

Chapter NR 261

METAL FINISHING

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NR 261.01 Purpose. The purpose of this chapter is to establish standards of performance and effluent limitations for discharges of wastewater from the metal finishing point source category into waters of the state. It is also the purpose of this chapter to establish pretreatment standards and effluent limitations for new and existing sources in the metal finishing point source category which discharge wastewater into publicly owned treatment works.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

NR 261.02 Applicability. c1d The provisions of this chapter are applicable to dischargers performing any of the operations outlined in s. NR 260.02 c1d which include: electroplating of common metals, electroplating of precious metals, anodizing, coatings echromating, phosphating and coloringd, chemical etching and milling, electroless plating and printed circuit board manufacturing. When any of the above operations are present the provisions also apply to discharges from the following process operations:

Abrasive jet machining	Paint stripping
Assembly	Painting
Brazing	Plasma arc machining
Burnishing	Polishing
Calibration	Pressure deformation
Cleaning	Salt bath descaling
Electric discharge machining	Sand blasting
Electrochemical machining	Shearing
Electron beam machining	Sintering
Electropainting	Soldering
Electrostatic painting	Solvent degreasing
Flame spraying	Sputtering
Grinding	Testing
Heat treating	Thermal cutting
Hot dip coating	Thermal infusion
Impact deformation	Tumbling
Laminating	Ultrasonic machining
Laser beam machining	Vacuum metalizing
Machining	Vapor plating
Mechanical plating	Welding

c2d The provisions of this chapter are not applicable to the following:

cad Operations similar to metal finishing which are specifically regulated by other categorical standards.

Note: These other applicable standards include aluminum forming, battery manufacturing, coil coating, copper forming, electrical and electronic components, iron and steel manufacturing, metal molding and casting cfoundriesd, nonferrous metals forming, nonferrous metals manufacturing, plastic molding and forming, porcelain enameling.

cbd Existing indirect discharging electroplating job shops and independent printed circuit board manufacturers, which are regulated under ch. NR 260.

ccd Metallic platemaking and gravure cylinder preparation conducted for use in the printing and publishing facilities.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

NR 261.03 Definitions. The following definitions are applicable to terms used in this chapter. Definitions of other terms and meanings of abbreviations are set forth in chs. NR 205, 211, and 260, and the EPA Development Document for Effluent Limitations Guidelines and Standards for the Metal Finishing Point Source Category cEPA 440{1-83{091, June 1983d.

Note: Copies of this document are available for inspection at the office of the department of natural resources, 101 S. Webster, Madison; the secretary of state[s] office, and the office of the legislative reference bureau, and may be obtained for personal use from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20460.

c1d XCyanide, AY means cyanide amenable to alkaline chlorination as determined by ch. NR 219.

c2d XIndependent printed circuit board manufacturerY means a facility which manufactures printed circuit boards principally for sale to other companies.

c3d XJob shopY means a facility which owns not more than 50% annual area basisd of the materials undergoing metal finishing.

c4d XNew sourceY for indirect dischargers means any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after August 31, 1982; and for direct dischargers means any point source, the construction of which commenced after August 29, 1983.

c5d XNSPSY means new source performance standards.

c6d XPSESY means pretreatment standards for existing sources.

c7d XPSNSY means pretreatment standards for new sources.

c8d XTTOY means total toxic organics, which is the sum of all quantifiable values greater than 0.01 milligrams per liter c10 micrograms per literd of the toxic organics listed in s. NR 215.03 c1d to c5d.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86; correction in c8d made under s. 13.92 c4d cbd 7., Stats., Register February 2021 No. 782.

Subchapter I — Direct Discharges

NR 261.10 Applicability. The provisions of this subchapter are applicable to discharges of wastewater from the metal finishing point source category directly into waters of the state.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

NR 261.11 Compliance dates. Discharge of pollutants from facilities subject to the provisions of this subchapter may not exceed, as appropriate:

c1d By July 1, 1977 effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available cBPTd;

c2d By July 1, 1984 effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable cBATd;

c3d At the commencement of discharge for new source performance standards cNSPsd.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

NR 261.12 Discharge standards. c1d BEST PRACTICABLE TECHNOLOGY CBPTD. cad Except as provided in par. cbd and subch. IV of ch. NR 220, any existing point source subject to this subchapter shall, no later than July 1, 1977, achieve the following effluent limitations attainable by applying the best practicable control technology currently available:

