

Humboldt Bay Power Plant Decommissioning

Eureka, CA

Owner: PG&E

General Contractor: CB&I
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Engineer/Architect: Drill Tech Drilling & Shoring, Inc.

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Year Performed: 2015 – Estimated 2017 Completion

Contract Value: \$ 20,000,000

Major Scope: World's Deepest CSM



Project Description:

Drill Tech is installing a Cutter Soil Mix (CSM) Caisson Shoring System around the underground Nuclear Reactor Caisson structure at the Humboldt Bay Power Plant. Various other scopes include dewatering well installation, geotechnical instrumentation installation, steel sheet pile installation/removal, and timber foundation pile removal.

The CSM shoring system is cylindrical with an inside diameter of 110 feet and a planned excavation depth of 96 feet. To achieve the required wall thickness of 13 feet, 5 concentric rings of CSM panels are overlapped end-to-end to create a compression ring. The required design compressive strength for the shoring system is 1,000 psi. The four inner rings increase in 4 foot depth intervals from 104.5 feet at the inner ring to 116.5 feet in the fourth ring. The outermost, 5th ring is structural to 120.5 feet and acts as a water cutoff to 174 feet deep. A custom modified Bauer BG 50 CSM rig was built to install the outer cutoff ring. A Bauer BG 40 CSM rig performs installation of the 3 inner rings.

