

CLOSURE OF WASTE IMPOUNDMENT CONSTRUCTION SPECIFICATION

1. SCOPE

The work shall consist of furnishing and installing materials and removing existing facilities and materials as outlined in this specification and the drawings.

2. MATERIALS

FILL MATERIAL - Soil that is free from stumps, wood, brush, roots, sod, rubbish, matter that may decay, and other objectionable materials.

MANURE LADEN SOIL - Soil that has been visibly color stained by manure or mixed with manure or sludge.

SLUDGE - Thick manure and other settled solids that are too thick to be pumped with manure, and deposited on the sides and bottom of the waste impoundment.

3. WASTE REMOVAL

Empty the impoundment. Manure shall be utilized by spreading on crop fields or pastures in accordance with Conservation Practice 633, Waste Utilization.

- a. Manure should be thoroughly agitated and pumped into a manure spreader or irrigation system. Every effort should be made to remove as much of the manure liquids as possible.
- b. Impoundments shall be further emptied by pushing or flushing the remaining manure and sludge to an unloading point.

4. LINER REMOVAL

An existing concrete, geomembrane, soil liner or biological film or fibrous mat shall have 25% of the surface area, at the lowest elevation, removed to allow for free drainage. Liner removal shall only occur after all manure and sludge has been removed.

5. EARTH STRUCTURE REMOVAL

The embankment shall be breached or removed as shown on the drawings or as specified in Section 10. The embankment shall be left in place until all waste has been removed, unless it is necessary to remove part of the embankment to provide access for waste removal. The breach shall not permit any remaining liquid manure, sludge or manure laden soil to leave the impoundment. A depth of storage, as specified in Section 10 or the drawings, shall be maintained until after all manure, sludge and manure laden soil is removed from the impoundment.

If the area within the breached embankment is to be filled, or if the impoundment is an excavated pond, the impoundment shall be filled and shaped using fill material from the designated borrow area.

Frozen material shall not be placed in the fill, nor shall the fill material be placed on a frozen foundation.

Fill shall be placed in 9 inches lifts. Fill material shall be compacted by routing construction equipment over the fill area.

Fill material shall contain sufficient moisture so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly.

The backfill height shall exceed the design finished grade by 5% to allow for settlement. The top one foot of the backfill shall be constructed of the most clayey material available and graded to provide positive drainage. Incorporate available topsoil where feasible to aid establishment of vegetation.

6. STEEL AND CONCRETE STRUCTURE REMOVAL

Structures that have been assembled shall be disassembled.

Above ground structure sidewalls shall be demolished or removed.

Removal of concrete floor slabs or other concrete support structures including steel reinforcement shall be as specified in Section 10.

Below ground structures shall be demolished, completely removed or remain in place with the top removed to the extent that fill material can be placed and compacted to fill all voids. Compaction inside of structures not accessible to equipment shall be compacted by manually operated compactors in 6" lifts. Below ground structures that will remain in place shall have 25% of the floor or bottom removed to allow for free drainage. Floor or bottom removal shall only occur after all manure and sludge has been removed.

Removal of concrete floor slabs or other concrete support structures including steel reinforcement shall be as specified in Section 10.

Excavations, depressions and all voids shall be filled with fill material as specified in Section 5.

7. APPURTENANCE REMOVAL

Waste transfer pipes shall be flushed clean of manure and either be removed for their entire length and properly disposed, or be plugged. Pipes shall be plugged as specified in Section 10 or on the drawings.

Where pipes are removed, the trench shall be filled with fill material as described in Section 5. Other appurtenances or structures shall be removed as described in Section 10 or on the drawings.

8. CONVERT TO FRESH WATER USE

Any existing concrete, geomembrane or soil liner and foundation drainage system shall remain in place. Any damaged to a seepage control liner shall be repaired as directed by the Engineer.

If the impoundment is to be converted to fresh water use, the bottom and sides of the impoundment shall be further cleaned as specified in Section 10. As a final step the impoundment shall be filled with clean water and emptied twice before being put into use as a fresh water impoundment. The water from this procedure shall be applied to land with vegetative cover at rates that will prevent surface runoff and deep percolation.

9. DISPOSAL

Manure laden soil, sludge or fibrous mat shall be spread evenly on cropland. After spreading, the manure laden soil, sludge or fibrous mat shall be incorporated using conventional tillage equipment.

Demolished materials including seepage control liner, pipe and other appurtenances shall be buried on site at the designated location(s) as shown on the drawings or removed from site and disposed of in an acceptable manner.

10. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE: