

**N NATURAL RESOURCES CONSERVATION SERVICE
PACIFIC ISLANDS AREA**

CONSERVATION PRACTICE SPECIFICATION

POND SEALING OR LINING, FLEXIBLE MEMBRANE

(No.)
CODE 521A

SCOPE

This specification covers the installation of a flexible membrane. The installation shall be in accordance with the construction plans, these specifications and the manufacturer's specifications.

MEMBRANE MATERIALS

Flexible membrane materials shall be of a quality that equals or exceeds the physical requirements as listed in plans.

All lining material shall be free of damage or defect. Each package delivered to the job site shall be marked with the name of the material, the manufacturer's name or symbol, the quantity therein, and the thickness or weight of the material.

SUBGRADE PREPARATION

The area to be lined shall be drained and allowed to dry until the surface is firm and will support the men and equipment that must travel over it during installation of the lining.

The foundation area for flexible membrane linings shall be smooth and free of projections that might damage the lining. Stumps and roots shall be removed. Rocks, hard clods, and other such material shall be removed, or shall be rolled so as to provide a smooth surface. No sharp or hard objects larger than 3/8 inches in diameter are allowed in the top 1 inch of the surface to be covered. The surface should provide a firm, unyielding foundation for the membrane.

If the subgrade is coarse-textured and open after preparing and compacting, or in rocky soils, geotextile or a two-inch cushion layer of sand or fine grained soil such as silty clay or silt should be applied.

Where needed, an effective sterilant shall be applied to the subgrade at a rate recommended by the manufacturer.

PLACING THE LINING

Membranes shall be carefully spread over the subgrade so they lie in a relaxed state. Polyethylene film requires about 5 percent slack for satisfactory results.

Backfill in anchor trench shall be compacted to a density equivalent to that of the surrounding area.

All field splices shall be made in accordance with the manufacturer's recommended technique, using materials furnished for the purpose. The joints shall be watertight and maintain its integrity through the expected life of the lining.

BURIED LININGS

For covered membranes, the material to be used for protective cover shall be free of large clods, sharp rocks, sticks, and other objects that would puncture the lining. Maximum allowable particle size of soil cover material shall be 3/8-inch unless the liner is cushioned by an 8-ounce or greater needle punched, non-woven geotextile padding material. The cover shall be placed to the specified depth without damage to the membrane. Follow the membrane manufacturer's installation details. Cover materials shall be stable against slippage down the slope under all operational and exposure conditions.

BASIS OF ACCEPTANCE

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

WORKMANSHIP

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

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.

SAFETY

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.