

Chapter NR 264

ELECTRICAL AND ELECTRONIC COMPONENTS

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NR 264.01 Purpose. The purpose of this chapter is to establish effluent limitations, performance standards, and pretreatment standards for discharges of process wastes from the electrical and electronic components category of point sources and its subcategories.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.02 Applicability. This chapter applies to any manufacturing operation which produces semiconductors, electronic crystals, cathode ray tubes, or luminescent materials and which discharges or may discharge process wastewater pollutants to waters of the state or into a publicly owned treatment works.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

4 nitrophenol	1, 1 dichloroethylene
pentachlorophenol	2, 4, 6 trichlorophenol
di-n-butyl phthalate	carbon tetrachloride
anthracene	1, 2 dichloroethane
1, 2 diphenylhydrazine	1, 1, 2 trichloroethane
isophorone	dichlorobromomethane
butyl benzyl phthalate	

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 1
Semiconductor

BPT Effluent Limitations		
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.37	
pH	(1)	(1)

(1) Within the range of 6.0 to 9.0 at all times.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Table 2
Semiconductor

BAT Effluent Limitations		
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.37	
Fluoride	32.0	17.4

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.14 New source performance standards. Any new source subject to this subchapter shall achieve the following NSPS:

Register, May, 1990, No. 413

Table 3
Semiconductor

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.37	
Fluoride	32.0	17.4
pH	(1)	(1)

(1) Within the range of 6.0 to 9.0 at all times.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.15 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any existing source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and the TTO concentration in the discharge may not exceed 1.37 milligrams per liter for any one day.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.16 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and the TTO concentration in the discharge may not exceed 1.37 milligrams per liter for any one day.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.17 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve a pH within the range of 6.0 to 9.0 at all times.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

Subchapter II — The Electronic Crystals Subcategory

NR 264.20 Applicability; description of the electronic crystals subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs resulting from the growing of crystals or the production of crystal wafers for use in the manufacture of electronic devices.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.21 Specialized definitions. The following definitions apply to the terms used in this subchapter:

(1) "Electronic crystals" means crystals or crystalline materials, such as crystals comprised of quartz, ceramic silicon, gallium arsenide, and indium arsenide, which, because of their unique structural and electrical properties, are used in electronic devices.

(2) "TTO" means the sum of the concentrations of each of the following toxic organic compounds which is found in the discharge at a concentration greater than 10 micrograms per liter:

1, 2, 4 trichlorobenzene	2, 4 dichlorophenol
chloroform	4 nitrophenol
1, 2 dichlorobenzene	pentachlorophenol
1, 3 dichlorobenzene	di-n-butyl phthalate
1, 4 dichlorobenzene	anthracene
ethylbenzene	1, 2 diphenylhydrazine
1, 1, 1 trichloroethane	isophorone
methylene chloride	butyl benzyl phthalate
naphthalene	1, 1 dichloroethylene
2 nitrophenol	2, 4, 6 trichlorophenol
bis (2-ethylhexyl) phthalate	carbon tetrachloride
tetrachloroethylene	1, 2 dichloroethane
toluene	1, 1, 2 trichloroethane
trichloroethylene	dichlorobromomethane
2 chlorophenol	

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BPT:

Table 4
Electronic Crystals

Pollutant or pollutant property	BPT Effluent Limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.37	
Arsenic(1)	2.09	0.83
Fluoride	32.0	17.4
TSS	61.0	23.0
pH	(2)	(2)

(1) The arsenic limitation only applies to manufacturers of gallium or indium arsenide crystals.

(2) Within the range of 6.0 to 9.0 at all times.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable. Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BAT:

Register, May, 1990, No. 413

Table 5
Electronic Crystals

Pollutant or pollutant property	BAT Effluent Limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.37	
Arsenic(1)	2.09	0.83
Fluoride	32.0	17.4

(1) The arsenic limitation only applies to manufacturers of gallium or indium arsenide crystals.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.24 New source performance standards. Any new source subject to this subchapter shall achieve the standards set forth in s. NR 264.23.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.25 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any existing source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

