

POND SEALING OR LINING – FLEXIBLE MEMBRANE DESIGN AND CONSTRUCTION CHECKLISTS

DESIGN

1. Required permits obtained by the landowner
2. Compliance with NRCS national and state utility safety policy (NEM Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities 503.00 through 503.06).
3. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - a. Hydrogeology
 - b. Liner Material
 - c. Liner Thickness
 - d. Liner Protection
4. Construction Specifications
 - a. Were construction specifications for all practice standards associated with the pond lining included and modified to be fit the site conditions.
 - b. Were any additional specifications needed and included in the design
 - c. Construction sequence, if required
 - d. Liner installation and protection
5. Engineering Drawings
 - a. Plan View
 - North Arrow
 - Bench Marks
 - Scale
 - Legend
 - Road and Utilities
 - Access Roads
 - Existing Structures
 - Location of typical sections
 - Construction Limits
 - Location of vents for pressure relief, if needed
 - Location of pipes, appurtenances and structures
 - Property Lines
 - Well and Spring Locations
 - Water Course Locations
 - Known Sinkhole Locations
 - Erosion and Sediment Control BMPs
 - b. Typical Sections and Details
 - Minimum of 1 typical section
 - Scale
 - Pipes, appurtenances, and structures to be installed through liner
 - Excavation and earthfill slopes
 - Liner anchorage
 - Liner protective cover
6. Design Report and Inspection Plan as appropriate (NEM Part 511, Subpart B Documentation, 511.11 and Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.32).
7. Operation and Maintenance Plan
8. Design modifications during installation as required

INSTALLATION

1. Pre Installation conference with landowner and contractor.
2. Verification that client has obtained required permits.
3. Staking and layout according to plans and specifications including applicable layout notes.
4. Installation inspection (according to inspection plan as appropriate).
 - a. Actual materials used.
 - b. Inspection records
5. Facilitate and implement required design modifications with landowner and original designer.
6. Advise landowner on compliance issues with all federal, state, tribal, and local laws, regulations and NRCS policies during installation.
7. Certification that the installation process and materials meets design and permit requirements.
8. Erosion and sediment control BMPs in place and maintained.

CONSTRUCTION CHECKOUT

1. Certification by installer that the liner was installed to manufacturer's recommendations and specifications.
2. Documentation that required protective cover was installed according to specifications.
3. Disturbed areas vegetated properly
4. Certification that practice meets standard