

Chapter NR 286

RUBBER PROCESSING

NR 286.01	Purpose.
NR 286.02	Applicability.
NR 286.03	Definitions.
NR 286.04	Compliance with effluent limitations and standards.
NR 286.06	Application of effluent limitations and standards.

NR 286.09	Effluent limitations, non-process wastewater.
NR 286.10	Effluent limitations, best practicable treatment.
NR 286.11	Effluent limitations, best available treatment.
NR 286.12	Standards of performance.
NR 286.13	Pretreatment standards.

NR 286.01 Purpose. The purpose of this chapter is to establish limitations, standards of performance, and pretreatment standards for discharges of process wastes from the rubber processing category of point sources and subcategories thereof.

Note: The authority for promulgation of this chapter is set forth in ch. NR 205.
History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

NR 286.02 Applicability. c1d The effluent limitations, standards of performance, pretreatment standards, and other provision in this chapter are applicable to pollutants or pollutant properties in discharges of process waste resulting from manufacture in any of the following product subcategories.

- cad Pneumatic tires and inner tubes
- cbd Emulsion crumb rubber
- ccd Solution crumb rubber
- cdd Latex rubber.
- ced Small-sized rubber products manufacturing plants.
- cfid Medium-sized rubber products manufacturing plants.
- cgd Large-sized rubber products manufacturing plants.
- chd Wet digestion process reclaimed rubber.
- cid Pan, dry digestion, and mechanically reclaimed rubber.
- cjd Latex-dipped, latex-extruded, and latex-molded rubber products.
- ckd Latex foam.

c2d Discharges resulting from the production of latex based products, tires except retreaded tires and inner tubes, and textiles subject to the provisions of ch. NR 296 are specifically excluded from subcategories ced, cfid, and cgd of sub. c1d.

c3d Discharges resulting from textile facilities subject to the provisions of ch. NR 296 are specifically excluded from subcategories cjd and ckid of sub. c1d.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

NR 286.03 Definitions. The following definitions are applicable to terms used in this chapter. Definitions of other terms and meanings of abbreviations are set forth in ch. NR 205.

c1d XChromiumY or XCrY means total chromium

c2d XLarge-sizedY means manufacturing plants which process more than 23,000 lbs or 10,430 kg per day of raw materials.

c3d XMedium-sizedY means manufacturing plants which process between 8,200 and 23,000 lbs or 3,720 and 10,430 kg per day of raw materials.

c4d XProcess wasteY means for facilities in the pneumatic tire and inner tube subcategory which were constructed before 1959 discharges of water from soapstone solution application, steam cleaning operations, air pollution control equipment, unroofed process oil unloading areas, mold cleaning operations, latex applications, and air compressor receivers, excluding tread cooling and discharges from other areas of such facilities. Other-

wise in this chapter Xprocess wasteY means process wastewater as defined in s. NR 205.03 c21d.

c5d XPan, dry digestion, and mechanically reclaimed rubberY means rubber reclaimed by other than the wet digestion process.

c6d XRaw materialY means, as appropriate,

cad All natural and synthetic rubber, carbon black, oils, chemical compounds and fabric used in rubber products manufacturing.

cbd Wire in addition to the materials listed in par. cad used in the manufacture of tires and inner tubes, or

ccd All latex solids used in the manufacture of latex foam or latex-dipped, latex-extruded, or latex-molded products.

c7d XRaw material equivalentY means the amount of raw material equal to the daily raw material usage multiplied by the daily volume of wet scrubbed air and divided by the daily volume of all scrubbed air.

c8d XRubber products manufacturingY means the production of molded, extruded, and fabricated rubber products, foam rubber backing, rubber cement-dipped goods, and retreaded tires.

c9d XSmall-sizedY means manufacturing plants which process less than 8,200 lbs or 3,720 kg per day of raw materials.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

NR 286.04 Compliance with effluent limitations and standards. Discharge of pollutants from facilities subject to the provisions of this chapter 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;

c2d By July 1, 1983 effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable;

c3d Pretreatment standards for discharges to publicly owned treatment works;

c4d Standards of performance for new sources.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; r. and recr. Register, August, 1983, No. 332, eff. 9-1-83.

