NR 276

Filed April 29, 1976
10:00 am D. L. Parker

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Anthony S. Earl
Secretary

BOX 450
MADISON, WISCONSIN 53701

IN REPLY REFER TO: _____

STATE OF WISCONSIN)
) ss
DEPARTMENT OF NATURAL RESOURCES)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Anthony S. Earl, Secretary of the Department of Natural Resources and custodian of the official records of said Department, do hereby certify that the annexed copy of Natural Resources Board Order No. EL-27-76 was duly approved and adopted by this Department on February 19, 1976. I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at Pyare Square Building in the Village of Shorewood Hills, this 13TH day of April, 1976.

Anthony S. Earl, Secretary

(SEAL)

STATE OF WISCONSIN NATURAL RESOURCES BOARD

IN THE MATTER of creating Chapter NR 276 of the Wisconsin Administrative Code pertaining to phosphate manufacturing	EL-27-76

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(2), 147.06 and 147.07 and chapter 227, Wisconsin Statutes, the State of Wisconsin Natural Resources Board hereby creates rules as follows:

SECTION 1 - Chapter NR 276 is created to read:

Chapter NR 276

PHOSPHATE MANUFACTURING

NR 276.01 Purpose. The purpose of this chapter is to establish effluent limitations, standards of performance, and pretreatment standards for discharges of process wastes from the phosphate 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 276.02 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 in any of the following subcategories.

(1) Phosphorus production

(2) Phosphorus consuming

(3) Phosphate

(4) Defluorinated phosphate rock,

(5) Defluorinated phosphoric acid, and

(6) Sodium phosphates.

NR 276.03 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) "Phosphorus production" means the manufacture of phosphorus and ferrophosphorus by smelting phosphate ore.

(2) "Phosphorus consuming" means the manufacture from elemental phosphorus of phosphoric acid and phosphorus pentoxide, pentasulfide, trichloride, and oxychloride.

(3) "Phosphate" means the manufacture from phosphoric acid of sodium tripolyphosphate, animal feed grade calcium phosphate, and human food grade calcium phosphate.

(4) "Defluorinated phosphate rock" means the production of phosphate rock defluorinated by the use of high temperature, wet process phosphoric acid, silica, and other reagents.

(5) "Defluorinated phosphoric acid" means wet process phosphoric acid defluorinated by application of heat and other processing aids (such as vacuum and air stripping) and concentrated to 70-73 percent P_2O_5.

(6) "Sodium phosphates" means the manufacture of sodium phosphates from wet process phosphoric acid.

(7) "Within the impoundment" means;

(a) For impoundments constructed prior to January 27, 1975, within the water surface area at maximum capacity plus that portion, not to exceed 30 percent of such water surface area, of the surface area of the inside and outside slopes of the impoundment dam and extending to any immediately adjacent seepage ditch from which rain water is returned to the impoundment, and

(b) For new impoundments the water surface area at maximum capacity.

(8) "Pond water surface area" means the water area at the average operating level for the month but not less than one third of the water area at maximum capacity.

NR 276.07 Discharges from impoundments. (1) A process wastewater impoundment which is designed, constructed and operated so as to contain the precipitation from the 10 year, 24 hour rainfall event for the area in which such impoundment is located may discharge that volume of process wastewater which is equivalent to the volume of precipitation that falls within the impoundment in excess of that attributable to such rainfall event when it occurs.

(2) A process wastewater impoundment which is designed, constructed and operated so as to contain the precipitation from the 25 year, 24 hour rainfall event for the area in which such impoundment is located may discharge that volume of process wastewater which is equivalent to the volume of precipitation that falls within the impoundment in excess of that attributable to such rainfall event when it occurs.

(3) 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 from the pond water surface area for that month. Such discharges shall have a pH within the range of 6.0-9.0, daily average concentrations not to exceed 35, 10, and 25 mg/l respectively of total phosphorus, fluoride, and suspended solids, and daily maximum concentrations not to exceed 70, 30, and 50 mg/l respectively.

(4) The 10 year and 25 year, 24 hour rainfall events for the impoundment location shall be as set forth in Wis. Adm. Code section NR 205.05.

NR 276.10 Effluent limitations, best practicable treatment. The following effluent limitations for all or specific subcategories establish, except as provided in sections NR 276.05 and 276.06, the quantity or quality of pollutants or pollutant properties which may be discharged to surface waters by a facility subject to the provisions of this chapter after application to process wastes of the best practicable control technology currently available.

(1) There shall be no discharge resulting from the manufacture of sodium tripolyphosphate or animal feed grade calcium phosphate in the phosphate subcategory.

(2) There shall be no discharge resulting from manufacture in subcategories (4) and (5) except in accordance with sections NR 276.07(1) and (3).

(3) The pH of all discharges shall be within the range of 6.0 to 9.0.

(4) For discharges from subcategories (1), (2) and (6) and human food grade calcium phosphate in subcategory (3), the 30-day average limitations for suspended solids and other parameters are set forth in table 1 in lbs/1000 lbs. or kg/1000 kg, of product. Daily maximum limitations are twice the 30-day average limitations, except for elemental phosphorus.

TABLE 1
BPT EFFLUENT LIMITATIONS

Subcategory*	Susp. Solids	Total Phosphorus	Fluoride	Arsenic	Elemental Phosphorus
(1)	0.5	0.15	0.05		No detectable quantity
(2)	0.7	0.8		.00005	No detectable quantity
(3)**	0.06	0.03			
(6)	0.25	0.40	0.15		

* As identified in section NR 276.02.
** Human food grade calcium phosphate only.

such discharge shall not exceed respectively 0.40 and 0.15 lbs/1000 lbs or kg/1000 kg of product on a daily average basis nor 0.80 and 0.30 lbs/1000 lbs or kg/1000 kg on a daily maximum basis.

NR 276.14 Pretreatment standards for existing sources. (1) The pretreatment standards for discharges to publicly owned treatment works from existing sources in subcategories (1), (2), (3), and (6) shall be as set forth in Wis. Adm. Code chapter NR 211. In addition the limitations for incompatible pollutants for specific subcategories shall be those set forth in section NR 276.10. Wastewaters from such new sources may not be discharged to publicly owned treatment works except in compliance with this section.

(2) The pretreatment standards for discharges to publicly owned treatment works from new sources in subcategories (4) and (5) shall be as set forth in Wis. Adm. Code chapter NR 211. In addition the volume of discharge shall be limited in accordance with sections NR 276.07(1) and (3) and total phosphorus and fluoride shall not exceed respectively 0.40 and 0.15 lbs/1000 lbs or kg/1000 kg of product on a daily average basis nor 70 and 30 lbs/1000 lbs or kg/1000 kg on a daily maximum basis.

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on February 19, 1976.

The rules contained herein shall take effect upon publication.

Dated at Madison, Wisconsin 13 April 1976

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

By Anthony S. Earl

Anthony S. Earl, Secretary

(SEAL)