

WALTER F. GEORGE LOCK & DAM Shorterville, AL



- **Owner:**
U.S. Army Corps of Engineers, Mobile District
- **Technique(s) Utilized:**
Cutoff Wall

This project involved the design and construction of a concrete cutoff wall upstream of the dam to control seepage. The wall comprises secant piles installed from the lake bed nearly 100 feet below the water's surface and a diaphragm wall built within the dam's embankments. A drilling and grouting program was carried out first to verify ground conditions and fill any voids that might disrupt the work. The project team decided that the secant piles would be installed using reverse-circulation drill rigs mounted on top of 54-inch diameter temporary casings driven into the prepared lake bed. The diaphragm walls were completed using a hydrofraise that uses bentonite as a stabilizing and drilling fluid. This project also involved the installation of 78 jet grout columns using double-fluid and single-fluid methods. The jet grout was installed from barges through water using casing to reach the bottom of the lake located 65 feet below. The challenging project was completed by a joint venture consisting of Rodio International (a wholly-owned subsidiary of Nicholson Construction Company) and Treviicos of Boston.