NR 286.06 Application of effluent limitations and standards. c1d The effluent limitations and standards set forth in this chapter shall be used in accordance with this section to establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this chapter, except as;

cad They may be modified in accordance with subch. IV of ch. NR 220,

cbd They may be superseded by more stringent limitations and standards necessary to achieve water quality standards or meet other legal requirements, or

ccd They may be supplemented or superseded by standards or prohibitions for toxic pollutants or by additional limitations for other pollutants required to achieve water quality.

c2d The production basis for application of the limitations and standards set forth in this chapter shall be the daily average of a maximum month in each subcategory subject to the provisions of this chapter.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; correction in c1d cad made under s. 13.92 c4d cbd 7, Stats., Register April 2018 No. 748.

NR 286.09 Effluent limitations, non-process wastewater. The following effluent limitations are applicable to discharges of non-process wastewater, including tread cooling water, from facilities in the pneumatic tire and inner tube subcategory which were constructed before 1959. Such facilities shall in order to minimize discharge of oil and grease in such wastewaters:

c1d No later than July 1, 1977 employ the best practicable maintenance and housekeeping practices;

c2d No later than July 1, 1983 employ the best available maintenance and housekeeping practices; and

c3d Limit the oil and grease content of such wastewaters to daily average and daily maximum concentrations of 5 and 10 mg{ 1 respectively.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

NR 286.10 Effluent limitations, best practicable treatment. The following effluent limitations for all or specific subcategories establish, except as provided in subch. IV of ch. NR 220, the quantity or quality of pollutants or pollutant properties which may be discharged by a facility subject to the provisions of this chapter after application to process wastes of the best practicable control technology currently available.

c1d The pH of all discharges shall be within the range of 6.0 to 9.0.

c2d The 30-day average and daily maximum limitations for BOD₅, suspended solids, and other parameters are set forth in table 1.

c3d The limitations of table 1 are in lbs{ 1000 lbs or kg{ 1000 of raw material, for subcategories ced, cfd, cgd, cjd and ckd and of product for the other subcategories of s. NR 286.02.

c4d The limitations for lead in table 1 apply only to discharges attributable to the manufacture of lead sheathed hose.

c5d The limitations for chromium in table 1 apply only to facilities using a chromic acid form cleaning operation.

c6d For facilities in subcategory ced, cfd, or cgd having wet scrubbing operation the 30 day average and daily maximum discharge limitations for suspended solids shall be increased above those calculated from table 1 by respectively 2.9 and 5.8 lbs{ 1000 lbs or kg{ 1000 kg of raw material equivalent.

**Table 1
BPT Limitations**

Subcategory	Sus. Solids		Oil & Grease		BOD ₅		Other Parameters	
	ave.	max.	ave.	max.	ave.	max.	ave.	max.
cad	.064	.096	.016	.024				
cbd	.65	.98	.16	.24	.40	.60	8.0	12.0 COD
ccd	.65	.98	.16	.24	.40	.60	3.94	5.91 COD
cdd	.55	.82	.14	.21	.34	.54	6.85	10.27 COD
ced	.64	1.28	.25	.70			.0007	.0017 lead
efd	.40	.80	.15	.42			.0007	.0017 lead
egd	.25	.50	.093	.26			.0007	.0017 lead
chd	.52	1.04	.144	.40			6.11	14.7 COD
cid	.192	.384	.144	.40			2.8*	6.7* COD
cjd	2.90	6.96	.73	2.0	2.20	3.72	.0036	.0086 Cr
ckd	.94	2.26			1.4	2.4	.024	.058 Zinc

Subcategories are set forth in s. NR 286.02.

