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**South Texas Project Units 3 and 4  
Combined License Adjudication**

**Docket Nos. 52-012, 52-013**

**LADTAP II Model Declaration of Dr. Arjun Makhijani**

The applicant's calculations of radiation doses to the general public as a result of consuming radioactively contaminated fish and invertebrates are incorrect. They are done using the LADTAP II model, which is obsolete and which systematically underestimates doses to the public. Specifically, a comparison of the results of the LADTAP II model with an updated version, LADTAP XL, shows that LADTAP II underestimates doses from commercial fish by almost eight times; it underestimates doses from saltwater invertebrates by over 700 times.

While the specifics of this comparison study relate to the Savannah River Site, the systematic underestimation of doses is inherent in the model, since the doses are calculated for the same source term for each case and each radionuclide. Further, the dose conversion factors used even in the more recent model are for adults. The factors for children are considerably higher and, under many circumstances, doses to children from the same environmental contamination are higher than those for adults even when differences in consumption are taken into account.

The FSAR needs to be completely redone using the most recent validated approaches for estimating dose and estimating dose to the most exposed members of the public.

A handwritten signature in black ink, reading "Arjun Makhijani". The signature is written in a cursive style and is located below the main body of text.

Arjun Makhijani, Ph.D.  
President, Institute for Energy and Environmental Research