



NR 274

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

L. P. Voigt
Secretary

BOX 450
MADISON, WISCONSIN 53701

IN REPLY REFER TO: _____

STATE OF WISCONSIN)
)
DEPARTMENT OF NATURAL RESOURCES) SS

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, L. P. Voigt, Secretary of the Department of Natural Resources and custodian of the official records, do hereby certify that the annexed copy of Natural Resources Board Order No. W-10-74 (E) has been compared by me with the original order on file in this office of the Department of Natural Resources, Madison, Wisconsin, and that the same is a true copy thereof, and of the whole of such original order; that said order was duly passed and published as set forth therein.

IN TESTIMONY WHEREOF, I have hereunto set my hand at the Pyare Square Building in the City of Madison, this 14th day of January, 1974.


L. P. Voigt, Secretary

(SEAL)

STATE OF WISCONSIN NATURAL RESOURCES BOARD

.....
IN THE MATTER of creating NR 274 .
of the Wisconsin Administrative .
Code .
.....

ORDER NUMBER W-10-74 (E)

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES

BOARD CREATING RULES

Pursuant to authority vested in the State of Wisconsin Natural Resources Board by sections 147.04(5) and 227.027, Wisconsin Statutes, the State of Wisconsin Natural Resources Board hereby creates rules as follows:

CHAPTER NR 274
Interim Effluent Limitations for
the Non-Ferrous Metal Industry
Wisconsin Pollutant Discharge Elimination System

NR 274.01 Purpose. The purpose of this chapter is to establish interim effluent limitations for discharges from industrial point sources identified herein as authorized by section 147.04(5), Wisconsin Statutes.

274.02 Applicability. These limitations apply to the aluminum industry and Standard Industrial Classification Codes 2819, 3334, and 3361. These include rolling and drawing of wire, rod, bars, and structural shapes; and extrusion of tubes and shapes.

- (1) Subcategories Considered. Limitations for the aluminum industry are considered under the following subcategories; refining of bauxite; primary smelting; ingot casting and foundry operations; rolling of plate and sheet; rolling of foil; rolling and drawing of rod, bar and structural shapes; and extrusion of aluminum shapes and tubes.
- (2) Operations Excluded. These interim limitations cover only the listed operations.
 - (a) Metal cleaning and coating is included in Metal Finishing Operations.
 - (b) Secondary smelting is not included. This operation uses scrap aluminum as raw material and is significantly different from the primary operation in regard to water usage.
 - (c) Discharges of non-contact cooling water and boiler water blowdown are not included under these limitations.
- (3) Other Limitations. Other interim effluent limitations in chapter NR 217 are applicable to discharges from facilities which belong in the classifications for this section but are excluded from, or not specifically included in, its provisions.

274.03 Application of Interim Limitations. The use of the interim limitations is limited solely to bauxite refining.

274.04 Description of Abatement Models. The following paragraphs describe in general terms the type of treatment facilities considered to be best practicable treatment technology for the purpose of establishing the interim effluent limitations of this chapter. This description is included to illustrate the type of treatment required. Other treatment technology may be acceptable.

- (1) Bauxite Refining - The mud slurries discharged from this operation can be impounded in lagoons where the solids will settle out. The solids should be allowed to accumulate in the bottom of the lagoon and the water evaporated to prevent any discharge of solids.
- (2) Primary Smelting - this subcategory covers only scrubber water used to wash the gas from the electrolytic cells. It includes pre-bake and Soderberg type operations. It does not include other water uses such as non-contact cooling of rectifiers. The limitations can be attained by recycling wash water and treatment using lime addition, clarification, and detention time sufficient to attain the required limits.

- (3) Ingot Casting and Foundry Operations - The discharge from these operations comes from water sprayed over the molds and ingot surfaces. The minimum treatment is skimming and clarification, assuming recycle, and treatment of the concentrated blowdown by clarification and air flotation or filtration.
- (4) Rolling of Plate and Sheet - This subcategory includes the first reduction of ingots to plate and sheet by hot rolling and cold rolling mills. The minimum treatment should be lime addition, emulsion breaking, skimming, air flotation, and clarification with recycling assumed.
- (5) Rolling of Foil - Cold reduction of sheet to foil normally requires a mineral base oil and in some cases an oil emulsion. The limits assume extension of plate and sheet rolling; if separate facilities are used, the water usage may be significantly higher. The minimum treatment should be emulsion breaking, skimming, and clarification with recycling assumed.
- (6) Rolling and Drawing of Rod, Bar, and Structural Shapes - A low oil-content emulsion is used in this operation to lubricate and cool the aluminum being rolled into rods, bars and structural shapes. The model treatment system is emulsion breaking, skimming and clarification, with recycle assumed. Water used for equipment cooling or in die casting or forging operations, where the water does not come in contact with the metal, is not included under the limitations.
- (7) Extrusion of Tubes Shapes - The water from this category comes from leakage and maintenance of the water-hydraulic presses. The discharge could be continuous or batch. The model treatment system is again emulsion breaking, skimming and clarification, with recycle assumed.

274.05 Table of Interim Effluent Limitations

<u>Process</u>	<u>Parameter</u>	<u>Pounds Per 1000 Pounds (2)</u>
(1) Refining of Bauxite		No discharge essentially
(2) Primary Smelting	Fluoride	0.38
	TSS (1)	0.5
	Oil and Grease	0.25
(3) Ingot Casting & Foundry Operations	TSS	0.08
	Oil	0.08
(4) Rolling of Plate and Sheet	TSS	0.056
	Oil	0.028
	Phosphate as P	0.006
(5) Rolling of Foil	TSS	0.167
	Oil	0.083
(6) Rolling & Drawing of Rod Bar and Structural Shapes	TSS	0.0834
	Oil	0.0417
(7) Extrusion of Aluminum Shapes	TSS	0.11
	Oil	0.054

NOTES:

- (1) TSS means the total suspended solids
- (2) Pounds per 1000 pounds of daily production based on the highest 7 consecutive days of production.

The rules contained herein shall take effect upon publication on
February 1, 1974.

Dated at Madison, Wisconsin JAN 17 1974

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By



L. P. Voigt, Secretary

(SEAL)



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

L. P. Voigt
Secretary

January 16, 1974

BOX 450
MADISON, WISCONSIN 53701

IN REPLY REFER TO: 1020

Mr. James J. Burke
Revisor of Statutes
411 West
C A P I T O L

Dear Mr. Burke:

Enclosed is State of Wisconsin Natural Resources Board Order No. W-10-74 (E) for filing as required by section 147.04(5), Wisconsin Statutes.

These are interim rules concerning Effluent Limitations for the Non-Ferrous Metal Industry adopted pursuant to section 227.027, Wisconsin Statutes, and are effective the day of publication, in the official state paper, which is February 1, 1974.

Very truly yours,


L. P. Voigt
Secretary

Enc.