

**NATURAL RESOURCES CONSERVATION SERVICE
PACIFIC ISLANDS AREA**

CONSERVATION PRACTICE SPECIFICATION

**POND SEALING OR LINING
COMPACTED CLAY TREATMENT (521D)**

SCOPE

This specification covers the installation of a compacted soil liner. The work shall consist of furnishing and placing soil materials to the lines, grades, elevations, density, and cross-sections as shown in the drawings or as staked in the field. The installation shall be in accordance with the construction drawings and these specifications.

SAFETY

Any hazards must be brought to the attention of the responsible person.

Landowners or operators, sponsoring organizations, and contractors shall be liable for damage to utilities and damage resulting from disruption of service caused by construction activities. The Natural Resources Conservation Service makes no representation on the existence or non-existence of any utilities. Absence of utilities on the drawings is not assurance that no utilities are present at the site.

It is the responsibility of the landowner or operator to determine if there are buried or overhead utilities in the vicinity of the proposed work. They should take proper procedures to insure that the utilities shall not be jeopardized and that equipment operators and others will not be injured during construction operations.

CONSTRUCTION OPERATIONS

Construction operations shall be carried out in such a manner and sequence that erosion and air and water pollution are minimized and held within legal limits.

The owner, operator, contractor or other persons will conduct all work and operations in accordance with proper safety codes for the type of construction being performed with due regards to the safety of all persons and property.

INSTALLATION

Site Preparation. The surface area of the pond that is to be treated shall be cleared of all trees, brush, weeds, sod, loose rocks, or other material not suitable for the subgrade. Clearing and disposal methods shall be in accordance with applicable state and county laws with due regards to the safety of persons and property.

Prior to placement of the first layer of lining material, the surface area shall be compacted, following the procedures in the Compaction section. The top 3 inches of the surface area shall then be scarified.

Material. Lining material shall have a unified classification of CL, CH or MH. Material shall have no rock material larger than 3/8" in diameter.

Placement and Compaction. The soil lining material shall be placed and uniformly spread over the area. It shall have sufficient moisture needed for optimum compaction. If the soil is too wet, allow it to dry. If it is too dry, mix water into the soil by sprinkling.

Construction equipment shall be operated over the areas of each layer of fill to ensure the required compaction as shown on the plans. Special equipment shall be used, if needed, to obtain the required compaction.

Fill, adjacent to structures and pipe conduits, shall be compacted to a density equivalent to that of the surrounding fill by means of hand tamping, manually directed power tampers, or plate vibrators. Heavy equipment shall not be operated within two feet of any structure.

Compaction shall meet the requirements of the method specified as described below:

A. Sheepsfoot roller - the maximum layer thickness shall be 8 inches before compaction. The roller shall have staggered, uniformly spaced tamping feet, and be equipped with suitable cleaners. The weight of the roller shall not be less than 2,500 pounds per foot of width. The maximum speed of the compaction equipment shall be 3 miles per hour. The entire surface of each layer placed shall receive at least 6 passes of this equipment to attain the necessary compaction.

B. Pneumatically-tired equipment - The maximum layer thickness before compaction shall be 6 inches. A loaded scraper may be considered a pneumatic roller. The wheels of this equipment must pass over at least 90 percent of the surface of each lift before a new lift is placed.

C. Track laying equipment (bulldozer) - The maximum layer thickness before compaction shall be 4 inches. The tracks of the equipment must pass over at least 90 percent of the surface of each lift before a new lift is placed.

An infiltration test of the compacted lining will be performed and documented. Documentation, recording length of test and permeability rates will be recorded and stored in the cooperators file. Lining not meeting the specified requirements shall be reworked or removed and replaced with acceptable fill.

WORKMANSHIP

All construction shall be performed in a workmanlike manner, and the job site shall have a neat appearance when finished.

All disturbed areas not graveled or paved will be vegetated to control erosion.

BASIS OF ACCEPTANCE

The acceptability of this practice shall be determined by inspections during and following construction to ensure compliance with all provisions of this specification and the construction drawings.