



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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April 17, 1980

Docket No. 50-142

Walter F. Wegst, Ph.D.
Director, Research & Occupational Safety
Department of Community Safety
University of California, Los Angeles
405 Hilgard Avenue
Los Angeles, California 90024

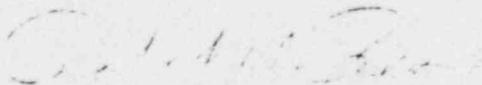
Dear Dr. Wegst:

We have performed a preliminary review of your application for the license renewal of the UCLA reactor. Before proceeding any further, however, we find that we must have the additional information posed by the enclosed items.

We request that we receive your response by May 19, 1980.

If you have any questions, please do not hesitate to phone Mr. H. Bernard, the Project Manager assigned to this docket, (301) 492-7435.

Sincerely,


Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosure: Request for
Additional Information

cc w/enclosure: See next page

University of California
at Los Angeles

cc w/enclosure(s):

Energy Resources Conservation and
Development Commission
ATTN: Librarian
1111 Howe Avenue
Sacramento, California 95825

Director
Energy Facilities Siting Division
Energy Resources Conservation &
Development Commission
1111 Howe Avenue
Sacramento, California 95825

California Department of Health
ATTN: Chief, Environmental
Radiation Control Unit
Radiologic Health Section
714 P Street, Room 498
Sacramento, California 95814

REQUEST FOR ADDITIONAL INFORMATION

1. In order for us to prepare a rigorous analysis of student exposure, we request the receipt of a typical floor plan of the adjacent Math Building. This plan should show built up walls as well as more permanent fire walls.
2. Provide an analysis of the costs, benefits and problems associated with increasing the height of the discharge stack and other methods for reducing emissions concentrations onto the contiguous occupied buildings.
3. Provide information on the various plugs used to seal the reactor. What is their condition? Do they have gaskets; what are their condition
4. Provide the justification for not using area monitors in the classrooms contiguous to the reactor room.
5. Part 3.0 Page II/3-1 indicates that you had calculated doses to the environment for potential accident scenarios. Please provide us with those calculations.
6. Page III/8-1 refers to the "current restriction" on reactor operations 5% operating hours/year or 438 hours/year. Table III/1-5 indicates the reactor operated for 446 hours in 1979. Clarify this apparent violation. In addition, Technical Specification 3.8.2 on Page V/3-10 is ambiguous. It could be interpreted as limiting on a week-by-week basis (i.e., more restrictive). Clarify the Technical Specification to indicate exactly the restriction within which the reactor is to be operated.
7. Page IV/1-3 gives emergency procedures for evacuation of the adjacent building. The names of all those evacuated and checked should be obtained before allowing them to leave the site. Change these procedures accordingly.
8. Table III/1-3 provides hours/year of reactor operation for research, class instruction, and maintenance. Class instruction accounts for only 8% of the total hours of operation. Please provide a breakdown in hours/year of the types of research programs conducted and the types of customers for whom this service was performed.
9. Page V/ii provides justification for a Technical Specification Change to delete "unauthorized reactivity change" as an example of an abnormal occurrence. NRC does not agree that sufficient justification has been provided. For instance, if an excess of \$.10 were expected for a particular configuration, an excess of \$3.50, provided the operator controlled the reactor so as not to exceed a trip point, would not be considered abnormal.

Again, if \$2.50 were expected and only \$.50 were found, the new Technical Specification would define this as an "abnormal occurrence". However, both events are indicative of a lack of understanding of the situation within the reactor, and may indicate a condition where the safety analysis provided is no longer applicable.

Though the examples (a, b, c, d) that were presented fall within your proposed change, the proposed change eliminates situations that should be reported. Accordingly, your proposed Technical Specification Change is not acceptable.

We would entertain a change to that Technical Specification which eliminates certain unanticipated reactivity changes that would not detrimentally affect safety and if they are analyzable, or can be calculated and explained satisfactorily. If you wish, resubmit such a Technical Specification Change for our consideration.

10. Page V/5-1 provides a Technical Specification which will permit the use of $U_{308}\text{-Al}$ fuel meat. However, the Safety Analysis Report (Appendix III) does not address this possibility. Your safety analysis is for the present UCLA reactor, and this analysis is based upon a comparison with other reactors that utilize your current fuel. These comparative reactors have never used $U_{308}\text{-Al}$. If you intend to utilize $U_{308}\text{-Al}$ in the UCLA reactor, the safety analysis should address this directly. Accordingly, until such a safety analysis is provided, the use of $U_{308}\text{-Al}$ will be deleted from proposed Technical Specification Section 5.1.
11. Page III/6-4 - Alarms (light and horn). Please justify the radiation alarm setting indicated in this section. The set points appear high and would preclude annunciating except at very high radiation concentrations.
12. Page IV/C-1 Section C.2.1 and C.2.2 state following contamination "such persons are no hazard to attendants, other patients and the environment" this is not always true since a person may be irradiated by neutrons in addition to x- or gamma rays.

The related sentences should be rephrased, to wit: "the probability that a person will receive that type or quantity of dose to become a source and subsequent hazard to attendents, patients or the environment is extremely remote."

In addition, delete the phrase concerning comparison to the x-ray patient.
13. Page II/2-1 discusses an "NEL radiation controlled area". Where are the boundaries on this area in relation to figures II/2-1 and -2?
14. Table III/6-1 presents comparisons between the UCLA reactor and those of the University of Florida and University of Washington. Although not actually defined, presumably a "*" in the table indicates similar characteristics within a line of the table. Why do UCLA and UW reactors have different fast/thermal flux ratios? Why do UCLA and UF reactors have different void reactivity coefficients?
15. We are continuing our analysis on seismic influences, and may, under a separate request, require additional information on that subject.