

Chapter NR 229

**INTERIM EFFLUENT LIMITATIONS FOR THE ASBESTOS PRODUCTS, FLAT GLASS, CEMENT, CONCRETE, LIME AND GYPSUM INDUSTRIES
WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

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Note: Pursuant to Chapter 74, Laws of 1973, in sections 147.04 (3) and (5) and under the procedure of section 227.027, Wis. Stats., the department of natural resources has promulgated interim effluent limitations which become effective February 1, 1974 and will remain in effect for a period of one year. These interim effluent limitations will be periodically replaced by permanent effluent limitations.

NR 229.01 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), Wis. Stats.

History: Emerg. cr. eff. 2-1-74.

NR 229.02 Applicability. These limitations apply to Standard Industrial Classification Codes 3211, 3241, 3271, 3273, 3274, 3275, and 3292 which include the following categories: asbestos products; flat glass; flat glass products made of purchased glass; cement, hydraulic; concrete block and brick; concrete products other than block and brick; ready mix concrete; lime and gypsum products.

History: Emerg. cr. eff. 2-1-74.

NR 229.03 Application of interim limitations. The limitations shown for the cement industry are incomplete and require the addition of limitations for pH, heavy metals, and runoff from storage piles. These limitations apply to process water only and not to cooling water. Concrete Products and Ready Mix Concrete are generally classed as "job-shop operations" wherein wide variations in production levels occur, therefore, these industries are limited on concentration only.

History: Emerg. cr. eff. 2-1-74.

NR 229.04 Effluent characteristics and abatement models. (1) The industries in these categories grind, heat, crush, and otherwise process basically inert mineral substances to produce the final end product. As a result, the major pollutants are suspended solids consisting of mineral fragments. These can be removed adequately by sedimentation, with the addition of coagulants as required. Acceptable criteria which are available for construction of settling ponds should be utilized in the design and construction of such ponds.

(2) Dissolved inorganic ions, chiefly sulfate, leached from the raw material or from air-pollution control devices, constitute the second major class of pollutants. Significant reduction of these inorganics can be realized by modifications in the process.

(3) Dissolved heavy metals may result from leaching of raw materials, from plating operations, or from reagents added to cooling or

process waters. Heavy metals are especially troublesome in cement plants utilizing oyster or clam shells as raw materials.

(4) The specified levels can be achieved by a combination of process modifications and metal precipitation. Oil is used primarily as a binder and/or emulsifier in the manufacture of both asbestos and glass.

(5) Processes should include maximum practical recirculation and reuse of cooling waters, condensates, cleaning, washing and other process flows should be practiced. Process water from lime and gypsum manufacturing should be used for hydrator supply, scrubbing, and consumptive use.

(6) Water use, and time of contract of water with leachable substances, should be reduced to a minimum. Frequent and unnecessary spillage, overflows, excess running water, and inefficient handling and washing methods should be eliminated.

(7) Asbestos products facilities should recycle mix and curing water to the maximum extent possible.

(8) Concrete products and Ready Mix Concrete facilities should recycle their wash water to the maximum extent possible.

(9) The treatment system model used in the development of these limitations consisted of:

- (a) Equalization of flow,
- (b) Sedimentation (with coagulants where required),
- (c) Neutralization, and
- (d) Metal precipitation (where required).

History: Emerg. cr. eff. 2-1-74.

NR 229.05 Table of Interim Effluent Limitations (In Pounds per Production Unit, Except Concrete Products and Ready Mix).

Subcategory	Production Unit	TSS ¹	COD ²	Total Phosphorus
(1) Asbestos products.....	1000 tons			
(a) insulation		99	99	
(b) asbestos paper.....		152	152	
(c) pipe and siding.....		200	200	
(2) Flat Glass products				
(a) Float glass.....	1000 tons	5	5	0.25
(b) Plate glass, rolled laminated, tempered....	1000 sq. ft.	84	84	4.2 ³
(c) Mirrored glass.....	1000 sq. ft.	0.2	0.2	0.01
(3) Cement, Hydraulic				
(a) With leaching.....	1000 bbl.	2		
1. dry process.....		25	25	
2. wet process.....		7	7	
(b) Without leaching.....		No Discharge		
(4) Concrete Products.....	Concentration	20 mg/l	20 mg/l	
(5) Ready Mix Concrete.....	Concentration	20 mg/l	20 mg/l	
(6) Gypsum Products.....	1000 tons	4	4	
(7) Lime Manufacture.....	1000 tons	50	50	

NOTES:

¹TSS means total suspended solids.

²COD means chemical oxygen demand.

³Pounds phosphorus based on 1000 tons with oil and grease limited to 8.4 pounds on the same basis.

History: Emerg. cr. eff. 2-1-74.