

relies on experimental data that does not support this reliance as will be shown below. Applicant's referenced publication, NEDO-20,964, "Generation of Void and Doppler Reactivity Feedback for Application to BWR Design" (July, 1975), states: "The basic mathematical model in calculating void reactivity and reactivity coefficient for BWRs has been the same since 1961," (p. 15). This mathematical mode has been relied upon because it produced data similar to the experimental data produced from experiments using the SPERT-I and SPERT-III reactors. But the experiments from SPERT-I cited in NEDO-20,964, cannot be applied because that reactor used powdered oxide or uranium which dispersed into the coolant during excursion testing, creating the appearance that Doppler feedback had decreased the reactivity when it was actually the dispersal of the powder through the failed cladding to the coolant which mitigated the transient effects. SPERT-III, referenced in NEDO-20,964, was an ". . . experimental program limited to nondestructive reactivity accident tests" (IDO-17281, March, 1969, p. 79), which did not include investigation into the mechanical behavior of the fuel (pellets of uranium dioxide). The National Reactor Testing Station planned and sought support for investigations with SPERT-III which would not be limited to nondestructive reactivity accident tests in an internal report, PTR-815 (see p. 17-9 and 30), but the tests were not performed.

Intervenor contends that since ACNGS is the most powerful BWR attempted (and has a higher power core density than any licensed BWR) that miscalculation of the Doppler reactivity feedback effect will produce greater consequences to his health and safety interests.

Argument

Intervenor Doherty asserts in this contention that in analyzing the Doppler negative reactivity effect, General Electric erroneously relied on the Special Power Excursion

Tests (SPERT) conducted by the Idaho Nuclear Experimental Laboratories. Intervenor cites General Electric topical report (NEDO-20964) as support for his assertion.

General Electric does not rely on the results of the SPERT tests to support its mathematical model which is used to calculate Doppler feedback reactivity. The attached Stirn affidavit points out that the prediction of Doppler effects is a straightforward physics calculation based on well-known empirical values of neutron energy resonances for heavy nuclei. The Stirn affidavit also demonstrates that the test results used to corroborate the General Electric model were the widely-known Hellestrand tests, which were tests conducted to measure the temperature dependence of resonance neutron absorption in clad uranium dioxide fuel rods. Intervenor does not take issue with the use of the Hellestrand test results to corroborate the model used by General Electric to calculate the Doppler effect.

As the Stirn affidavit further states, the General Electric Doppler reactivity model was only compared secondarily to the appropriate SPERT tests and this was done simply to support the verification of the model by the Hellestrand tests. The General Electric Doppler reactivity model is fully supported and corroborated by tests other than the SPERT tests.

Since General Electric does not rely on the SPERT tests to support its Doppler reactivity model, there is no

genuine issue of material fact to be heard in this proceeding and, accordingly, Applicant is entitled to summary disposition as a matter of law.