

POSITION PAPER RE: ADEQUACY OF THE VOGTLE SITE FOUNDATION EXPLORATION

In the Vogtle site exploration program a large number of borings was deployed over a large area of investigation. Although we and our consultants, the Corps of Engineers, agree that the general geologic conditions at the site are basically as described in the PSAR, we believe that more specific details of the foundation conditions, pertinent to design, may have been overlooked due to the wide spacing of the borings covering the critical structure locations. Specifically, some solutioning of the calcareous clay bearing stratum cannot be ruled out, because of its heterogeneous interlayering of sand and fractured limestone which could have created solution channels, as evidenced at times by partial or complete loss of drilling fluid in the marl.

We and our consultants therefore recommended that, for the containment buildings locations, additional borings be placed on a minimum grid of 50 feet on centers and that they penetrate at least 40 feet of fresh, unweathered marl stratum. Other, less heavy Category I structures should have an average spacing of not more than 100 feet on centers, depending upon the reliance that can be placed on geologic interpretation between borings. An appropriate number of samples should be recovered from these borings and tested to demonstrate that the upper 15' to 20' of the marl can adequately support the heavy structures, the high bearing capacities represented in Table 2.5-2 of the PSAR, and the low compressibility characteristics.

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The applicant has assigned the mechanism causing surface depressions (sinkholes) to the erosion of the shell bed above the marl bearing stratum. The applicant should provide assurance that the control mechanism for creating sinkholes is due to this entirely, and not in part to deep seated leaching and consolidation of the soils below the bearing stratum. We, therefore, recommend that the applicant correlate in detail the geometry, locations, and amount of depression of the sinkholes with the extent and thickness of the shell bed; and provide a detailed discussion of the geomorphology of the area. The additional borings recommended above will provide valuable data in this regard, also.