Mushroom Composting Facilities Regulation Applicability Guidance

Purpose of this document

This document explains how the different phases of mushroom composting and mushroom production are regulated under the *Environmental Management Act* (EMA). Depending on the activity, requirements may fall under the Mushroom Compost Facilities Regulation (MCFR) or the Code of Practice for Agricultural Environmental Management (AEM Code).

Background

Facilities that produce mushroom growing substrate (mushroom compost) through a composting process are regulated under the MCFR. The regulation sets requirements for managing air emissions and liquid waste generated during composting and during the storage of "goody water."

The MCFR does not authorize the discharge of any solid or liquid waste to the environment. All liquid waste, including compost leachate (goody water) and any rainwater or wash water that comes into contact with it, must be collected and contained. Discharge to the environment is only allowed if a site-specific waste discharge permit authorizes it.

Mushroom Composting and Growing Phases

Phase 1: Composting

Raw materials are mixed and blended, then composted to create mushroom growing media. During this process, moisture is maintained and compost temperatures rise. Leachate ("goody water") is generated and is typically recycled back onto the compost piles to maintain moisture.

Phase 2: Pasteurization and Conditioning

This phase eliminates parasitic organisms and further breaks down compost ingredients to create nutrients needed for mushroom growth. It may include secondary composting to stabilize and mature the compost. After pasteurization, the compost is cooled to a temperature suitable for inoculation.

Phase 3: Inoculation

Once cooled and stabilized, the compost is inoculated with mushroom spawn (mycelium). This is usually done in a controlled, sterile environment to prevent contamination. Inoculation may occur at individual farms after delivery or at facilities that also conduct Phase 2 activities.

MCFR Applicability

The applicability of the MCFR depends on the specific activities conducted at a facility. The sections below outline how different phases of mushroom composting and production are generally regulated..

A summary diagram is provided in Figure 1.

1. ***Facilities Conducting Phase 1 and Phase 2 Activities at the Same Site***

A facility that performs both Phase 1 and Phase 2 activities at the same location is regulated under the MCFR for air emissions only. Any discharge of liquid or solid waste to the environment requires a site-specific waste discharge permit, as the MCFR does not authorize these discharges.

2. Facilities Conducting Only Phase 2 Activities

A facility conducting only Phase 2 activities is also regulated under the MCFR for air emissions only. As with Phase 1/2 facilities, a site-specific waste discharge permit is required to authorize any discharge of liquid or solid waste to the environment.

The AEM Code generally applies when Phase 2 and Phase 3 activities:

- are used solely to produce mushroom compost for mushroom production at the same operation, and
- involve aerobic decomposition with mixing or layering, and either periodic turning or passive/forced aeration.

A facility that conducts Phase 2 activities together with mushroom growing (Phase 3) at the same operation is regulated under the AEM Code. Operators are encouraged to consult Ministry of Environment and Parks staff to confirm how their specific operation fits within the provincial regulatory framework.

3. Facilities Conducting Phase 2 and Phase 3 Activities at the Same Site

Phase 2 activities may be considered:

- an agricultural operation when combined with Phase 3, or
- a composting operation when conducted only with Phase 1.

If the AEM Code does not address the type of discharge expected from a proposed operation, a waste discharge permit may be issued to authorize the discharge.

A facility conducting only Phase 3 activities is not regulated under the MCFR. Instead, these activities fall under the AEM Code and/or other applicable legislation, depending on the nature of the operation and its discharges.