*These limitations are applicable only to facilities in which dry digestion processes are integrated with wet digestion processes for reclaiming rubber.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; correction in cintro.d made under s. 13.92 c4d cbd 7, Stats., Register April 2018 No. 748.

NR 286.11 Effluent limitations, best available treatment. The following effluent limitations for all or specific subcategories establish the quantity or quality of pollutants or pollutant properties which may be discharged by a facility subject to the provisions of this chapter after application to process wastes of the best available technology economically achievable.

c1d The pH of all discharges shall be within the range of 6.0 to 9.0.

c2d The 30-day average and daily maximum limitations for BOD₅, suspended solids, and other parameters are set forth in table 2.

c3d The limitations of table 2 are in lbs{ 1000 lbs or kg{ 1000

kg of raw material for subcategories ced, cfd, cgd, cjd and ckd and of product for the other subcategories of s. NR 286.02.

c4d The limitations for lead in table 2 apply only to discharges attributable to the manufacture of lead sheathed hose.

c5d The limitations for chromium in table 2 apply only to facilities using a chromic acid form cleaning operation.

c6d For facilities in subcategory ced, cfd, or cgd having wet scrubbing operations the 30 day average and daily maximum discharge limitations for suspended solids shall be increased above those calculated from table 2 by respectively 0.5 and 1.0 lbs{ 1000 lbs or kg{ 1000 kg of raw material equivalent.

Table 2
BAT Effluent Limitations

Subcategory	Sus. Solids		Oil & Grease		BOD ₅		Other Parameters	
	ave.	max.	ave.	max.	ave.	max.	ave.	max.
cad	.064	.096	.016	.024				
cbd	.16	.24	.08	.12	.08	.12	2.08	3.12 COD
ccd	.16	.24	.08	.12	.08	.12	2.08	3.12 COD
cdd	.07	.11	.14	.21	.07	.11	1.78	2.66 COD
ced	.64	1.28	.25	.70			.0007	.0017 lead
efd	.40	.80	.15	.42			.0007	.0017 lead
egd	.25	.50	.093	.26			.0007	.0017 lead
chd	.52	1.04	.144	.40			6.11	14.7 COD
cid	.192	.384	.144	.40			2.8*	6.7* COD
cjd	2.90	6.96	.73	2.00	2.20	3.72	.0036	.0086 Cr
ckd	.94	2.26			1.4	2.4	.024	.058 Zinc

Subcategories are set forth in s. [NR 286.02](#).

*These limitations are applicable only to facilities in which dry digestion processes are integrated with wet digestion processes for reclaiming rubber.

History: Cr. [Register, June, 1976, No. 246](#), eff. 7-1-76.

NR 286.12 Standards of performance. The following effluent limitations for all or specific subcategories establish the quantity or quality of pollutants or pollutant properties which may be discharged by a facility which is a new source subject to the provisions of this chapter.

c1d The pH of all discharges shall be within the range of 6.0 to 9.0

c2d The 30-day average and daily maximum limitations for BOD₅, suspended solids, and other parameters are set forth in table 1.

c3d The limitations of table 1 are in lbs{ 1000 lbs or kg{ 1000 kg or raw material for subcategories ced, cfd, cgd, cjd and ckd and of product for the other subcategories of s. [NR 286.02](#).

c4d The limitations for lead in table 1 apply only to discharges attributable to the manufacture of lead sheathed hose.

c5d The limitations for chromium in table 1 apply only to facilities using a chromic acid form cleaning operation.

History: Cr. [Register, June, 1976, No. 246](#), eff. 7-1-76.

NR 286.13 Pretreatment standards. The pretreatment standards for discharges to publicly owned treatment works from sources subject to the provisions of this chapter shall be as set forth in ch. [NR 211](#).

History: Cr. [Register, June, 1976, No. 246](#), eff. 7-1-76; r. and recr. [Register, August, 1983, No. 332](#), eff. 9-1-83.