

## MINE SHAFT AND ADIT CLOSING

### DESIGN AND CONSTRUCTION DATA REQUIREMENTS

The following items must be addressed in the design folder for a Mine Shaft and Adit Closing. The following items shall be included:

- 1) Table of Contents
- 2) Site Investigation Report including:
  - Geology and groundwater conditions at the site
  - Access conditions into mine
  - Risks to life and property associated with the mine
  - Equipment and trash within mine
  - Presence of hazardous gases
  - Presence of acid mine drainage
  - Mine history including mine plan if available
  - Inventory of plant or animal species using the mine
  - Potential for surficial changes due to water table variation
- 3) Applicable permits
- 4) Construction Specifications
- 5) Engineering Drawings
- 6) Erosion & Sediment Control Plan
- 7) Quality Assurance Plan
- 8) O&M Plan

Items 1 through 3 can be documented in narrative form. Items 4 through 8 require more detail as described below.

#### **Construction Specifications**

Enclose the applicable specification(s) PA543, PA342, and others as needed.

Include any "additional conditions" or items that are site specific or must be defined to supplement the standard specification.

Add any special or "by-others" specifications.

Safety Plan, as needed

#### **Engineering Drawings**

On each drawing sheet, the title block should show the operator's name, type of operation, county and the persons involved in drawing and designing the closure. All closures require approval by a registered Professional Engineer or an Engineer with NRCS job approval authority for Standard PA547. The following items should be included:

##### PLAN VIEW SHEET

- North arrow, Bench mark(s)
- Scale, Legend
- One Call documentation
- Contours
- Roads & utilities
- Access
- Existing structures
- Existing waste impoundment
- Location(s) of breach or embankment removal
- Cross section locations
- Construction limits
- Remaining drainage & outlet locations
- Locations of pipes, appurtenances, & structures
- Borrow area
- Spoil area
- Property lines
- Water well and spring location(s)
- Water courses
- Known sinkhole locations

##### CROSS SECTION SHEET(S)

- Two sections, minimum
- Scale(s)
- Pipes, appurtenances, & structures to be installed and/or removed
- Excavation and earth fill
- Slopes

SEQUENCING STATEMENT WITH:

- Construction sequence
- Special considerations and equipment
- Lining removal or protection
- Removal of waste materials

**Erosion and Sediment Control Plan**

See DEP Erosion and Sediment Pollution Control Program Manual.

**Quality Assurance Plan**

- List specify items to be inspection and when.
- Specify who will do the actual inspection.
- List testing equipment required for the inspection.

**Operation and Maintenance Plan**

- Routine operational requirements
- Routine maintenance requirements
- Safety precautions (gates, signs, fencing)
- Other special situations, practices, conditions, and requirements for the individual operation.