Contact Information and Enquiries

If you have questions about this guidance or need help determining how your facility may be regulated, please contact Ministry of Environment and Parks staff at:

- AEM Code Enquiries - AEMCoPenquiries@gov.bc.ca
- MCFR and Waste Discharge Application Enquiries - Waste Discharge Application Enquiry – Environmental Protection & Sustainability Forms
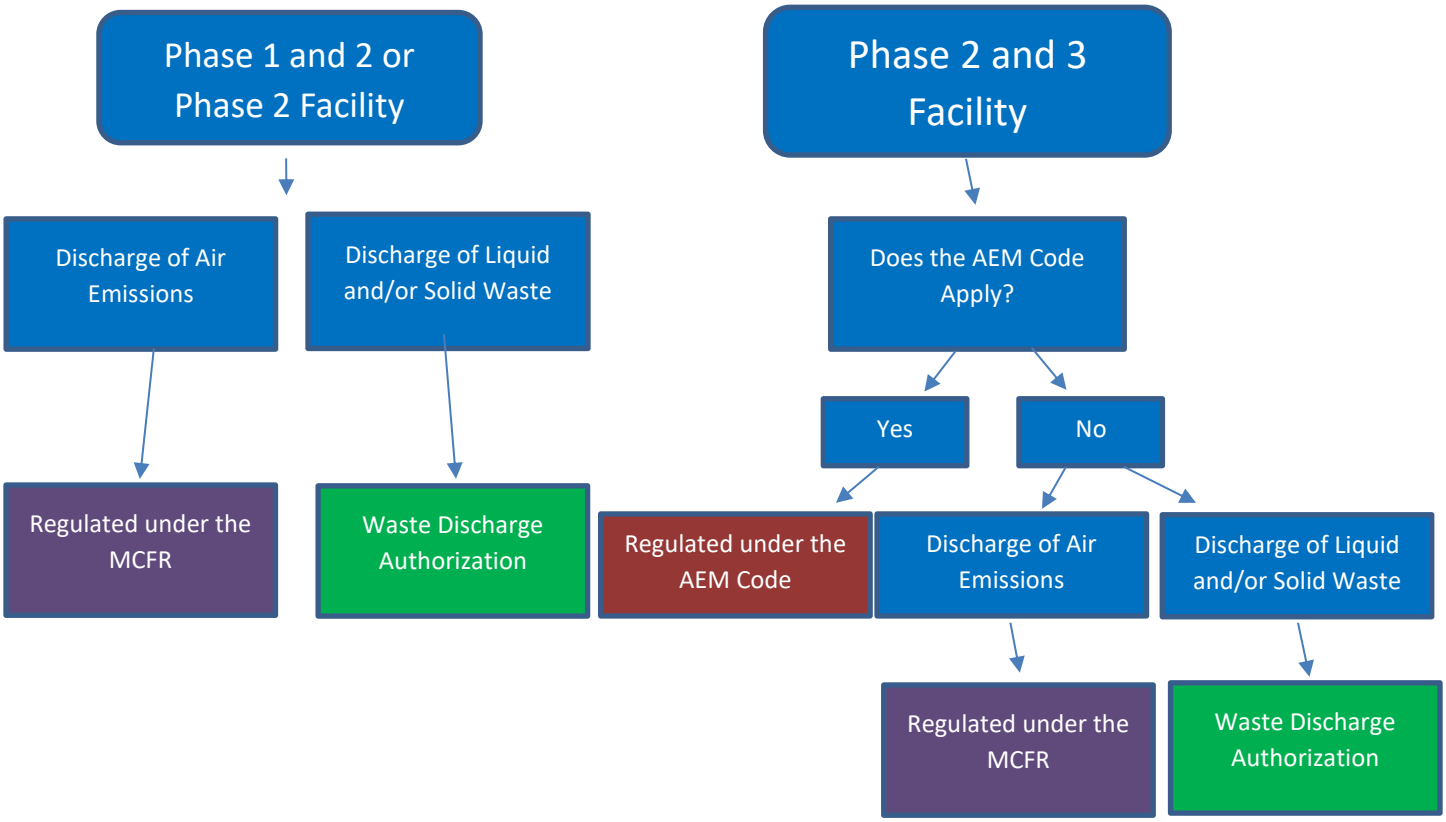
Figure 1. Summary of MCFR Regulation Applicability