Eden Isotope Production Complex
Construction Permit Application

Enclosure 5:
Supporting Information

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Planned Submittal of Supporting Site-Specific Information for the Eden Preliminary Safety Analysis Report Chapter 2 (see PSAR Section 2.5.2.2 “Site Soil Conditions”)

As described in PSAR Section 2.5.2.2, “Site Soil Conditions,” the subsurface soil conditions at the Eden Isotope Production Complex (EIPC) site are expected to be similar to those characterized for the nearby URENCO National Enrichment Facility. Based on this assumption, as discussed in PSAR Section 2.5.5, “Vibratory Ground Motion,” the design response spectrum (DRS) is determined using a soil classification C based on the URENCO site characteristics.

A geotechnical subsurface investigation of the Eden Medical Isotope Facility (EMIF) site will be performed to characterize the in-situ soil stratigraphy and engineering properties and to verify consistency with the URENCO subsurface data. Soil borings will be performed beneath the EMIF, which is the only safety-related structure within the EIPC. The borings will extend to a depth of approximately 100 feet, with at least one boring extended to a depth of approximately 200 feet to investigate deeper subsurface conditions. A geotechnical investigation specification has been prepared and will be made available for NRC review upon request.

The subsurface investigation will be completed prior to the start of safety-related nuclear construction. The final report documenting the subsurface investigation methods, results, and engineering evaluations will be made available for NRC review when completed.

As described in PSAR Section 3.4, “Seismic Damage,” the DRS is an input to the seismic analysis. In parallel with the site specific geotechnical investigations, Eden may decide to proceed with the seismic analysis and design of the EMIF using the URENCO subsurface characteristics. If this approach is used, the seismic analyses will be performed using site-specific characteristics and compared with the URENCO based analysis. Non-conservative differences between the results of the EMIF and URENCO seismic analyses will be addressed in the design.