



DEFENSE NUCLEAR AGENCY

ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE  
BETHESDA, MARYLAND 20814

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MAR 24 1983

Director  
Nuclear Reactor Regulation  
ATTN: Standardization & Special Projects Branch  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Sir:

This is to inform you of actions which involve the 1.0 Megawatt TRIGA Research Reactor operated by the Armed Forces Radiobiology Research Institute (AFRRI) under U.S. Nuclear Regulatory Commission License R-84.

AFRRI is planning a major renovation of the mechanical and electrical systems of its physical plant during FY 84-85. This project will include replacement of the existing AFRRI cooling tower, which presently serves both the AFRRI Reactor and Linear Accelerator (LINAC) facilities, with larger and more efficient dedicated units for each of these facilities. This letter provides information about the planned cooling tower replacement and includes the results of a recent review by AFRRI's Reactor and Radiation Facility Safety Committee.

The cooling tower replacement will be accomplished in three steps:

1. Isolate and disconnect the existing cooling tower from the AFRRI Reactor and LINAC facilities.
2. Tie the AFRRI Reactor and LINAC to separate facility-based cooling towers for a period of time until the new cooling towers are installed.
3. Ultimately reconnect the AFRRI Reactor and LINAC to the two separate newly-installed and dedicated cooling towers.

As you are well aware, the cooling tower is served by an independent secondary water loop which transfers heat from the reactor primary coolant at the heat exchanger. Therefore there is no potential impact on safety if the cooling tower is lost or unavailable. Additionally, the cooling tower is rarely required since operations at 1.0 Megawatt for periods longer than one hour are almost never performed; the heat capacity of the reactor pool is more than sufficient for cooling the reactor for these typical lesser burnup operations.

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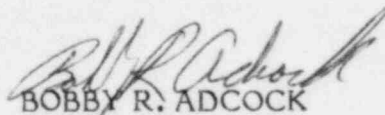
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During the course of the replacement effort, when the AFRRRI Reactor is tied to a separate facility-based cooling tower, isolation capability for service and maintenance will be provided and the secondary reactor coolant loop will operate at a pressure greater than that of the primary reactor coolant loop.

This action was discussed at the last AFRRRI Reactor and Radiation Facility Safety Committee meeting on 24 February 1983. At that time, it was unanimously determined that no safety-related issues remain unresolved and that this proposed action can be accomplished under the provisions of 10 CFR 50.59 without the need for an amendment to License R-84.

Should you have any questions or comments on this matter, please feel free to contact Major Joseph A. Shoitis, Jr., Chief, Radiation Sources Division and Reactor Physicist-in-Charge, at (301) 295-1096/1048.

Sincerely,

  
BOBBY R. ADCOCK  
Colonel, MSC, USA  
Director

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