfaction of the permitting authority (or, in the case of indirect dischargers, the control authority) the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for ensuring that toxic organics do not routinely spill or leak into the wastewater. For direct dischargers, the permitting authority shall incorporate the plan as a provision of the permit.
- (c) Self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, samples may be taken of the final effluent, if the plant limitations are adjusted based on the dilution ratio of the cyanide waste stream flow to the effluent flow.

*(Approved by the Office of Management and Budget under control number 2040-0074)*

*[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983, as amended at 49 FR 34823, Sept. 4, 1984]*

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

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

**BPT Effluent Limitations**

<b>Pollutant or pollutant property</b>	<b>Maximum for any 1 day</b>	<b>Monthly average shall not exceed</b>
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	
Oil & Grease	52	26
TSS	60	31
pH	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within 6.0 to 9.0.

- (b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

<b>Pollutant or pollutant property</b>	<b>Maximum for any 1 day</b>	<b>Monthly average shall not exceed</b>
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

- (c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

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

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

### BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

- (b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

- (c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

### § 433.15 Pretreatment standards for existing sources (PSES).

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

### PSES for All Plants Except Job Shops and Independent Printed Circuit Board Manufacturers

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26



Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

- (b) Alternatively, for industrial facilities with cyanide treatment, upon agreement between a source subject to those limits and the pollution control authority. The following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

- (c) No user introducing wastewater pollutants into a publicly owned treatment works under the provisions of this subpart shall augment the use of process wastewater as a partial or total substitute for adequate treatment to achieve compliance with this standard.
- (d) An existing source submitting a certification in lieu of monitoring pursuant to § 433.12 (a) and (b) of this regulation must implement the toxic organic management plan approved by the control authority.
- (e) An existing source subject to this subpart shall comply with a daily maximum pretreatment standard for TTO of 4.57 mg/l.
- (f) Compliance with the provisions of paragraph (c), (d), and (e) of this section shall be achieved as soon as possible, but not later than June 30, 1984, however metal finishing facilities which are also covered by part 420 (iron and steel) need not comply before July 10, 1985. Compliance with the provisions of paragraphs (a) and (b) of this section shall be achieved as soon as possible, but not later than February 15, 1986.

[48 FR 32485, July 15, 1983, as amended at 48 FR 41410, Sept. 15, 1983; 48 FR 43682, Sept. 26, 1983]

#### § 433.16 New source performance standards (NSPS).

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

##### NSPS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	
Oil and Grease	52	26
TSS	60	31
pH	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Within 6.0 to 9.0.

- (b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

- (c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983]

#### § 433.17 Pretreatment standards for new sources (PSNS).

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

##### PSNS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

- (b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to these limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

- (c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.
- (d) An existing source submitting a certification in lieu of monitoring pursuant to § 433.12 (a) and (b) of this regulation must implement the toxic organic management plan approved by the control authority.

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983]

## Subpart B [Reserved]