

# UNIVERSITY OF CALIFORNIA, IRVINE

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

Office of the Executive Vice Chancellor

509 Administration  
Irvine, CA 92697-1000  
(949) 824-6297  
FAX (949) 824-2438

November 6<sup>th</sup> 2000

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555  
ATTENTION: Mr. Marvin Mendonca

Re: Request for Amendment to Technical Specifications for UCI TRIGA Reactor  
Docket 50-326; License R-116

Dear Mr. Mendonca:

Current Technical Specifications items 4.1. a and 4.2. c for the referenced reactor require visual inspection and/or measurements of fuel elements and control rods at intervals not to exceed 36 months. This requirement was designed to provide assurance as to the integrity of these components under the stressful conditions of operations at power, pulsing to high power levels, or abnormal conditions such as pool water corrosion or handling accidents. These measurements were last performed in the period November 8-11, 1997.

The referenced components in the UCI reactor were examined annually from 1969 until 1993 when a 36-month cycle was instituted. No evidence of significant change was ever noted. The surveillance done in 1997 was, through oversight, one year late on the agreed cycle, yet measurements and observations indicated no change in physical condition of fuel elements or control rods. Low staffing levels and operations at the facility create a burden for carrying this out on the 36-month cycle.

Since 1993, the operating hours and energy generation at this reactor have been substantially reduced as evidenced in annual reports submitted to NRC. In addition, the last pulse operation of any kind was performed on 10-25-93. No operations since that time have exceeded 250 kilowatts steady-state, a power level much below the proven capacity of this type of TRIGA fuel and control rod elements. Measurements of pool water conductivity performed as part of daily start-up requirements, and of radioactivity levels of pool water performed monthly, continue to demonstrate the absence of corrosion. Measurements of control rod worths and drop times have continued to show a high degree of reproducibility from year to year. All of this suggests that the frequency of 36 months is more than adequate to provide the additional assurance, provided that the other surveillance continues to demonstrate the absence of change. Reducing the frequency will have no adverse effect on analyzed or potential accidents or reduce the margin of safety of facility operations.

A020

We thus request an extension of the time period for this requirement to 60 months (5 years), effective immediately for the current cycle. We would add the stipulation that:

"full surveillance be carried out before further operations are conducted if any significant changes are observed in pool water conductivity, pool water radioactivity, control rod drop times, control rod reactivity worths, or core reactivity worths such that it could be concluded that fuel element or control rod integrity may be compromised."

We would note that the stipulations in TS 4.1.a that measurements be performed every 500 pulses of greater than \$1.00 in magnitude, and in TS 4.1.c that measurements be carried out if fuel temperature limits might have been exceeded, will remain in place and provide assurance that extreme conditions will require close examination of these critical components.

We would be most grateful for your prompt consideration of this request in view of the rapidly approaching deadline for the current surveillance cycle. Technical questions regarding this matter should be addressed to the reactor supervisor, Dr. George Miller, 949-824-6649.

We would use this opportunity to report on an administrative change at U.C. Irvine. The Executive Vice Chancellor is now Dr. Michael R. Gottfredson, replacing Dr. Lillyman. Please make the appropriate change in your records.

Yours sincerely,



Michael R. Gottfredson  
Executive Vice Chancellor

cc: Members, Reactor Operations Committee  
Dean, School of Physical Sciences