7041.1400 OPERATIONAL STANDARDS; VECTOR ATTRACTION REDUCTION.

Subpart 1. **Agricultural and other lands.** One of the vector attraction reduction requirements in subpart 2 must be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

Subp. 2. **Home use and land application.** One of the vector attraction reduction requirements in items A to H must be met when bulk sewage sludge is applied to a lawn or a home garden or when sewage sludge is sold or given away in a bag or other container for application to the land.

A. The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

B. When the 38 percent volatile solids reduction requirement in item A cannot be calculated for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When at the end of the 40 days the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

C. When the 38 percent volatile solids reduction requirement in item A cannot be calculated for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When at the end of the 30 days the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

D. The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

E. Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

F. The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

G. The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75

percent based on the moisture content and total solids prior to mixing with other materials at the time the sewage sludge is applied to the land, at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements of exceptional quality sewage sludge.

H. The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials, at the time the sewage sludge is applied to the land, at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements of exceptional quality sewage sludge.

I. Sewage sludge shall be injected below the surface of the land.

(1) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(2) When the sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

J. Sewage sludge applied to the land surface shall be incorporated into the soil within six hours after application to the land unless specified otherwise by the permitting authority. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

Statutory Authority: *MS s 116.07*

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