Table 1
BPT Effluent Limitations cmg{ld

Pollutant or pollutant property ¹	1 day max.	monthly avg.
Cadmium cCdd	0.69	0.26
Chromium cCrd	2.77	1.71
Copper cCud	3.38	2.07
Lead cPbd	0.69	0.43
Nickel cNid	3.98	2.38
Silver cAgd	0.43	0.24
Zinc cZnd	2.61	1.48
Cyanide cCNd	1.20	0.65
Total Toxic Organics cTTOd	2.13	--
Oil & Grease	52	26
Total Suspended Solids cTSSd	60	31
pH	6.0 - 9.5	6.0 - 9.5

¹ All metals and cyanide shall be determined in XtotalY form.

cbd For facilities with cyanide treatment, and upon approval of the department, an amenable cyanide limit cCyanide, Ad of 0.86 milligrams per liter c1 day max.d and 0.32 milligrams per liter cmonthly avg.d may apply in place of the total cyanide limit specified in Table 1.

ccd No discharger subject to the provisions of this subsection may 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 standard.

c2d BEST AVAILABLE TECHNOLOGY CBATD. cad Except as provided in par. cbd and subch. IV of ch. NR 220, any existing point source subject to this subchapter shall, no later than July 1, 1984, achieve the following effluent limitations attainable by applying the best available technology economically achievable:

Table 2
BAT Effluent Limitations cmg{ld

Pollutant or pollutant property ¹	1 day max.	monthly avg.
Cadmium cCdd	0.69	0.26
Chromium cCrd	2.77	1.71
Copper cCud	3.38	2.07
Lead cPbd	0.69	0.43
Nickel cNid	3.98	2.38
Silver cAgd	0.43	0.24
Zinc cZnd	2.61	1.48
Cyanide cCNd	1.20	0.65
Total Toxic Organics cTTOd	2.13	----

¹All metals and cyanide shall be determined in XtotalY form.

cbd For facilities with cyanide treatment, and upon approval of the department, an amenable cyanide limit cCyanide, Ad of 0.86 milligrams per liter c1 day max.d and 0.32 milligrams per

liter cmonthly avg.d may apply in place of the total cyanide limit specified in Table 2.

ccd No discharger subject to the provisions of this subsection may 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 standard.

c3d NEW SOURCE PERFORMANCE STANDARDS CNSPsd. cad Except as provided in par. cbd and subch. IV of ch. NR 220, any new source subject to this subchapter shall, at the commencement of discharge, achieve the following performance standards:

Table 3
NSPS cmg{ld

Pollutant or pollutant property ¹	1 day max.	monthly avg.
Cadmium cCdd	0.11	0.07
Chromium cCrd	2.77	1.71
Copper cCud	3.38	2.07
Lead cPbd	0.69	0.43
Nickel cNid	3.98	2.38
Silver cAgd	0.43	0.24
Zinc cZnd	2.61	1.48
Cyanide cCNd	1.20	0.65
Total Toxic Organics cTTOd	2.13	--
Oil & Grease	52	26
Total Suspended Solids cTSSd	60	31
pH	6.0 - 9.5	6.0 - 9.5

¹All metals and cyanide shall be determined in XtotalY form.

cbd For facilities with cyanide treatment, and upon approval of the department, an amenable cyanide limit cCyanide, Ad of 0.86 milligrams per liter c1 day max.d and 0.32 milligrams per liter cmonthly avg.d may apply in place of the total cyanide limit specified in Table 3.

ccd No discharger subject to the provisions of this subsection may 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 standard.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86; correction in c1d cad, c2d cad, c3d cad made under s. 13.92 c4d cbd 7, Stats., Register April 2018 No. 748.

