

## **Comparison of Seismic Responses of Deeply Embedded and Surface Supported Structures**

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Comparisons of accelerations ( $z_{pa}$ ), base shears and in structure response spectra (ISRS) for surface and deeply embedded structures of similar structural configurations are presented. The study includes assessment of the responses of a prototypical reactor building supported at the surface and at two embedment depths of 40 and 60 ft. Seismic responses that include SSI effects are computed for 7 different soil profiles for seismic hazards defined for two sites; one with a moderate seismic hazard and one with a relatively high seismic hazard.