

New Madrid Power Plant Units 1 & 2

New Madrid, Missouri, USA

Keller installed, operated and maintained a deep well dewatering system for a very deep excavation at a power plant in the Mississippi River flood plain.



The project

Keller as a subcontractor to J. S. Alberici Construction Company installed a perimeter deep well dewatering system for the construction of a rotary car dumper in New Madrid, Missouri. The rotary car dumper was located along the banks of the Mississippi River constructed in a partially open cut, partially sheeted excavation extending down to approximately 100 ft below ground surface and 80 ft below normal groundwater level. The site was situated in the Mississippi River floodplain and the highly transmissive alluvial aquifer. Based on aquifer pumping test data in the vicinity, the dewatering system was designed with a capacity of 56,000 GPM from 16 high volume production wells.

The challenge

Keller installed the dewatering system, including 6,000 ft of 36-inch steel discharge line in a period of six weeks. Keller operated and maintained the groundwater control system for a period of seven months starting May 1993, maintaining a dry subgrade despite the Mississippi River Flood of '93.

The solution

The pumping system consisted of 16 wells (24-inch diameter x 150 FT deep) each equipped with 3500 gpm vertical turbine pumping units powered by 150 HP right-angle-drive diesel engines.

The project involved lowering the groundwater from EL 285 to EL 205 while maintaining drawdowns for a period of seven months.

Project facts

Owner(s)

Associated Electric Cooperative Inc.

Keller business unit(s)

Keller

Main contractor(s)

J.S. Alberici Construction Company

Solutions

Groundwater control and dewatering

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Infrastructure

Power

Techniques

Dewatering

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