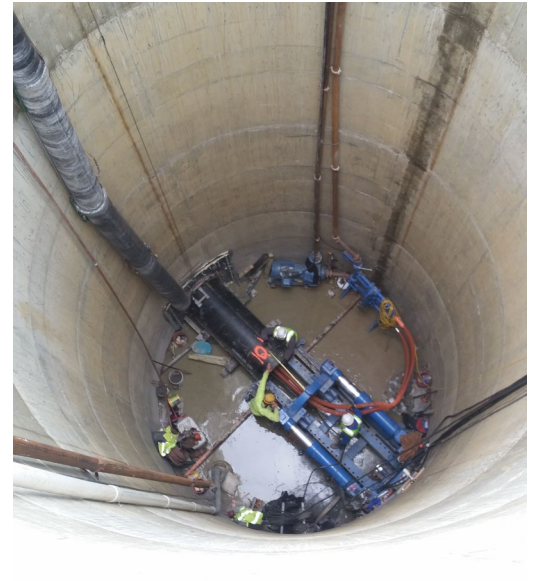


KIEWIT
DESIGN-BUILD TVA COMBINED CYCLE
RAW WATER INTAKE
DRAKESBORO, KENTUCKY



Project Description

Tennessee Valley Authority opted to replace two coal-fired power producing units. This power plant, like most, burns fuel to heat water to make steam, to turn a turbine, to turn a generator, to produce electricity. Reynolds' part of the project involved transferring water from the Green River to the new power plant for the steam turbine/generator and the cooling towers. Reynolds installed the intake screen and piping that connects the screen to the wet well, constructed the wet well, and installed the pumps, the electricity, and controls for these pumps. Innovative construction approaches included the use of a 20-ft diameter concrete caisson, installed via the sinking caisson method through the initial 65-ft of alluvial overburden, and then conventional rock excavation for the remaining 35-ft wet well depth. The horizontal piping was installed via the micro-tunnel boring method. The centerline of the micro-tunnel is at elevation 318. This is about 32 vertical feet below the bottom of the river with about 25 feet of overburden (soft silty sand) over the bedrock in the bottom of the river at the proposed site of the new intake. Reynolds built and then removed a cofferdam to hold back the overburden and keep the receiving pit open. Sheet piling was also installed for the cofferdam in the river to facilitate our intake installation.

At a Glance

Contract Amount:
\$12.8 M

Notice to Proceed:
April 23, 2015

Completion Date:
July 29, 2016

MGD:
11.5

Owner:
Kiewit Power

Engineer:
Bell Engineering