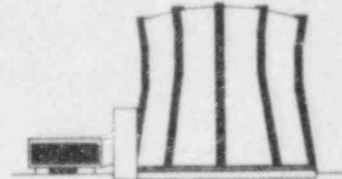


TEXAS ENGINEERING EXPERIMENT STATION

THE TEXAS A&M UNIVERSITY SYSTEM
COLLEGE STATION, TEXAS 77843



NUCLEAR SCIENCE CENTER
713/845-7551

21 January 1983

Mr. Cecil O. Thomas, Chief
Standardization and Special Projects Branch
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: Docket No. 50-128, R-83

Dear Mr. Thomas:

A post damage pulse test program has been developed for the resumption of pulsing of the NSCR. Prior to the resumption of pulsing we have established a requirement that the pulse test program be reviewed and approved by the Reactor Safety Board (RSB). In addition to this initial review the RSB will be required to review the results of each phase of the program and authorize continuance. The RSB will review and approve all reports prior to submittal to the USNRC. The purpose of the reports is to provide information to the NRC for monitoring the results and progress of the program. Gordon West of G.A. Technologies, San Diego, California will also receive information and reports. We hope this passing of information to interested parties will lead to constructive comments. In this program the following limits for pulsing will be adhered to:

"Pulsing parameters shall be limited to those in the current technical specifications or to maximum core fuel temperature of 830°C, whichever is the more stringent"

This restriction will remain in force at the conclusion of the pulse test program.

The pulse test program involves the measurement of pulse core parameters necessary to establish an operational pulsing core. The test program will be applied to a full FLIP core loading as shown in Figure 1. A fuel inspection program is included to provide surveillance against possible fuel damage resulting from pulsing of the FLIP core. Fuel inspection frequency has been selected to detect at its onset any fuel damage should it occur. This is important to operation of the NSCR as the required removal of damaged fuel from the core and its replacement by fuel from our limited reserve present a problem of fuel economics.

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Mr. Cecil O. Thomas
Page 2

The experimental pulse test program for a full FLIP TRIGA core is attached. We feel this program has the provisions necessary to reestablish in a safe manner pulsing of the NSCR.

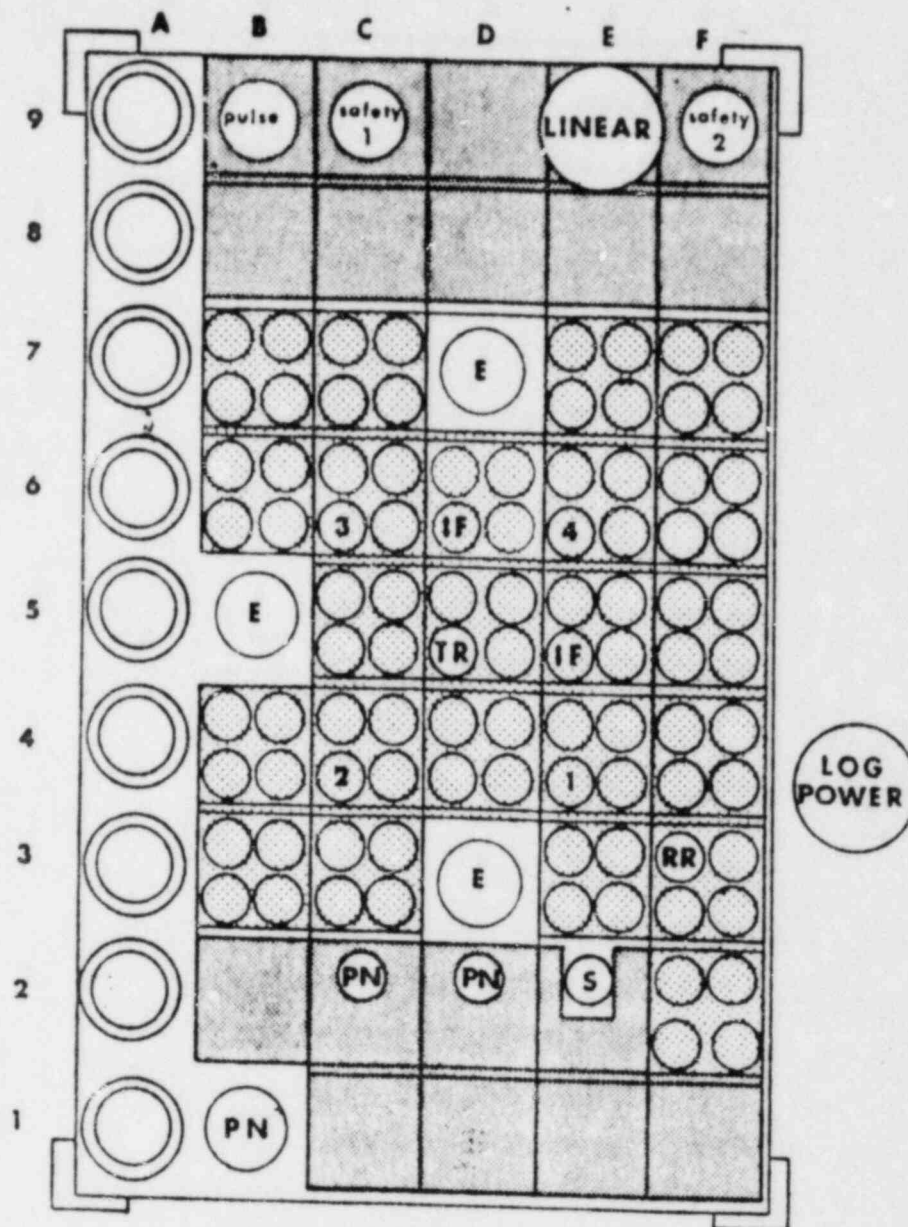
Sincerely,


Donald E. Feltz
Acting Director

DEF/ym

Attachment: NSCR Experimental Pulse Test Program
for a FLIP TRIGA Core
Figure 1, Core VIII Configuration

cc: Dr. Carl A. Erdman, Head
Department of Nuclear Engineering



- | | |
|--|------------------------|
| (I) SHIM SAFETY ROD WITH FUELED FOLLOWER | (●) FLIP FUEL |
| (RR) REGULATING ROD WITH H ₂ O FOLLOWER | (●) GRAPHITE REFLECTOR |
| (IF) INSTRUMENTED FUEL | (PN) PNEUMATIC TUBE |
| (S) Sb-B _e NEUTRON SOURCE | |
| (E) EXPERIMENTER NOTCH | |

Figure 1. CORE VIII 90 FLIP ELEMENTS