

Iowa DNR rules on composting of livestock mortalities

On Aug. 30, 2012, the representatives of Region 7 of the federal EPA held a meeting in Arcadia to discuss EPA's livestock CAFO (concentrated animal feeding operations) inspection and enforcement program. The majority of the two-hour meeting covered EPA's aerial surveillance of livestock operations and issues involving open feedlot CAFOs.

During the discussion of EPA's aerial surveillance, EPA noted that it also looks at confinement feeding operations for any runoff that would require an NPDES (National Pollution Discharge Elimination System) discharge permit. Remember, following the NPPC v. EPA court decision last March, EPA has amended its rule to require an NPDES only when a discharge of manure or other pollutants to a water of the U.S. occurs. Because Iowa law requires confinement operations to contain all manure to manure storage structures, compliance with Iowa law should assure compliance with federal EPA requirements.

EPA stated during the meeting that in doing aerial surveillance, it also looks at confinement operations for runoff, particularly runoff from any composting sites or feed storage areas. For swine confinement operations, feed storage areas are not usually an issue, but mortality composting can be if the runoff is not controlled.

At the meeting, EPA first noted that composting areas are part of the production area under federal CAFO rules and, therefore, subject to EPA enforcement of NPDES discharge permit requirements. Under these requirements, there cannot be a discharge of pollutants from the production area to a water of the U.S. unless the operation has an NPDES permit under which the operation is designed, operated and maintained to contain all runoff resulting from a precipitation event not greater than a 25-year, 24-hour storm.

However, like Iowa law requirements for manure, Iowa law prohibits discharges of compost leachate from a livestock composting site. In other words, a federal NPDES permit for a livestock operation that uses composting for livestock mortalities is not required since Iowa DNR rules prohibit the discharge of any compost leachate.

Here is the complete list of Iowa DNR rules on composting of livestock mortalities:

1. Compost leachate and runoff must be prevented from leaving the compost. Runoff from the composting facility must be properly managed.
2. Operators of livestock mortality composting facilities are encouraged, but not required, to be trained, tested, and certified by a DNR-approved certification program, if the DNR approves such a program.
3. Composting of livestock mortalities does not require a DNR composting permit unless the operator of the composting site is not an owner or operator of any of the production sites where the livestock were produced.
4. Before beginning composting, the operator is encouraged, but not required, to notify the regional DNR field office. The DNR may provide general assistance, such as locating bulking agents and providing advice in regard to siting considerations such as pad location, sizing and design.
5. Livestock that died from an infectious disease that can be spread by scavengers or insects or that died from a reportable disease must be disposed of in accordance with the requirements of the Iowa Department of Agriculture and Land Stewardship and the DNR.
6. Vehicles used to move livestock mortalities to a compost site must be constructed to prevent the release of mortality contaminated materials under normal operating conditions. The most direct haul route that avoids biosecurity risks must be used.
7. The composting facility must be designed to accommodate at least the average annual death loss for all sites using it. Facility design must also take into account space requirements for managing raw materials (for example, additional bedding and bulking agents needed for mortality composting) and finished compost.
8. Livestock mortalities from a catastrophic event, such as a fire or electrical outage, cannot be composted until the DNR field office is contacted and DNR approves of the method of treatment or

disposal of the mortalities. The facility must contact the regional DNR field office as soon as possible after such a catastrophic event.

9. Livestock mortalities must be incorporated into the composting process within 24 hours of death. An adequate base layer (from 12 to 24 inches thick, depending on the size and number of mortalities) with 6 to 12 inches of bulking agent between carcasses and an additional 12 inches of cover material shall be maintained around carcasses at all times to control leachate and odors and to prevent access by scavenging animals.
10. Mortalities must not be removed from composting until all soft tissue is fully decomposed.
11. Finished compost (including bones that have not fully decomposed) must be applied to cropland in a manner that minimizes the runoff into a water of the state. Finished compost cannot be applied to land other than cropland unless the DNR gives prior approval.
12. The composting facility must be 500 feet from any existing inhabited residence, not including the residence of the person owning/operating the compost facility.
13. Composting must be done outside of wetlands, at least 200 feet from public wells, 100 feet from private wells, 50 feet from property lines, and 100 feet from flowing or intermittent streams, lakes, or ponds.
14. Composting done in a 100-year flood plain must be in accordance with all local and department regulations.
15. Composting must be done in a manner that minimizes the formation of compost leachate by the facility.
16. Runoff must be prevented from entering the compost.
17. Compost facilities must be designed, constructed, and maintained to minimize ponding of water or liquids. Any ponding that does occur must be corrected through routine facility maintenance within 48 hours after the termination of the event causing the ponding.
18. Composting must be done on an all-weather surface of compacted soil, compacted granular aggregates, asphalt, concrete or similar relatively impermeable material that will permit accessibility during periods of inclement weather and prevent contamination of surface water and groundwater.
19. Solid waste which cannot be composted or which is removed during processing shall be properly disposed of. Infectious waste shall not be accepted for composting at any composting facility unless approved by the DNR in writing.
20. Solid waste materials must be managed through the entire process in accordance with best management practices to minimize conditions such as odors, dust, noise, litter and vectors which may create nuisance conditions or a public health hazard.
21. Finished compost cannot be stored for more than 18 months. However, this 18-month period may be extended with prior written approval from the DNR.
22. If compost is offered for sale as a soil conditioner or fertilizer, the compost must be registered by the Iowa Department of Agriculture and Land Stewardship. Any sale shall be in compliance with all applicable federal and state laws and local ordinances and regulations.
23. Compost cannot be land-applied, sold or given away unless the concentration of human-made inert materials such as glass, metal, and plastic is less than 1.5 percent by dry weight and unless the size of any human-made inert materials is less than 13 mm (0.512 inches).