

NR 230



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-12-74 (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 17th day of January, 1974.



L. P. Voigt, Secretary

(SEAL)

STATE OF WISCONSIN NATURAL RESOURCES BOARD

.....
IN THE MATTER of creating NR 230 .
of the Wisconsin Administrative .
Code .
.....

ORDER NUMBER W-12-74 (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 230
Interim Effluent Limitations for the
Inorganic Chemicals Industry
Wisconsin Pollutant Discharge Elimination System

NR 230.01 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.

230.02 Applicability. These interim limitations apply only to Standard Industrial Classification Codes 2812, 2816 and 2819.

- (1) Subcategories included. The following subcategories are included: aluminum chloride, aluminum sulfate, chlorine - sodium hydroxide, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, lime, nitric acid, elemental phosphorus, and sulfuric acid.
- (2) Operation Excluded. For inorganic compounds such as anhydrous ammonia, superphosphates, and urea, the limitations are included in those for the fertilizer industry in NR 234, Wisconsin Administrative Code.
- (3) Other Limitations. Other interim effluent limitations in chapter NR 217, Wisconsin Administrative Code, are applicable to discharges from facilities which belong in the classifications of this section but are excluded from, or not specifically included in, its provisions.

230.03 Application of Interim Limitations. The use of these interim limitations is limited to single product plants for the ten categories covered in NR 230.05.

The effluent limitations are based on process wastewater and do not include non-contact cooling water, cooling tower blowdown or boiler blowdown.

The mercury effluent limitation of 0.15 pounds per day for the entire chlor-alkali operation is to be measured at the outlet from the mercury treatment unit. Should there be another process at the location that has an effluent containing mercury, that stream must be treated in the mercury treatment unit and thus be included in the 0.15 pound per day limitation day. Mercury residuals (i.e., mercury picked up between the treatment unit outlet and the discharge to the stream) may be a problem and a program with schedules for reduction of the residual may be necessary.

230.04 Characteristics of Effluents and Abatement Models. The industries in these categories manufacture products from raw materials that are inorganic in nature, thereby resulting in wastewater containing

a low biochemical oxygen demand, inert solids, large amounts of dissolved solids, and effluents with a wide range of pH values. The major pollutant common to nearly all of the industry is inorganic suspended solids, a parameter that can be controlled with sedimentation basins designed for minimal short circuiting and sufficient detention time. Treatment models representing best practicable treatment for each category are:

- (1) Aluminum Chloride - sedimentation and coagulation
- (2) Aluminum Sulfate - sedimentation and recycling of clarified effluent
- (3) Caustic-Chlorine - sedimentation, chemical precipitation-coagulation-sedimentation, filtration, carbon adsorption, neutralization, water recycling, and water conservation practices.
- (4) Hydrochloric Acid - segregation of cooling water, collection of spills and leaks for recycle or land disposal.
- (5) Hydrofluoric Acid - lime precipitation, coagulation flocculation, sedimentation and neutralization.
- (6) Hydrogen peroxide - (organic method) - biological oxidation of organic solvents, sedimentation.
- (7) Lime - dry collection of dust.
- (8) Nitric Acid - segregation of cooling water, collection of spills and leaks for recycle or land disposal.
- (9) Phosphorus - sedimentation and recycle.
- (10) Sulfuric Acid - segregation of cooling water, collection of spills and leaks for recycle or land disposal.

230.05 Table of Interim Effluent Limitations (In Pounds per Ton as Noted)

<u>Product</u>	<u>Flow Basis</u> ⁽⁵⁾ <u>Gal/Ton</u>	<u>Total Suspended Solids</u>	<u>Other Parameters</u> <u>By Footnote</u>
(1) Aluminum Chloride		0.015	
(2) Aluminum Sulfate	120	No Effluent	
(3) Caustic Chlorine (6)			
Diaphragm Cell	8,000	1.0	(1)
Mercury Cell	5,000	0.6	(2)
Downs Cell	7,300	0.9	
(4) Hydrochloric Acid (Chlorine burning)		No Effluent	
(5) Hydrofluoric Acid	4,672	0.6	(3)
(6) Hydrogen Peroxide (Organic process)	8,600	1.1	(4)
(7) Lime/Calcination		No Effluent	
(8) Nitric Acid		No Effluent	
(9) Phosphorus		No Effluent	
(10) Sulfuric Acid (Sulfur burning contact plants)		No Effluent	

pH range is 6-9 for all products

NOTES:

- (1) 0.04 lb/ton lead
- (2) 0.15 lb/day mercury for each facility in accordance with section 144.423, Wisconsin Statutes
- (3) 0.2 lb/ton fluorides
- (4) 0.06 lb/ton TOC
- (5) The flow basis numbers show how limitations were derived and are not flow limitations.
- (6) Production basis is tons of chlorine

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-12-74 (E) for filing as required by section 147.04(5), Wisconsin Statutes.

These are interim rules concerning Effluent Limitations for the Inorganic Chemicals 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,

A handwritten signature in cursive script, appearing to read "L. P. Voigt".

L. P. Voigt
Secretary

Enc.