

**NATURAL RESOURCES CONSERVATION SERVICE
ENGINEERING JOB SHEET**

**ANIMAL MORTALITY FACILITY
(No.)
CODE 316**

Landowner/Operator _____ **Date** _____

Facility Location _____ **County** _____

NRCS Staff _____ **Capacity of Unit** _____

Equipment Supplier _____

Animal Type(s) _____

SYSTEM DESIGN AND INSTALLATION REQUIREMENTS:

The owner and/or operator will follow these steps to ensure proper design and installation of the proposed system, cost-shared by NRCS under the EQIP program.

1. In-Vessel Mechanically Grinding Batch Composters shall meet the following minimum requirements:
 - a) Minimum capacity of 1000 lbs per batch.
 - b) Have the ability to process composted material which meets the following requirements at the end of the batch process:
 - the density of fecal coliform less than 1,000 most probable numbers (MPN) per gram total solids, or
 - the density of *Salmonella* sp. bacteria must be less than 3 MPN per 4 grams of total solids (dry-weight basis).
 - Composter must be capable of this performance for expected range of temperatures in winter.
 - c) If a minimum residence time of 5 days at a temperature greater than 130°F is not provided during primary composting within the composter, additional facilities, meeting MN Board of Animal Health requirements, shall be included to provide an additional secondary composting period in the form of a static pile. The secondary composting period shall consist of a period of time needed to provide a total residence time of at least 7 days at a temperature greater than 130°F. This total residence time includes any primary and secondary composting time.
 - d) Must be constructed of materials that will provide an expected life greater than 10 years.
2. In-vessel plug flow composters shall meet the following minimum requirements:
 - a) Minimum capacity of 2,500 lbs per week.
 - b) Have the ability to process composted material meeting the requirements described in 1.(b) above. Composter must be capable of this performance for expected range of temperatures in winter.
 - c) If the primary residence time within the composter is less than 5 days, facilities as described in 1.(c) above must be provided to finish the compost.
3. If the composter is installed on an existing pad or platform, it must be able to support the weight of the loaded composter and any equipment used to load the unit.

4. The composter will be of all new materials free from defects and must be constructed of materials that will provide an expected life greater than 10 years.
5. The landowner/operator shall provide the system requirements specified above to the designer for their use in designing the system to meet NRCS requirements.
6. The owner must meet the requirements for conditional approval as outlined in the attached document and obtain a permit from the Minnesota Board of Animal Health. A copy of the permit must be provided to the NRCS prior to certification.
7. The owner must provide documentation from the designer which certifies that the system meets the requirements specified above and which contains operation and maintenance recommendations from the designer.

OPERATION AND MAINTENANCE:

1. After installation, a field check of the installation will be performed by NRCS personnel to compare the installed system to the design specified by the equipment manufacturer. Any deficiencies, if found, will be addressed *prior to certification* of the practice. If the system is found to have deficiencies, it will be the responsibility of the owner and/or operator to coordinate with the equipment supplier for assistance in correcting the problems.
2. Periodic checks of the system for leaks, wear, and proper function will ensure proper operation and function. In the event that the system malfunctions before compost materials have fully processed, all material will be removed from the composter and finished using a secondary composting system.
3. Follow manufacturers' recommendations of maintenance on mechanical components.
4. Follow manufacturers' recommendations for loading and operation of the composter.

These system design and installation requirements and operation and maintenance requirements were discussed with the landowner and/or operator.

NRCS Staff Person

Date

I agree to operate and maintain the system in accordance with the information stated in this document.

Landowner/Operator

Date



Minnesota

Board of Animal Health

Safeguarding Animal Health

www.bah.state.mn.us

Board Gives Conditional Approval for Two New Composting Methods

After meeting with representatives of Gillis Agricultural Systems, Inc and SEMA Equipment, Inc, along with composting experts from the University of Minnesota, the Board of Animal Health approved two new composting systems in Minnesota. These composting systems, Ecodrum and the Dutch Compost System, may now be used for carcass disposal in the state under certain conditions, outlined below.

Producers wishing to use either of these two systems for carcass disposal must call the Board office and request a permit number. Information will be collected on where the composter will be located and how it will be used. Because this method of carcass disposal is new in Minnesota, a Board field inspector will visit the site as needed to inspect the system to insure the composter is working as expected and to collect samples to confirm that pathogens of concern to livestock industry are destroyed.

Conditions of Use for Ecodrum or Dutch Compost System in Minnesota

- **Permit required:** No person in Minnesota shall use an Ecodrum or Dutch Compost System without first obtaining a permit from the Minnesota Board of Animal Health. The permit will be valid for a period of one year from the issue date and must be renewed annually. A person desiring a permit or renewal of a permit shall call the Board office to make the request.
- **Species allowed:** Composting using these systems is allowed for poultry, swine, sheep, goats, cattle, and horses.
- **Site selection and use:** The composter may be used only for mortalities that originate on the premises where the composter is located or, if the operation is a multi-site operation owned and operated by the same entity, the composter may be permitted to receive mortalities from the other locations listed on the permit. Requests to use a composter to handle mortalities that originate from sites owned or operated by a different producer or operator may be made to the Board and will be evaluated on a case by case basis.
- **Installation and operation:** The composting unit must be installed and operated in accordance with manufacturer's instructions.
- **Protocol:** The operator of the compost system shall have a written protocol for the operation of the unit and shall instruct and be responsible for making sure that all employees follow the protocol.
- **Inspection:** The operator of the compost system must contact the Board as soon as the unit is operational to arrange for a field inspection and sample collection.
- **Temperature:** The temperature must be taken and recorded on site daily. The compost must reach the required temperature and be maintained at that temperature for the length of time specified in manufacturer's guidelines.
- **Pest control:** Flies, rodents, and vermin must be controlled around the area of the composting system so they are not a health hazard to human or animal populations.
- **Transportation to compost site:** Carcasses and discarded animal parts that are transported over public roads must be in vehicles or containers that are leakproof and covered.
- **Finished product:** The finished product must not contain visible pieces of soft tissue and must be handled, stored, and used according to Pollution Control Agency and Department of Agriculture rules.

**For a permit call the Minnesota Board of Animal Health:
Betsy Lempelius 651-201-6821**

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