SLURRY WALL DESIGN & CONSTRUCTION

Design

Remedial Design Investigation

- Drill borings along slurry wall alignment
- Define depth to aquitard for closure key
- Obtain soil samples for particle size testing
- Test permeability of key-in stratum (in situ)
- Measure water levels
- Interface bentonite slurry with site groundwater to evaluate compatibility
- Test S-B Backfill materials for stability in site groundwater:
  - Prepare (mock) backfill specimens (site soil with added clay and bentonite)
  - Test pressures will exceed seasonal high-water levels
  - Observe permeability change with seepage volume
- Establish clay and bentonite content for S-B Backfill
- Establish strength & permeability criteria for C-B Backfill (if needed)
- Groundwater modeling to estimate groundwater flow pattern with Containment Cell in place

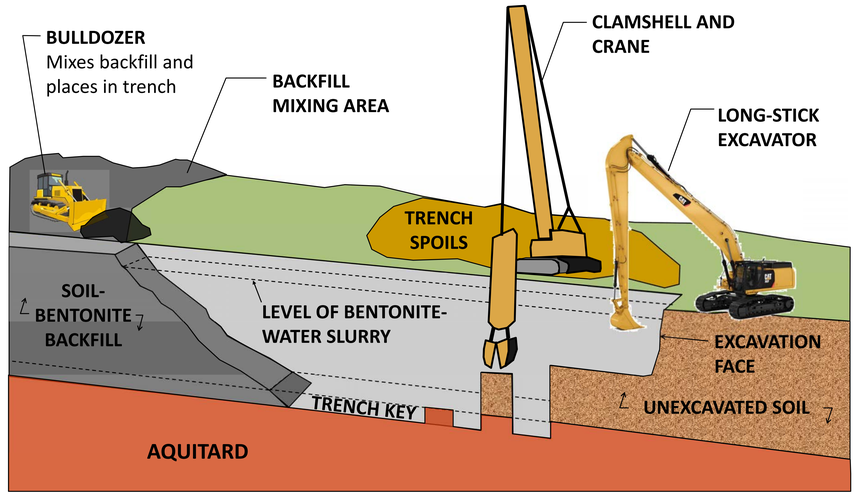
Flexible wall permeability test specimen in pressure cell


Slurry compatibility w/ site groundwater


Groundwater modeling


Permeability testing laboratory panels

Construction



Contractor Construction Quality Control

- Excavate continuous trench
- Measure final trench depth
- Test slurry properties (sand content, weight, filter cake)
- Test Prepared Backfill (particle size, weight, slump, permeability)

Owner Quality Assurance

- Full Time Inspection of Contractor work
- Sample and examine material in Closure Key
- Measure and Document Closure Key depth
- Test & Approve Prepared Backfill (particle size & permeability)


Inspector measures trench depth

Construction Materials

- Soil-bentonite
- Cement-bentonite
- Imported clay
- Sodium bentonite additive if necessary

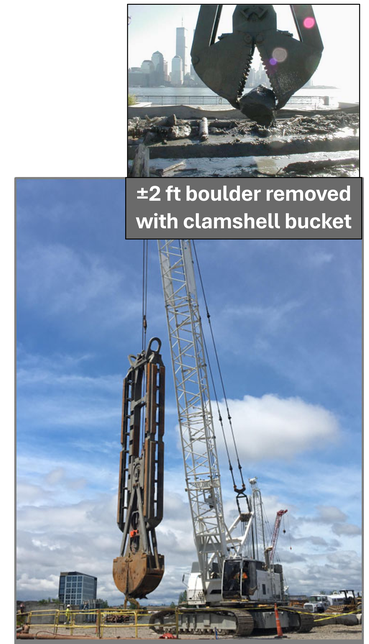
Construction Equipment

- Long-stick excavator
- Clamshell
- Chisel

Long-stick Excavator


Chisel used for boulder breakup


Backfill Placement



Clamshell and crane

Post-Construction

Containment Cell Performance after Construction

- Monitor groundwater levels inside and outside of Cell
- Remove seepage into Cell for treatment and disposal