

## **Operation & Maintenance Plan Waste Storage Facility (Code 313)**

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### **Expected Lifespan**

The minimum expected lifespan of this practice is at least 15 year(s).

### **OPERATION AND MAINTENANCE ITEMS**

A properly operated and maintained waste storage structure is an asset to your farm. The waste storage structure was designed and installed to be used for the temporary storage of animal wastes. Estimated life span of this installation is at least 15 years. The life of this installation can be assured and usually increased by developing and carrying out a systematic operation and maintenance program.

This practice will require periodic maintenance and may also require operational items to maintain satisfactory performance. Your operation and maintenance program includes:

- Remove waste from storage and utilize at locations, times, rates, and volumes in accordance with the Agricultural Waste Management System Plan. Virginia state regulations, including the certified nutrient management plans, must be followed when applying animal wastes.
- Operate the facility in a manner that minimizes odors and air drift.
- Follow the **Emergency Action Plan** in case of an overflow, breach, leakage, fire, need for emergency land application, etc.
- **Do not allow human entry into any enclosed structure unless the appropriate safety equipment is used. Store safety equipment near the facility in a visible and easily accessible location. This equipment will include a ladder, safety harnesses, and breathing apparatus.**
- Maintain all fences, railings, and warning signs to prevent unauthorized human or livestock entry. Maintain all lids, grates, and shields on openings to underground structures. Regularly check the effectiveness of gas control components and ventilation systems.
- Maintain all pumps, agitators, piping, valves and all other electrical and mechanical equipment in good operating condition by following the manufacturer's recommendations. Grounding rods and wiring for all electrical equipment shall be maintained in good condition.
- Maintain positive drainage away from the facility.
- Eradicate or otherwise remove all rodents or burrowing animals and repair any damage caused by their activity. Maintain screens and/or rodent guards.
- Immediately repair any vandalism, vehicular, or livestock damage to the structure, earthen areas surrounding the structure, or any appurtenances.

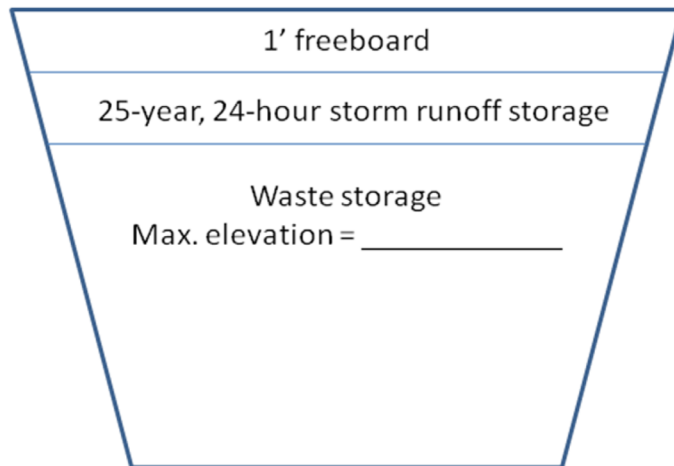
**Checked boxes contain additional requirements for the system.**

### **Additional Requirements for an Earthen Pond-type Animal Waste Storage Facility:**

- When the maximum waste storage elevation is reached, agitate and pump out the liquid waste storage pond. Mark the maximum waste storage elevation shown in Figure 1 on the staff gage.
- Operate an unroofed liquid waste storage facility so that the storage capacity required for the 25-year, 24-hour storm and storm runoff is always available. See Figure 1. If the accumulated storm water raises the waste in the facility above the planned maximum waste storage elevation, immediately agitate the pond and pump out the waste volume that is above the maximum waste elevation.
- Immediately remove all foreign debris within the structure that may cause damage to pumps, agitators, liners, or earthfill.
- Periodically inspect earthen embankments for longitudinal cracks or unusual settlement. Make sure all structure drains are functional and soil is not being transported through the drainage system.

- Maintain vigorous growth of non-woody vegetative coverings on earthen structures. Reseed, fertilize, and apply herbicides, when necessary. Mow the embankment and other vegetated areas to maintain a protective vegetative cover. Clip vegetation a minimum two times each year on the pond embankments. Do not allow trees to grow on the embankments.
- Protect the soil liner against damage from agitators or other equipment activities that could reduce the effectiveness of the soil liner. The soil liner must also be protected from the erosive forces of filling operations.
- Prevent animals from entering the waste holding pond to protect the soil liner from damage.