NR 261.13 Monitoring requirements. c1d TOTAL TOXIC ORGANICS. cad In place of monitoring for TTO, the department may allow dischargers to make the following certification statement:

XBased on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics cTTOd, 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 Department of Natural Resources.Y

cbd In requesting the certification alternative, a discharger shall submit a toxic organic management plan. The plan shall specify to the satisfaction of the department, 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. The department shall incorporate the plan as a provision of the permit.

ccd If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyze only for

those pollutants reasonably expected to be present or those pollutants specified in the discharge permit.

c2d CYANIDE. Self-monitoring for cyanide shall be conducted after cyanide treatment but before dilution with other wastestreams. Alternatively, samples may be taken of the final effluent if the facility limitations are adjusted based on the dilution ratio of the cyanide wastestream flow to the effluent flow.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

Subchapter II — Indirect Discharges

NR 261.20 Applicability. The provisions of this subchapter are applicable to discharges of wastewater from the metal finishing processes as listed in s. NR 261.02 c1d into publicly owned treatment works.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

NR 261.21 Compliance dates. Discharge of pollutants from facilities subject to the provisions of this subchapter may not exceed as appropriate:

c1d By February 15, 1986 for pretreatment standards for existing sources cPSESd;

c2d At the commencement of discharge for pretreatment standards for new sources cPSNSd.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

NR 261.22 Discharge standards. c1d PRETREATMENT STANDARDS FOR EXISTING SOURCES CPSED. cad Except as provided in par. cbd, any existing source subject to this subchapter shall comply with ch. NR 211 and achieve, by February 15, 1986, the following pretreatment standards for existing sources:

Table 4
PSES cmg{ld

Pollutant or pollutant property ¹	1 day max.	monthly avg.
Cadmium cCdd	0.69	0.26
Chromium cCrd	2.77	1.71
Copper cCud	3.38	2.07
Lead cPbd	0.69	0.43
Nickel cNid	3.98	2.38
Silver cAgd	0.43	0.24
Zinc cZnd	2.61	1.48
Cyanide cCNd	1.20	0.65
Total Toxic Organics cTTOd	4.57 cby June 30, 1984d ²	----
	2.13 cby Feb. 15, 1986d	----

¹All metals and cyanide shall be determined in XtotalY form.

²Metal finishing facilities which are covered by ch. NR 254 shall comply with the 4.57 mg/l TTO limitation by July 10, 1985.

cbd For facilities with cyanide treatment, and upon approval of the control authority, an amenable cyanide limit cCyanide, Ad of 0.86 milligrams per liter c1 day max.d and 0.32 milligrams per liter cmonthly avg.d may apply in place of the total cyanide limit specified in Table 4.

ccd No discharger subject to the provisions of this subchapter may 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 standard.

c2d PRETREATMENT STANDARDS FOR NEW SOURCES CPSNSD.

cad Except as provided in par. cbd, any new source subject to this subchapter shall comply with ch. NR 211 and achieve, at the commencement of discharge, the following pretreatment standards for new sources:

Table 5
PSNS cmg{ld

Pollutant or pollutant property ¹	1 day max.	monthly avg.
Cadmium cCdd	0.11	0.07
Chromium cCrd	2.77	1.71
Copper cCud	3.38	2.07
Lead cPbd	0.69	0.43
Nickel cNid	3.98	2.38
Silver cAgd	0.43	0.24
Zinc cZnd	2.61	1.48
Cyanide cCNd	1.20	0.65
Total Toxic Organics cTTOd	2.13	----

¹All metals and cyanide shall be determined in XtotalY form.

cbd For facilities with cyanide treatment, and upon approval of the control authority, an amenable cyanide limit cCyanide, Ad of 0.86 milligrams per liter c1 day max.d and 0.32 milligrams per liter cmonthly avg.d may apply in place of the total cyanide limit specified in Table 5.

ccd No discharger subject to the provisions of this subchapter may 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 standard.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.

NR 261.23 Monitoring requirements. c1d TOTAL TOXIC ORGANICS. cad In place of monitoring for TTO, the control authority may allow dischargers to make the following certification statement:

XBased on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics cTTOd, I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic plan submitted to the control authority.Y

cbd In requesting the certification alternative, a discharger shall submit a toxic organic management plan. The plan shall specify to the satisfaction of 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.

ccd If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyze only for those pollutants reasonably expected to be present.

cdd A new or existing source submitting a certification pursuant to pars. cad to ccd shall implement the toxic organic management plan approved by the control authority.

c2d CYANIDE. Self-monitoring for cyanide shall be conducted after cyanide treatment but before dilution with other wastestreams. Alternatively, samples may be taken of the final effluent if the facility limitations are adjusted based on the dilution ratio of the cyanide wastestream flow to the effluent flow.

History: Cr. Register, October, 1986, No. 370, eff. 11-1-86.