

INSTRUCTIONS FOR USE OF CONSTRUCTION SPECIFICATION

POND SEALING OR LINING – FLEXIBLE MEMBRANE, CODE 521A

1. Applicability

National Engineering Handbook, Part 642 Specifications for Construction Contracts, Construction Specification 97—Flexible Membrane Liner is applicable to the placement of flexible membrane liners in liquid containment systems to control seepage . Construction Specification 97—Flexible Membrane Liner will be the primary construction specification for installing a flexible membrane for pond sealing or lining.

2. Material specifications

Material Specification 594, Flexible Membrane Liner, is complementary to this specification.

3. Items to be included in the "ITEMS OF WORK AND CONSTRUCTION DETAILS" or on the Construction Drawings.

- a. Plan view of system layout, including containment structure, collection points, waste transfer locations or pipelines, and topography of the site.
- b. Required liner properties, type of liner material being used and required thickness of liner, cushion materials, and pipeline materials.
- c. The required lines and grades of the liner subgrade and the cover layer, if applicable and finished grade.
- d. Requirements for subgrade compaction.
- e. Details of panel placement, orientation, and anchorage.
- f. Requirements of any cushioning material to be used and the material references for the same.
- g. Requirements for a geosynthetic rub sheet, as mentioned in Section 6, Liner Placement
- h. Requirements for under drains and the associated materials.
- i. Details for any loading, unloading, or cleanout ramps; including batten strips or other means of fastening.
- j. Details for pipe outlets and boots or appurtenances to fit the liner to the pipe, concrete, or steel structures, as mentioned in Section 11, Appurtenances.
- k. Details of gas vents and their locations, as mentioned in Section 12, Gas Vents and Drainage.
- l. Details for fences, ladders, or other safety features.
- m. Requirements for cover soil to protect liner, as mentioned in Section 13, Cover Soil.
- n. Requirements for concrete placement including the slump of the concrete, as mentioned in section.
- o. Placement of concrete.

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- p. Any special instructions related to the materials, installation, and onsite quality control testing.
- q. Method of installation, including seaming requirements, and requirements for attachment of appurtenances.
- r. Trenching details.
- s. Structural details.
- t. Minimum qualifications of installers.
- u. Warranty requirements, if desired.
- v. Quality control testing requirements.
- w. .Quantity of materials.
- x. Location of utilities and notification requirements.