**Section 725.376 Food Chain Crops**

a) This subsection (a) corresponds with 40 CFR 265.276(a), which required notification of activity before a date long past. This statement maintains structural consistency with the corresponding federal rules.

BOARD NOTE: Growing food chain crops at a facility that has never before been used for this purpose is a significant change in process under 35 Ill. Adm. Code 703.155. The owner or operator of such a land treatment facility that proposes to grow food chain crops after May 17, 1982 must have submitted a new or revised Part A permit application.

b) Limitation Relating to Arsenic, Lead, Mercury, and Other Constituents

1) 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 either of the following is true of any arsenic, lead, mercury, or other constituents identified under Section 725.373(b):

A) They 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 (e.g., by grazing); or

B) They 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.

2) The information necessary to make the demonstration required by subsection (b)(1) must be kept at the facility and must, at a minimum, fulfill the following conditions:

A) It must be based on tests for the specific waste and application rates being used at the facility; and

B) It must include descriptions of crop and soil characteristics, sample selection, criteria, sample size determination, analytical methods, and statistical procedures.

c) Limitation Relating to Cadmium. Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless all requirements of subsections (c)(1)(A) through (c)(1)(C) or all requirements of subsection (c)(2)(A) through (c)(2)(D) are met.

1) Cadmium Limitation for Crops for Human Consumption. Application of waste must comply with all of the following conditions:

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 2 mg/kg (dry weight) or less;

B) The annual application of cadmium from waste does not exceed 0.5 kg/ha (0.45 lb/acre) on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food chain crops the annual cadmium application rate does not exceed 0.5 kg/ha (0.45 lb/acre).

C) The cumulative application of cadmium from waste does not exceed the levels in either subsection (c)(1)(C)(i) or (c)(1)(C)(ii).

i) Maximum Cumulative Application of Cadmium

|  |  |
| --- | --- |
| Maximum Cumulative Application  of Cadmium  (kilograms per hectare) | |
| For Background Soil pH Less Than 6.5 | |
| Soil Cation Exchange Capacity  (milliequivalents per 100 grams) |  |
| Less than 5 | 5 |
| 5 to 15 | 5 |
| Greater than 15 | 5 |

|  |  |
| --- | --- |
| FOR BACKGROUND SOIL pH GREATER THAN 6.5 | |
| Soil Cation Exchange Capacity  (milliequivalents per 100 grams) |  |
| Less than 5 | 5 |
| 5 to 15 | 10 |
| Greater than 15 | 20 |

ii) For soils with a background pH of less than 6.5, the cumulative cadmium application rate does not exceed the levels below (provided, that the pH of the waste and soil mixture is adjusted to and maintained at 6.5 or greater whenever food chain crops are grown):

|  |  |
| --- | --- |
| Maximum Cumulative Application of Cadmium  (kilograms per hectare) | |
| For Background Soil pH Less Than 6.5  with pH Adjustment | |
| Soil cation exchange capacity  (milliequivalents per 100 grams) |  |
| Less than 5 | 5 |
| 5 to 15 | 10 |
| Greater than 15 | 20 |

2) Cadmium limitation for crops for animal feed. Application of waste must comply with all of the following conditions:

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 that demonstrates how the animal feed will be distributed to preclude ingestion by humans. The facility operating plan describes the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain that may result from alternative land uses; and

D) Future property owners are notified by a stipulation in the land record or property deed that 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 subsection (c)(2).

BOARD NOTE: As required by Section 725.173, if an owner or operator grows food chain crops on his land treatment facility, he must place the information developed in this Section in the operating record of the facility.

(Source: Amended at 42 Ill. Reg. 23725, effective November 19, 2018)