

NATURAL RESOURCES CONSERVATION SERVICE

; 9CF; 5

OPERATION AND MAINTENANCE REQUIREMENTS

WASTE TREATMENT LAGOON

CODE 359

Land Owner/Operator _____

County _____ SWCD _____ Farm/Tract No. _____

Prepared By _____ Date _____

OPERATION AND MAINTENANCE ITEMS

A properly operated and maintained waste treatment lagoon is an asset to your farm. This waste facility was designed and installed to provide temporary storage and treatment of animal waste. The estimated life span of this installation is at least _____ 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:

- Waste will be removed from the lagoon and utilized at locations, times, rates, and volumes in accordance with the overall waste management system plan. ~~Other~~ estate laws must be followed when emptying and applying animal wastes. The lagoon shall be operated to maintain the maximum liquid level below the storage volume required for the 25-year, 24-hour storm and storm runoff.
- Prior to the storage season, the lagoon storage volume should be drawn down to the minimum operating level for the design loading to provide storage capacity for the accumulation of animal wastes and precipitation during the storage period.
- Inspection and needed maintenance of the embankment, vegetation, and other structures shall be made after any rainfall event, especially after unusual storm events.
- After 5 years of operation, the waste treatment lagoon shall be checked for sludge accumulation annually. If sludge has encroached into the treatment volume, the sludge will be removed and applied at agronomic rates based on analysis of the sludge.
- Maintain vigorous growth of vegetative coverings on earthen structures. This includes reseeding, fertilization, and application of herbicides when necessary. Fertilize the established stand as needed to maintain a uniform vigorous stand. The embankment and other vegetated areas shall be mowed to maintain a protective vegetative cover. Vegetation shall be clipped a minimum two times each year on the pond embankments. Trees shall not be allowed to grow on the embankments. Apply insecticides for insect control as per the manufactures recommendations and precautions, as needed.

- Maintain all pumps, agitators, piping, valves and other electrical and mechanical equipment by following the manufactures recommendations. Maintain grounding rods and wiring of all electrical equipment.
- All fences, railings, and/or warning signs shall be maintained to provide warning and/or prevent unauthorized human or livestock entry. Maintain all lids, grates, and shields on openings to underground structures.
- Immediately remove all foreign debris in or adjacent to the lagoon that may cause damage to pumps, agitators or earthen structures. Immediately remove any obstructions or blockage of spillways, trash racks, or pipe inlets.
- Periodically inspect spillways and control gates for proper functioning for their ability to maintain the water level to design elevations. Immediately remove any blockage or obstructions in spillways and maintain a minimum of _____ feet of freeboard from the top of the structure to the maximum water surface for earthen storage structures.
- 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. Check concrete surfaces for accelerated weathering, spalling, settlement, alignment or cracks. Needed repairs should be made immediately.
- Immediately empty storage facilities if damage to the structure may cause failure and immediately seek a qualified engineer to assess the situation. It is important not to reduce the water level in earthen storage facilities by more than 1 foot per day when emptying the facility.
- Check metal surfaces for rust and other damage especially sections in contact with earthfill and with other materials. Repair or replace damaged sections and apply paint as a protective covering.
- Check all rock riprap sections for accelerated weathering and displacement. Replace to original grades if necessary.
- Eradicate or otherwise remove all rodents or burrowing animals and repair any damage caused by their activity. Screens and/or rodent guards shall also be kept in place.
- Immediately repair any vandalism, vehicular or livestock damage to any earthfills, spillways, outlets or other appurtenances.
- Operate the facility in a manner that minimizes odors and air drift.

Additional Operation and Maintenance Requirements Specific to this Plan:

Maximum Waste Elevation before pumping must begin:
