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DEFENSE NUCLEAR AGENCY

ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE  
BETHESDA, MARYLAND 20014

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JUL 31 1981

50-170

Director, Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Dear Sir:

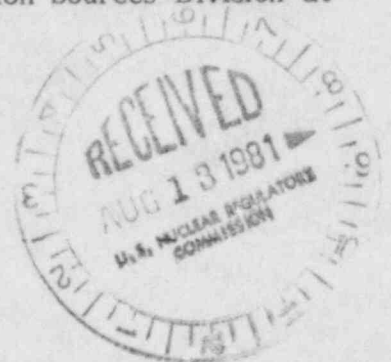
This information is provided as follow-up action to our telephonic report to Mr. McCabe of your office, by Major Ronald R. Smoker, at approximately 1520 hours on 30 July 1981.

On 30 July 1981, an operator inadvertently failed to measure k-excess prior to the first reactor power operation of the day. Two steady-state reactor operations at 21.0 kW (thermal) and one pulse of \$1.50 were subsequently performed prior to measuring k-excess. The AFRRI License Number R-84, Docket 50-170, Technical Specifications, Section ILC.7., states "The core excess reactivity shall be measured at the beginning of each day of normal operation or prior to each continuous operation extending more than one day." Excess reactivity as measured on 30 July 1981 was \$3.46 within \$.01 of the last k-excess measurement performed the previous day, and well below AFRRI's authorized maximum k-excess of \$5.00. Historically, excess reactivity measured on a daily operational basis has never varied outside of normally expected operational conditions. An internal administrative procedure has been instituted to prevent recurrence of such an event.

Should you have any questions or require additional information or reports regarding this matter, please contact Major Ronald R. Smoker, Chief, Radiation Sources Division at (202) 295-1092/1290.

Sincerely,

  
BOBBY R. ADCOCK  
Colonel, MSC, USA  
Acting Director



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