

283

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LOS ANGELES, CALIFORNIA 90024

March 30, 1984

John H. Frye, III, Chairman  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dr. Emmeth A. Luebke  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Glenn O. Bright  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

In the Matter of  
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA  
(UCLA Research Reactor)  
Docket No. 50-142  
(Proposed Renewal of Facility License)

Dear Administrative Judges:

In the Board's Memorandum and Order of March 22, 1984, UCLA was directed to inform the Board and parties concerning the schedule for maintenance and restart of the reactor, the exact nature of the maintenance to be performed, and UCLA's views on the opportunity which this maintenance may present to gather significant data relevant to the issues involved in this phase of the hearing. The following information is provided in response to the Board's request.

A schedule for the required maintenance and restart of the UCLA reactor has not been established. Such a schedule will not be considered until at least after the conclusion of the summer Olympic Games. The maintenance to be performed will consist of lubricating or replacing the bearings in which the rod drive shafts rotate, replacing plumbing gaskets, and improving the nitrogen distribution system by adding a manifold. Other preventative maintenance will be performed as inspection of the core indicates is necessary. The maintenance effort will require unstacking the lead and graphite blocks in the reactor core and removing all core plumbing including the fuel boxes. The maintenance will be performed by the Nuclear Energy Laboratory (NEL) staff. Because there are only five members of the NEL staff available for the maintenance effort, it is expected that some additional assistance will be needed to complete the work. Arrangements

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March 30, 1984  
Page 2

have not been made for this additional assistance. The maintenance effort will be paced to occur over a number of months to limit the occupational radiation doses to those who will be involved in the maintenance.

Because a schedule for the maintenance will not even be considered for several months there will be no opportunity to gather additional data relevant to the issues being considered in this phase of the proceedings. When the maintenance does eventually take place the core will be exposed and the opportunity will then exist to make some observations and take some measurements which may "shed light" on the shutdown mechanism and Wigner energy issues. However, UCLA does not believe that the opportunity to gather "significant data" will exist. On-site inspection of the voiding space for the water moderator by the Board and parties at the time the core is first exposed, as proposed in Mr. Bay's letter of March 14, 1984, would probably be precluded for health physics reasons. In any case, an inspection at the time the reactor core is first exposed would be inconclusive since the precise voiding spaces of interest to the Board and parties would be those that exist at the time the reactor is reassembled. In connection with the basic maintenance to be performed the UCLA staff will also have the opportunity to better define the water escape paths at the time the core is reassembled. In addition, although UCLA analyses demonstrate that stored energy is not a problem in Argonaut reactors, presented with the opportunity the UCLA staff does plan to take samples of the graphite from the core center to attempt to measure by differential scanning calorimetry the stored Wigner energy prior to reassembly of the reactor. Because handling the irradiated fuel during reloading operations raises health physics concerns UCLA will not attempt to re-measure the void coefficient. The UCLA staff has confidence in the data that already exists concerning the void coefficient. Of course, the UCLA staff will inspect the fuel assemblies and the core prior to reloading the fuel in the core and will document the maintenance performed.

Very truly yours,



William H. Cormier  
Representing UCLA

cc: Service List