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cc Reul  
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D. Ianni

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March 14, 1979

U.S. Nuclear Regulatory Commission  
Division of Operating Reactors  
Washington, DC 20555

Attention: Mr. D.C. DiIanni  
Operating Reactor Branch #4

Dear Mr. DiIanni:

Reference: Docket 50-160

This letter is in response to your request of 12 March 79 for information relative to reactivity worths for the Shim safetys in the GTRR.

There are some discrepancies between the differential worth curves in the SAR (dated Dec. 1967) and in a letter R.S. Kirkland to D.K. Davis, Operating Reactor Branch 2 dated April 13, 1978.

The earlier results were measured in a critical 13 element Mk I core. The later results were measured subcritically in the 17 element Mk II core. Since the current core is cleaner and larger and subcritical measurements lead to more conservative interpretation and results of the two sets of measurements are not incompatible. Measurements which were performed on 14 March show that the reactor is always subcritical with any two Shim safetys down regardless of the position of the other two plus the reg. rod. The detailed results of the reasurements will be sent if you desire but basically all combinations of two Shim safetys plus the reg rod were put in the most reactive configuration and the multiplication factor determined. In all cases it was less than unity.

If you desire more details please call me.

Very truly yours,

*Monte V. Davis*

Monte V. Davis  
Director

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