



## STANDARD OPERATING PROCEDURE FOR BACKFILL OF BORINGS IN OR NEAR LEVEES AND FLOODWALLS



15 January 2020

Backfill of borings in or near levees requires a USACE Section 408 Alteration Request ([Form CELRL-803](#)) and appropriate project plans and specifications are submitted with the alteration request.

**Method 1:** Boreholes shall be backfilled with granulated bentonite in not greater than one-foot increments. The volume of bentonite required to fill the borehole shall be determined in advance to equal the volume of material removed during boring. Bridging of borehole cavity during bentonite placement can occur; therefore, sounding of borehole shall be incrementally performed as the material is introduced into the hole to confirm no bridging has occurred. Coated bentonite pellets must be used below the water table, but uncoated bentonite chips are generally preferred above the water table. The upper two feet of the borehole shall be backfilled with auger cuttings to allow establishment of vegetation.

**Method 2:** Grout the boreholes using the tremie method and a mixture of powdered bentonite and water which will set to a consistency of a stiff soil with a maximum permeability of  $10^{-7}$  cm/sec.

Boring locations shall be provided-reference *SOP for Documentation of Levee System Feature Locations in the Field*, dated 04 November 2014. Photos during and at the end of the work shall be provided to USACE Louisville District upon completion of the work.