

Clinch River Nuclear Site, TVA Early Site Permit Application

Issue: SSAR information on the characteristics of subsurface voids at the proposed foundation sites is insufficient to demonstrate foundation stability and site suitability, per requirements in 10 CFR 100.23(d)(4).

Information needed in SSAR 2.5.4 for NRC review of application:

- 1) A technical basis for determining the characteristics of potential subsurface voids beneath the proposed foundation locations:
 - Specific to the subsurface materials beneath the proposed sites in the SSAR.
 - Accounts for uncertainties in existing information from site characterization.
 - Evaluates the potential differences in the geologic characteristics between the proposed sites and potential analogue sites, if used.
 - Provides sufficient information to support the technical basis for establishing foundation design criteria and/or a PPE.
- 2) A technical basis for defining a PPE and/or foundation design criteria:
 - Characteristics of a potential foundation design, including footprint and loading parameters (a representative foundation design could be used as a surrogate for the PPE).
 - Provides a reasoned basis to evaluate expected foundation loads.
 - Relates quantity and character of potential subsurface voids at the proposed sites to the potential loading demands.
- 3) A plan by TVA to conduct an evaluation that incorporates the results of #1 and #2 to demonstrate that the proposed sites are acceptable per requirements in 10 CFR Part 100.23. (Due to NRC by December 15, 2016)
- 4) Identification of COL action items to verify site conditions as presented in items #1–#3.