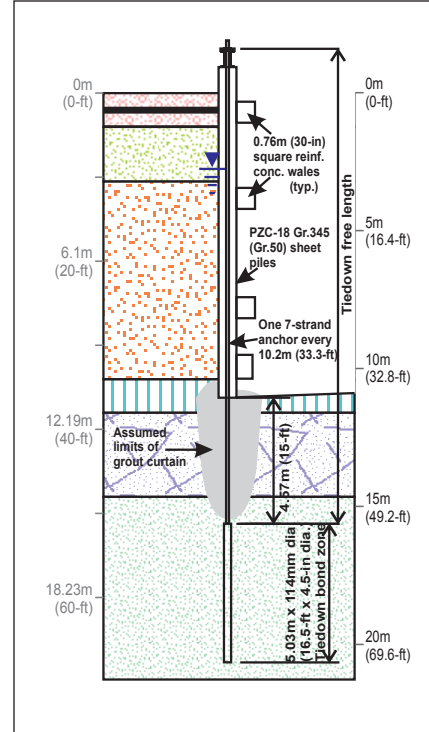


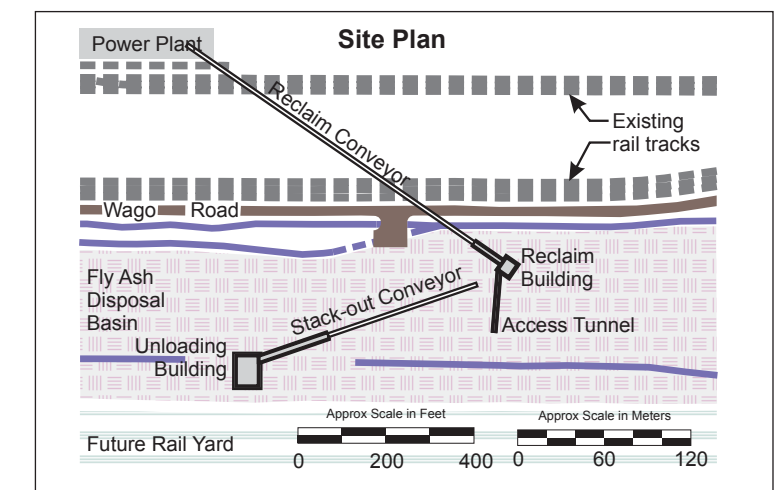
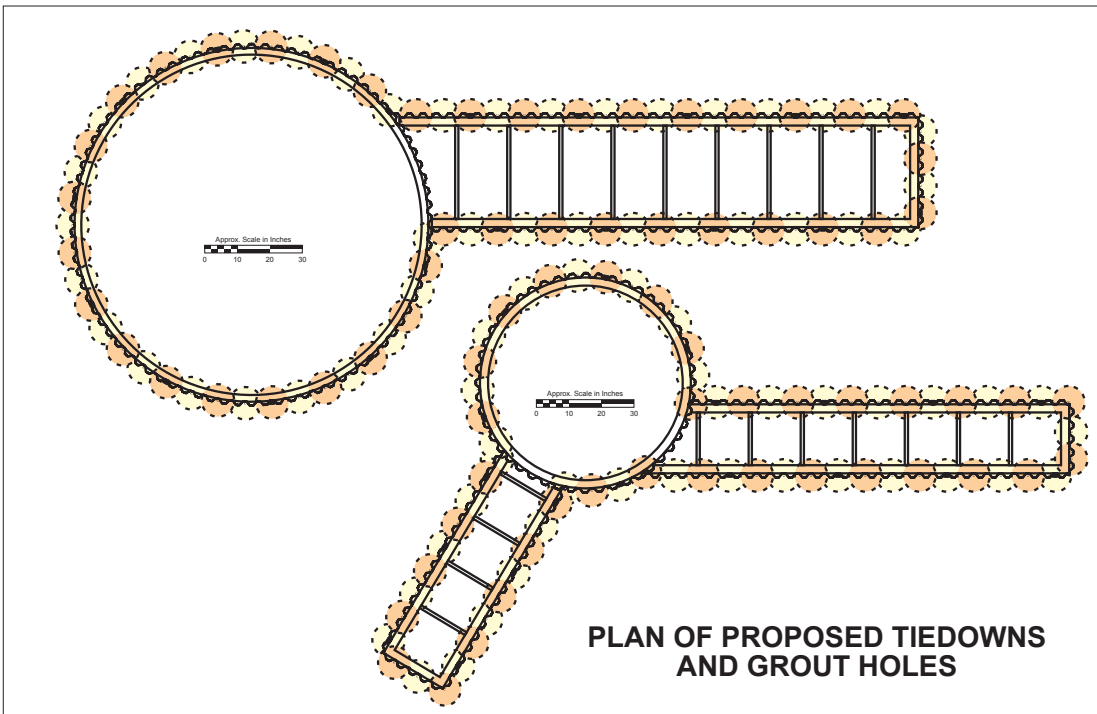
Design and Construction of Circular Cofferdams for Earth Retention in a Flyash Disposal Basin



This paper describes the successful design and construction of a pair of circular cofferdams, to provide the support of excavation for two deep excavations in a saturated fly ash disposal basin containing elevated concentrations of arsenic, chromium and mercury.

The circular driven sheet pile cells were internally braced using multiple levels of reinforced concrete compression wales. Excavations were maintained watertight by the use of proprietary water stop material in the sheet interlocks, and a program of injection grouting to form a cut-off wall in the rock beneath the sheet pile tips. Tie-downs were used to oppose the residual uplift.

This solution not only allowed unrestricted overhead access to the excavation, it also offered significant savings in cost and schedule, in maintaining a clean and tidy site where potentially contaminated soils existed, as well as optimizing the combined resources of the construction team.



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