STANDARD OPERATING PROCEDURE

DECOMMISSIONING AN EXISTING PIPE

16 January 2020

Pipes may only be decommissioned after USACE approval of a properly submitted Levee System Alteration Permission Form (CELRL-803) with the accompanying plans and specifications. The submittal must include an analysis proving that removal (decommissioning) of the pipe(s) from the system will not result in flooding/ponding within the leveed area.

The pipe(s) to be decommissioned must be cleaned (or in a clean condition) and then video-inspected to determine its condition prior to filling. In addition to removing debris to provide a cleaner surface to inspect, cleaning the pipe increases the potential for a good bond between the grout infilling and pipe. The pipe must be completely filled with a shrinkage-compensating grout that produces a 24-hour penetration resistance of no less than 100 psi (ASTM C403).

Below is an example mix design for a non-structural grout that will produce a foamed density of about 45 pcf and yield approximately 2.7 cubic yards. If another grout mix is chosen, it must include a shrinkage compensating admixture dosed at a rate recommended by the manufacturer. The grout must be used in under an hour (unless a retarding admixture is used) to prevent placing partially cured material that is too viscous to properly flow. A foaming agent is required to promote flow and maintain a grout density less than 50 pcf (ASTM C138). The grout viscosity must be 20 seconds or less as tested according to ASTM C939.

Example Non-Structural Grout Mix Design

Cement (ASTM C150)	1750 lbs.	Batches ~ 1yd³
Fly Ash	(Optional - will lower early strength) Weight of fly ash to be used must be deducted from the cement so that the total weight of the two will not exceed 1,750 lbs.	
Water	960 lbs.	
Sand	376 lbs.	
Foaming Agent Admixtures	108 lbs.	Batches ~ 2.7yd³

Documentation

Documentation shall be submitted to the USACE Louisville District Levee Safety Area Representative upon completion of decommissioning. That documentation shall include the As-Built stationing, a map showing the pipe location, location coordinates (reference SOP for *Documentation of Levee System Feature Locations in the field*, dated April 2015), method used, details of the decommissioning, and photos prior to, during, and after completion of work.