Table 6
Electronic Crystals

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.37	
Arsenic(1)	2.09	0.83

(1) The arsenic limitation only applies to manufacturers of gallium or indium arsenide crystals.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.26 Pretreatment standards for new sources. Except as provided in s. NR 211.13, and new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and comply with the standards set forth in s. NR 264.25.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.27 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. Except as provided in 40 C.F.R. ss. 125.30 to 125.32, any existing point source subject to this subchapter shall achieve the following effluent limitations representing the degree of effluent reduction attainable by application of BCT:

Table 7
Electronic Crystals

Pollutant or pollutant property	BCT Effluent Limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TSS	61.0	23.0
pH	(1)	(1)

(1) Within the range of 6.0 to 9.0 at all times.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

Subchapter III — The Cathode Ray Tube Subcategory

NR 264.30 Applicability; description of the cathode ray tube subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs from the manufacture of cathode ray tubes. This subchapter does not apply to the manufacture of receiving or transmitting tubes.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.31 Specialized definitions. The following definitions apply to the terms used in this subchapter:

(1) "Cathode ray tube" means an electronic device in which electrons focus through a vacuum to generate a controlled image on a luminescent surface.

(2) "TTO" means the sum of the concentrations of each of the following toxic organic compounds which is found in the discharge at a concentration greater than 10 micrograms per liter.

1, 1, 1 chloroform
trichloroethane
methylene chloride
bis (2-ethylhexyl) phthalate
toluene
trichloroethylene

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.32 New source performance standards. Any new source subject to this subchapter shall achieve the following NSPS:

Table 8
Cathode Ray Tube

NSPS		
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
pH	(1)	(1)
TTO	1.58	
Cadmium	0.06	0.03
Chromium	0.56	0.26
Lead	0.72	0.27
Zinc	0.80	0.33
Fluoride	35.0	18.0
TSS	46.0	24.0

(1) Within the range of 6.0 to 9.0 at all times.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.33 Pretreatment standards for existing sources. Except as provided in ss. NR 211.13 and 211.14, any existing source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSES:

Table 9
Cathode Ray Tube

PSES		
Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.58	
Cadmium	0.06	0.03
Chromium	0.65	0.30
Lead	1.12	0.41
Zinc	1.38	0.56
Fluoride	35.0	18.0

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.34 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 10
Cathode Ray Tube

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
TTO	1.58	
Cadmium	0.06	0.03
Chromium	0.56	0.26
Lead	0.72	0.27
Zinc	0.80	0.33
Fluoride	35.0	18.0

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

Subchapter IV — The Luminescent Materials Subcategory

NR 264.40 Applicability; description of the luminescent materials subcategory. This subchapter applies to the discharge of pollutants to waters of the state and the introduction of pollutants into POTWs resulting from the manufacture of materials, such as calcium halophosphate, yttrium oxide, zinc sulfide, and zinc-cadmium sulfide, which emit light upon excitation by energy sources such as photons, electrons, applied voltage, chemical reactions, or mechanical energy, and which are specifically used as coatings in fluorescent lamps and cathode ray tubes.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

NR 264.41 New source performance standards. Any new source subject to this subchapter shall achieve the following NSPS:

Table 11
Luminescent Materials

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
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 in the range of 6.0 to 9.0 at all times.

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

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NR 264.42 Pretreatment standards for new sources. Except as provided in s. NR 211.13, any new source subject to this subchapter which introduces pollutants into a POTW shall comply with ch. NR 211 and achieve the following PSNS:

Table 12
Luminescent Materials

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter	
Cadmium	0.55	0.26
Antimony	0.10	0.04
Zinc	1.64	0.67
Fluoride	35.0	18.0

History: Cr. Register, May, 1990, No. 413, eff. 6-1-90.

Note: The Wisconsin administrative code corresponds to the code of federal regulations as cross referenced in the following table:

<u>State Code</u>	<u>Corresponding Federal Regulation</u>
s. NR 205.03	40 C.F.R. s. 401.11
s. NR 205.04	40 C.F.R. s. 401.11
s. NR 205.07 (3) (d)	40 C.F.R. s. 122.44 (i)
ch. NR 211	40 C.F.R. Part 403
s. NR 211.03	40 C.F.R. s. 403.3
s. NR 211.13	40 C.F.R. s. 403.7
s. NR 211.14	40 C.F.R. s. 403.13
s. NR 211.15 (4)	40 C.F.R. s. 403.12 (e)
ch. NR 264	40 C.F.R. Part 469