

## **7045.0636 ADDITIONAL REQUIREMENTS FOR LAND TREATMENT FACILITIES GROWING FOOD CHAIN CROPS.**

Subpart 1. **Notification.** An owner or operator of a hazardous waste land treatment facility on which food chain crops are being grown, or have been grown, and will be grown in the future, shall notify the commissioner within 60 days after July 16, 1984. The growth of food chain crops at a facility which has never before been used for this purpose constitutes a significant change under the permitting procedures. Owners or operators of these land treatment facilities who propose to grow food chain crops after July 16, 1984, shall comply with the applicable permitting procedures.

Subp. 2. **Acceptability of the land treatment facility.** Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless the owner or operator can demonstrate, based on field testing, that any arsenic, lead, mercury, or other constituents identified under part 7045.0634, subpart 3, items B and C:

A. will not be transferred to the food portion of the crop by plant uptake or direct contact, and will not otherwise be ingested by food chain animals; or

B. will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on untreated soils under similar conditions in the same region.

The information necessary to make this demonstration must be kept at the facility and must be based on tests for the specific waste and application rates being used at the facility and must include descriptions of crop and soil characteristics, sample selection criteria, sample size determination, analytical methods, and statistical procedures.

Subp. 3. **Cadmium limitations; human food crops.** Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless:

A. the pH of the waste and soil mixture is 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of two milligrams per kilogram (dry weight) or less;

B. the annual application of cadmium from waste does not exceed 0.5 kilograms per hectare on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption and for other food chain crops, the annual cadmium application rate does not exceed the levels specified in the first table in item C; and

C. the cumulative application of cadmium from waste does not exceed the levels specified in the second table in this item.

### Annual Cadmium Application Rates

Time Period	Annual Cadmium application rate (kilograms per hectare)
Present to June 30, 1984	2.0
July 1, 1984 to Dec. 31, 1986	1.25
Beginning Jan. 1, 1987	0.5

#### Maximum Cadmium Cumulative Application

(kilograms per hectare)

Soil cation exchange capacity (meq/100g)	Background soil pH less than 6.5	Background soil pH greater than 6.5	Background soil pH less than 6.5 and waste/soil mixture pH greater than 6.5
Less than 5	5	5	5
5-15	5	10	10
Greater than 15	5	20	20

Subp. 4. **Cadmium limitations; animal feed crops.** Notwithstanding the provisions of subpart 3, food chain crops may be grown on a land treatment facility receiving waste that contains cadmium if:

- A. the only food chain crop produced is animal feed;
- B. the pH of the waste and soil mixture is 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level is maintained whenever food chain crops are grown;
- C. there is a facility operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans and the facility operating plan describes the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain which may result from alternative land uses; and
- D. future property owners are notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops must not be grown except in compliance with items A to C.

As required by part 7045.0584, if an owner or operator grows food chain crops on a land treatment facility, he or she shall place the information developed in this part in the operating record of the facility.

**Statutory Authority:** *MS s 116.07*

**History:** *9 SR 115; L 1987 c 186 s 15; 17 SR 1279*

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