

## Chapter NR 245

## GRAIN MILLS

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**NR 245.01 Purpose.** The purpose of this chapter is to establish effluent limitations, standards of performance, and pretreatment standards for discharges of process wastes from the grain mills category of point sources and subcategories thereof.

**Note:** The authority for promulgation of this chapter is set forth in ch. NR 205.

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.02 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 as defined in s. NR 245.03:

- (1) Process subcategories
  - (a) Corn dry milling,
  - (b) Corn wet milling,
  - (c) Normal wheat flour milling,
  - (d) Bulgur wheat flour milling,
  - (e) Normal rice milling, and
  - (f) Parboiled rice milling.
- (2) Product subcategories.
  - (a) Animal feed
  - (b) Hot cereal
  - (c) Ready-to-eat cereal
  - (d) Wheat starch and gluten

**History:** Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.03 Definitions.** The following special definitions are applicable to terms used in this chapter. Definitions of other terms and meanings of abbreviations are set forth in ch. NR 205.

- (1) "Animal feed" means such feeds (formula feed concentrate) manufactured using primarily grain and grain by-products which may be supplemented by proteins, pharmaceuticals, vitamins, or mineral additives.
- (2) "Bulgur wheat flour milling" means the process in which wheat is parboiled, dried, and partially debranned in the production of bulgur.
- (3) "Corn" means shelled corn delivered to a plant before processing.
- (4) "Corn dry milling" means the process in which shelled corn is washed and subsequently milled by dry processes into such products as corn meal, grits, flour, oil, and animal feed.
- (5) "Corn wet milling" means the process in which shelled corn is steeped in a dilute solution of sulfurous acid and then processed by wet means into such products as animal feed, regular and modified starches, corn oil, corn syrup, and dextrose.
- (6) "Hot cereal" means breakfast cereals produced from grains, principally wheat and oats, requiring cooking prior to human consumption.
- (7) "MsBu" means 1000 standard bushels.
- (8) "Normal rice milling" means the process in which rice is cleaned and milled by dry processes.
- (9) "Normal wheat flour milling" means the processes in which wheat is milled by dry processes into flour and mill feed.
- (10) "Parboiled rice milling" means the process in which rice is cleaned, cooked, and dried before milling.
- (11) "Ready-to-eat cereal" means breakfast cereals produced from various grains and other materials (whole grain wheat, rice, corn, grits, oat flour, sugar, and minor ingredients) and normally available for human consumption without cooking.
- (12) "Standard bushel" means a bushel of shelled corn weighing 56 pounds or a bushel of wheat weighing 60 pounds.
- (13) "Wheat" means wheat delivered to a plant before processing.
- (14) "Wheat starch and gluten" means such products produced from wheat flour through conventional processes of physical separation and subsequent refinement.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.04 Compliance with effluent limitations and standards.** Discharge of pollutants from facilities subject to the provisions of this chapter may 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, 1983 effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable;

(3) Pretreatment standards for discharges to publicly owned treatment works;

(4) Standards of performance for new sources.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; r. and recr. Register, August, 1983, No. 332, eff. 9-1-83.

**NR 245.05 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 Development Document for Grain Processing, EPA 440/1-74-028-a, March, 1974 or Animal Feed, Breakfast Cereal, and Wheat Starch, EPA 440/1-74-039-a, December, 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. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.06 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 s. NR 245.05.

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

(c) They may be supplemented or superceded 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 the maximum month production in the past year for the facility in each subcategory subject to the provisions of this chapter.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.10 Effluent limitations, best practicable treatment.** The following effluent limitations for all or specific subcategories establish, except as provided in s. NR 245.05, 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) There shall be no discharge of process waste waters from the normal wheat flour milling, normal rice milling, animal feed, and hot cereal subcategories.

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

(3) The 30 day average and daily maximum limitations for BOD<sub>5</sub> and suspended solids are set forth in table 1.

(4) The effluent limitations for process subcategories in table 1 are in lbs/MSBu of corn or wheat processed and in lbs/1000lbs or kg/1000kg of rice processed. The limitations for corn and wheat may be converted to kg/1000kg by dividing the english unit limitation by 56 in the case of corn and 60 in the case of wheat.

