CLOSURE OF WASTE IMPOUNDMENTS
DESIGN AND CONSTRUCTION CHECKLISTS

DESIGN

1. Risk Assessment
    a. Documentation of seepage rate of the liner by permeability tests or construction quality control tests during construction of the liner.
    b. Documentation of the intended use of the facility after closure
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
4. Construction Specifications
    a. Were construction specifications for all practice standards associated with the closure included and modified to be fit the conditions for this closure
    b. Were any additional specifications needed and included in the design
    c. Construction sequence, if required
    d. Liner removal or protection, if required
    e. Special equipment requirements
5. Engineering Drawings
    a. Plan View
        - North Arrow
        - Bench Marks
        - Scale
        - Legend
        - Road and Utilities
        - Access Roads
        - Existing Structures
        - Existing Waste Impoundment to be Closed
        - Location of any planned breaches in embankments
        - Location of cross sections either surveyed or taken from checkout notes from the original construction
        - Construction Limits
        - Location of drainage and outlet structures to remain
        - Location of pipes, appurtenances and structures
        - Borrow Area
        - Temporary Spoil Area for Sludge
        - Property Lines
        - Well and Spring Locations
        - Water Course Locations
        - Known Sinkhole Locations
        - Erosion and Sediment Control BMPs (this will need to be a separate document if planned use is nonagricultural)
    b. Cross Sections
        - Minimum of 2 cross sections (either surveyed or taken from construction checkout records)
        - Scale
        - Pipes, appurtenances, and structures to remain to be removed
        - Excavation and earthfill slopes
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. All waste removed from the impoundment disposed of according to applicable NRCS standard included in the design
2. All earthfill placed according to applicable specifications if the impoundment is to be closed
3. Water quality certified by a qualified professional to be acceptable for intended use if the impoundment is being converted to another use (pond, etc)
4. Disturbed areas vegetated properly
5. If site is a state permitted site, was Notice of Termination filed with state