WESTINGHOUSE ELECTRIC CORPORATION
ASTRONUCLEAR LABORATORY

PROJECT NERVA - THERMAL DESIGN INFORMATION

TO: J. Kenney

No: ~~NRX-A-1:7T~~ ^{WANH-TM1-519}

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Date: September 25, 1962

Title: Shield Dome End Plenum
Spacing

MASTER

Reactor Analysis previously requested an additional 0.25 inch be added to the dome end plenum. Mechanical Design had two ways which this could be done.

1. Reducing the length of the top center end plug, thus decreasing the height without moving the tube bundle. This solution would involve design and drafting time.
2. The shield could be moved as a unit 1/4 inch closer to the core.

This would involve fewer changes in design.

Estimates by Reactor Analysis Nuclear Design indicates that moving the shield 1/4 inch closer to the core would at the very most increase the heating rate at the Li H-Boronated SS interface by 3.7%.

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In view of the hot channel factor of 2.0 used in the thermal design of the shield, the 3.7% increase is, in this case, considered a minor factor. The NRX-A-1 shield may be moved 1/4 inch closer to the core.

BY: K. L. Rieke DATE: Sept 25, 1962
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APPROVED: F. D. Retallick DATE: 9-25-62
F. D. Retallick