**Figure 1. Pond or pit storage components and maximum waste storage elevation.**



**Additional Requirements for a Concrete Pit-type Animal Waste Storage Facility:**

- When the maximum waste storage elevation is reached, agitate and pump out the liquid waste storage pit. The maximum waste storage elevation shown in Figure 1 will be marked on the staff gage.
- Operate an unroofed liquid waste storage facility so that the storage capacity required for the 25-year, 24-hour storm and storm runoff is always available. See Figure 1. If the accumulated storm water raises the waste in the facility above the planned maximum waste storage elevation, immediately agitate the pond and pump out the waste volume that is above the maximum waste elevation.
- Do not allow the operation of any heavy equipment on or within ten feet of the structure.
- Immediately remove all foreign debris within the structure that may cause damage to pumps or agitators.
- Check backfill areas around structures often for excessive settlement. Determine if settlement is caused by backfill consolidation, erosion, or failure of the structure. Make necessary repairs immediately.
- Check walls and floor often for cracks and separation of concrete. As a minimum, check 2 times per year when the facility is empty. Make needed repairs promptly.
- Keep the outlets of the foundation drains open. When the storage facility is in use, check the outflow from these drains frequently to determine if there is leakage from the storage structure. If leakage is detected, repairs shall be made immediately to prevent the possible contamination of ground water.
- Maintain vigorous growth of non-woody vegetative coverings around the structure. Reseed, fertilize, and apply herbicides, when necessary. Mow vegetated areas to maintain a protective vegetative cover. Clip vegetation a minimum two times each year. Do not allow trees to grow within 25 feet of the structure.

### **Additional Requirements for a Dry Stack Animal Waste Storage Facility:**

- Inspect stacking facilities at least twice each year when the facility is empty. Replace any wooden parts, hardware, or other replaceable parts which are damaged or show excessive wear or decay. Roof structures should be examined for structural integrity. Walls of dry stacks that are constructed with lumber may need repair or replacement during the life of the structure.
- To prevent erosion, establish and maintain a good vegetative cover around facilities. Clip vegetation twice a year to kill noxious weeds and ensure a vigorous stand. Maintain and/or replace traffic accesses as necessary.
- Check backfill areas around structure for excessive settlement. Make necessary repairs.
- When moving manure to the dry stack facility, scrape and clean push-out and loading areas to prevent surface water contamination. When removing manure from the dry stack facility, load the manure into the truck from inside the facility, to the extent possible. If the truck is loaded outside, scrape up all spilled manure and place in the truck.

### **Additional Requirements for a Poultry Litter Dry Stack Facility:**

- Do not store poultry litter outside unless an emergency situation occurs. Cover litter in accordance with the certified Nutrient Management Plan and Virginia state law.
- Inspect stacking facilities at least twice each year when the facility is empty. Replace any wooden parts, hardware, or other replaceable parts which are damaged or show excessive wear or decay. Roof structures should be examined for structural integrity. Walls of dry stacks that are constructed with lumber may need repair or replacement during the life of the structure.
- To prevent erosion, establish and maintain a good vegetative cover around facilities. Clip vegetation twice a year to kill noxious weeds and ensure a vigorous stand. Maintain and/or replace traffic accesses as necessary.
- Check backfill areas around structure for excessive settlement. Make necessary repairs.
- When moving litter from the houses to the dry stack facility, scrape and clean push-out and loading areas to prevent surface water contamination. When removing litter from the dry stack facility, load the litter into the truck from inside the facility, to the extent possible. If the truck is loaded outside, scrape up all spilled litter and place in the truck.
- In order to reduce the potential for fires in the litter storage structure, the following is recommended:
  - Pile height should not exceed 7 feet. Storing material in separate small windrows reduces the cross sectional area and is the safest option for stacking.
  - Keep the litter dry. Do not wet the litter in the hope of preventing fire; just the opposite may occur.
  - Avoid placing wet material in contact with dry material. Do not layer new litter on top of old, and do not let dead poultry compost come into contact with stored litter.
  - Do not compact the material by driving over it or packing it with equipment.
  - Monitor temperatures at different points in the pile frequently. If temperatures exceed 190°, or if the material is smoldering, prepare to remove material from the building. This includes notifying the local fire department to be on hand. A smoldering pile could burst into flames if exposed to air. A garden hose could be inadequate to extinguish the fire.

## Specific Site Requirements