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EXPECTED DENSIFICATION GAPS IN OCONEE 1

Data are available to compare densification behavior of Oconee 1 (B&W) and Point Beach (W) for your use in evaluating cladding collapse predictions.

Resintering data for Oconee 1, lot 14 fuel was reported in BAW-10054, Table 4.3-3. Anneals at 1650 C for 20h on 30 pellets of initial density 94.04% T.D. (true) gave measured $\Delta L/L = 1.58\%$ and $\Delta\rho/3 = 1.19\%$. From this I would expect in-reactor stack length changes $\Delta L/L$ to be 1.4 to 1.5%. This estimate is not intended to be particularly conservative.

Gamma-scan stack length changes measured by Westinghouse on Point Beach fuel are reported in WGAP-8218, Table A.4, with some descriptive information in Table 3.1. Stack length changes on 25 unpressurized rods, 93.5% TD (geometric) initial density, gave an average $\Delta L/L$ of Similar measurements on 78 prepressurized rods, 90.8% TD (geometric) initial density, gave an average $\Delta L/L$ of

The Oconee 1 fuel therefore appears to be relatively unstable and can be expected to densify about 50% more than the Point Beach fuels. Incidentally, it is unusual to have such a large quantity of data available for comparison as was available for these fuels of interest to you.

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