

Chapter NR 274

NONFERROUS METALS MANUFACTURING

(Interim Effluent Limitations)

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Note: Pursuant to chapter 147, Wis. Stats. and under the procedure of section 227.027, Wis. Stats., the department of natural resources has promulgated interim effluent limitations which were in effect for one year. These interim effluent limitations will be periodically replaced by permanent effluent limitations.

NR 274.01 Purpose. The purpose of this chapter is to establish effluent limitations, standards of performance, and pretreatment standards for discharges of process wastes from the nonferrous metals manufacturing category of point sources and subcategories thereof.

Note: The authority for promulgation of this chapter is set forth in Wis. Adm. Code chapter NR 205. ✓

History: Cr. eff. 2-28-75.

NR 274.02 Applicability. The effluent limitations, standards of performance, pretreatment standards, and other provisions in this chapter are applicable to pollutants or pollutant properties in discharges of process waste resulting from manufacture of the following subcategories.

(1) **BAUXITE REFINING.** This subcategory covers the process of converting bauxite ore containing alumina monohydrate or trihydrate to alumina by the Bayer process or the combination process.

(2) **PRIMARY ALUMINUM SMELTING.** This subcategory covers the process of converting alumina to aluminum by the Hall-Heroult process.

(3) **SECONDARY ALUMINUM SMELTING.** This subcategory covers the recovery, reprocessing, and remelting of aluminum scrap to produce metallic aluminum alloys.

NR 274.03 Definitions. The following definitions are applicable to terms used in this chapter. Definitions of other terms and meanings of abbreviations are set forth in Wis. Adm. Code chapter NR 205. ✓

(1) "Product" means alumina produced from bauxite or hot aluminum metal produced in primary or secondary refining.

NR 274.04 Compliance with effluent limitations and standards. Discharge of pollutants from facilities subject to the provisions of this chapter shall not exceed, as appropriate:

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

(2) By July 1, 1977 pretreatment standards for existing discharges to publicly owned treatment works;

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

(4) Standards of performance for new sources; or

(5) Pretreatment standards for new sources discharging to publicly owned treatment works.

History: Cr. eff. 2-28-75.

NR 274.05 Modification of effluent limitations. (1) Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available may be modified in accordance with this section.

(2) An individual discharger or other interested person may submit evidence to the department that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the effluent limitations. On the basis of such evidence or other available information the department will make a written determination that such factors are or are not fundamentally different for that facility compared to those specified in the appropriate one of the Development Documents, Bauxite Refining, Primary Aluminum Smelting, or Secondary Aluminum Smelting, respectively EPA 440/1-74-019-e, EPA 440/1-74-019-d, or EPA 440/1-74-019-c, all published in March 1974. If such fundamentally different factors are found to exist, the department shall establish for the discharge effluent limitations in the WPDES permit either more or less stringent than the limitations in this chapter, to the extent dictated by such fundamentally different factors. Such limitations must be approved by EPA which may approve, disapprove, or specify other limitations. Copies of these Development Documents are available for inspection at the office of the department of natural resources, the secretary of state's office, and the office of the revisor of statutes and may be obtained for personal use from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20460.

History: Cr. eff. 2-28-75.

NR 274.06 Application of effluent limitations and standards.

(1) 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;

(a) They may be modified in accordance with section NR 274.05,

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

(c) 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.

(2) 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. eff. 2-28-75.

NR 274.10 Effluent limitations, best practicable treatment. The following effluent limitations for all or specific subcategories establish, except as provided in section NR 274.05, 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.

(1) For the bauxite refining subcategory there shall be no discharge of process wastes to surface waters except that during any calendar month there may be discharged from a process wastewater impoundment a volume of process wastewater equal to the difference between the precipitation for that month which falls within the impoundment and the evaporation for that month.

(2) For the primary aluminum smelting subcategory discharges shall be within the pH range of 6.0 to 9.0, the 30-day average limitations for suspended solids and fluoride shall be respectively 1.5 and 1.0 lbs/1000 lbs. or kg/1000 kg. of product, and the daily maximum limitations for suspended solids and fluoride shall be twice the 30-day average limitations.

(3) For the secondary aluminum smelting subcategory;

(a) There shall be no discharge of process wastes to surface water from facilities which use water for metal cooling or from facilities which use aluminum fluoride in the magnesium removal process, and

(b) Discharges from facilities which use chlorine in the magnesium removal process and discharges from facilities which process residues by wet methods shall have a pH within the range of 7.5 to 9.0 and be limited with respect to other pollutant parameters to the 30-day average limitations set forth in table 1 in lbs/1000 lbs. or kg/1000 kg. of product.

TABLE 1
BPT EFFLUENT LIMITATIONS

| Parameter | Average (1) | Average (2) |
|------------------|-------------|-------------|
| Suspended Solids | 175 | 1.5 |
| COD | 675 | 1.0 |
| Fluoride | | .4 |
| Ammonia as N | | .01 |
| Aluminum | | 1.0 |
| Copper | | .003 |

Note: (1) Applicable to facilities using chlorine for magnesium removal; limitations are in lbs/1000 lbs. or kg/1000 kg. of magnesium removal.

(2) Applicable to facilities processing residues by wet methods; limitations are in lbs/1000 lbs. or kg/1000 kg. of product.

History: Cr. eff. 2-28-75.

NR 274.11 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.

(1) For the bauxite refining subcategory there shall be no discharge of process wastes to surface waters except that during any calendar month there may be discharged from a process wastewater impoundment a volume of process wastewater equal to the difference between the precipitation for that month which falls within the impoundment and the evaporation for that month.

(2) For the primary aluminum smelting subcategory discharges shall be within the pH range of 6.0 to 9.0, the 30-day average limitations for suspended solids and fluoride shall be respectively .1 and .05 lbs/1000 lbs. or kg/1000 kg. of product, and the daily maximum limitations for suspended solids and fluoride shall be twice the 30-day average limitations.

(3) For the secondary aluminum smelting subcategory there shall be no discharge of process wastes to surface waters.

History: Cr. eff. 2-28-75.

NR 274.12 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.

(1) For the bauxite refining subcategory there shall be no discharge of process wastes to surface waters except that during any calendar month there may be discharged from a process wastewater impoundment a volume of process wastewater equal to the difference between the precipitation for that month which falls within the impoundment and the evaporation for that month.

(2) For the primary aluminum smelting subcategory discharges shall be within the pH range of 6.0 to 9.0, the 30-day average limitations for suspended solids and fluoride shall be respectively .05 and .025 lbs/1000 lbs. or kg/1000 kg. of product, and the daily maximum limitations for suspended solids and fluoride shall be twice the 30-day average limitations.

(3) For the secondary aluminum smelting subcategory there shall be no discharge of process wastes to surface waters unless variation from this standard is determined to be necessary for facilities using chlorine for magnesium removal after consideration of the cost of achieving effluent reduction and any non-water quality environmental impact and energy requirements. Such variation shall not exceed the limitations of section NR 274.10 (3) (b).

History: Cr. eff. 2-28-75.

NR 274.13 Pretreatment standards for new sources. The pretreatment standards for discharges to publicly owned treatment works from new sources subject to the provisions of this chapter shall be as set forth in Wis. Adm. Code chapter NR 211. In addition the limitations for incompatible pollutants shall be those set forth in section NR 274.12, except as provided in Wis. Adm. Code section NR 211.30 (2). Wastewaters from such new sources may not be discharged to publicly owned treatment works except in compliance with this section.

History: Cr. eff. 2-28-75.