(5) The effluent limitations for product subcategories in table 1 are in lbs/1000lbs or kg/1000kg of cereal product for the ready-to-eat subcategory and of wheat flour raw material for the wheat starch and gluten subcategory.

Table 1

Process subcategory	BPT Effluent Limitation			
	BOD		Suspended Solids	
	Ave.	Max.	Ave.	Max.
corn dry milling	4	12	3.5	10.5
corn wet milling	50	150	50	150
bulgur wheat flour milling	.5	1.5	.5	1.5
parboiled rice milling	.14	.42	.08	.24
Product subcategory				
ready-to-eat cereal	0.40	1.2	0.4	1.2
wheat starch and gluten	2.0	6.0	2.0	6.0

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.11 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) There shall be no discharge of process waste waters from the normal wheat flour milling, normal rice milling, animal feed, and hot cereal subcategories.

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

(3) The 30 day average and daily maximum limitations for BOD<sub>5</sub> and suspended solids are set forth in table 2.

(4) The effluent limitations for process subcategories in table 2 are in lbs/MSBu of corn or wheat processed and in lbs/1000/lbs or kg/1000kg or rice processed. The limitations for corn and wheat may be converted to kg/1000kg by dividing the english unit limitation by 56 in the case of corn and 60 in the case of wheat.

(5) The effluent limitations for product subcategories in table 2 are in lbs/1000lbs or kg/1000kg or cereal product for the ready-to-eat subcategory and of wheat flour raw material for the wheat starch and gluten subcategory.

Table 2

Process subcategory	BPT Effluent Limitation			
	BOD		Suspended Solids	
	Ave.	Max.	Ave.	Max.
corn dry milling	2	6	1	3
corn wet milling	20	60	10	30
bulgur wheat flour milling	.3	.9	.2	.6
parboiled rice milling	.07	.21	-.3	.09
Product subcategory				
ready-to-eat cereal	0.20	0.60	0.15	0.45
wheat starch and gluten	0.50	1.50	0.40	1.20

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.12 Standards of performance.** The following effluent limitations for all or specific subcategories establish the quantity or quality or pollutants or pollutant properties which may be discharged by a facility which is a new source subject to the provisions of this chapter.

(1) There shall be no discharge of process waste waters from the normal wheat flour milling, normal rice milling, animal feed, and hot cereal subcategories.

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

(3) The 30 day average and daily maximum limitations for BOD<sub>5</sub> and suspended solids are set forth in table 3.

(4) The effluent limitations for process subcategories in table 3 are in lbs/MSBu of corn or wheat processed and in lbs/1000/lbs or kg/1000kg or rice processed. The limitations for corn and wheat may be converted to kg/1000kg by dividing the english unit limitation by 56 in the case of corn and 60 in the case of wheat.

(5) The effluent limitations for product subcategories in table 3 are in lbs/1000lbs or kg/1000kg or cereal product for the ready-to-eat subcategory and of wheat flour raw material for the wheat starch and gluten subcategory.

Table 3

Process subcategory	Standard of Performance		Effluent Limitation	
	BOD		Suspended Solids	
	Ave.	Max.	Ave.	Max.
corn dry milling	2	6	1	3
corn wet milling	20	60	10	30
bulgur wheat four milling	.3	.9	.2	.6
parboiled rice milling	.07	.21	.03	.09
Product subcategory				
ready-to-eat cereal	0.20	0.60	0.15	0.45
wheat starch and gluten	1.0	3.0	1.0	3.0

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76.

**NR 245.13 Pretreatment standards.** The pretreatment standards for discharges to publicly owned treatment works from sources subject to the provisions of this chapter shall be as set forth in ch. NR 211.

History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; r. and recr. Registration, August, 1983, No. 332, eff. 9-1-83.

**NR 245.14 Pretreatment standards for existing sources.** History: Cr. Register, June, 1976, No. 246, eff. 7-1-76; r. Register, August, 1983, No. 332, eff. 9-1-83.