United States Department of the Interior

GEOLOGICAL SURVEY
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DENVER, COLORADO 80225

TAKE PRIDE IN AMERICA

IN REPLY REFER TO

50-274

September 9, 1992

U.S. Nuclear Regulatory Commission
ATTN: Mr. L.J. Callan
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

Sir:

We received notification of an apparent generic problem with the General Atomics (GA) digital control consoles that appears to apply to our facility. This letter is to notify you that this problem involves one of the Technical Specification requirements of our license and could potentially cause the violation of a required interlock for pulsing operations.

Personnel at the AFRRI reactor facility noticed that if a standard control rod was being raised at the instant the console was switched into the pulse mode, that control rod would continue to move up even if the Reactor Operator released the UP button. The rod would stop moving if the DOWN button was depressed, or if the reactor was SCRAMMED. Once the rod motion stopped, the pulse interlock properly prevented any further motion. If no rod motion was occurring when the console was switched into the pulse mode, the interlock properly functioned to prevent any motion of the standard control rods.

This characteristic was checked at the GA facility in San Diego and they found the same response with their console, when switching to either the pulse or square wave modes. GA personnel then notified us of the problem late on Friday, September 4. We examined our console response when switching to the square wave mode (with the reactor shutdown) and found that rod motion continues if the rod is moving when the mode is switched. The only pulsing operations we have performed were during the initial console checkout in April of 1991. We have not been able to pulse in the last few months due to an unrelated problem with the control console.

Our Technical Specification Table II requires that the withdrawal of any control rod except the pulse rod must be prevented in the pulse mode. It appears that this requirement would not be met if an operator was withdrawing a control rod during the mode switching. Our procedure for pulse mode operations requires that the operator adjust the standard control rod positions to their desired levels prior to switching

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to the PULSE mode, thus preventing loss of the required interlock. Despite this, we will not perform any critical pulsing operations until GA has resolved the problem with the pulse mode interlock. We will need to perform the pulse sequence in a shutdown condition for troubleshooting and resolution verification.

It is our understanding that this problem exists on all new GA digital consoles at pulsing facilities, so we have hope for a quick resolution. We will keep you informed of any progress. If you have any questions regarding this matter, please contact the Reactor Supervisor, Tim DeBey, at (303) 236-4726.

Sincerely,

Rick Sampson for

David B. Smith
Reactor Administrator

Copy to:

Al Adams, NRR
USNRC
Washington, D.C. 20555

Tim DeBey, MS 974