

**NIST**

UNITED STATES DEPARTMENT OF COMMERCE  
National Institute of Standards and Technology  
Gaithersburg, Maryland 20899

April 9, 1993

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

Subject: Information Letter, Docket No. 50-184

On March 30, 1993, a reactor supervisor who was on the console was transferring console duties to the senior operator, when he noticed that suddenly indications on the three nuclear power channels and the linear channel were decreasing. This was followed by the reactor going out of automatic due to servo deviation. After a quick check of the power supply, which was normal, and thinking that he might have lost the power channels, he decided to put the reactor in the best position while investigating further. Accordingly, he initiated a manual scram. Just prior to the scram, he thought he saw that thermal power indication and the log N indications began to decrease. He did not have time to notice the exact positions of the shim arms prior to the scram although another supervisor in the control room thought they were at about the same position as before. Both log N channels and the linear channel (after scale change) were indicating normal after the shutdown.

A thorough check of all components of the channels could not find anything wrong. After completing a checklist, the reactor was restarted for observation at low power. However, because nearly two hours had passed, criticality could not be achieved due to xenon buildup and the reactor was shut down. During this period all indications were stable.

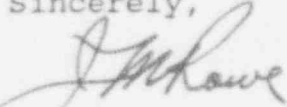
On the following day March 31, 1993, the checks were repeated prior to the scheduled start up. The only thing noticed was a periodic downward fluctuation in the current to the clutch of shim No. 1. It is possible that this fluctuation caused the

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clutch to slip momentarily causing a decrease in power. The output card for the No. 1 clutch current was replaced. The reactor was then started up and power increased to 15 MW. Since then, all indications have been steady and normal.

Sincerely,



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