



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

MAR 22 1989

MEMORANDUM FOR: Alexander Adams, Project Manager
Standardization and Non-Power Reactor
Project Directorate
Division of Reactor Projects III/IV/V
and Special Projects
Office of Nuclear Reactor Regulation

FROM: LeMoine J. Cunningham, Chief
Radiation Protection Branch
Division of Radiation Protection
and Emergency Preparedness
Office of Nuclear Reactor Regulation

SUBJECT: SAFETY EVALUATION - DECOMMISSIONING PLAN FOR UNIVERSITY
OF CALIFORNIA LOS ANGELES (UCLA) TRAINING REACTOR
DECOMMISSIONING PLAN PHASE II (50-142)

REFERENCES: 1. NRR letter, F. J. Miraglia to Dr. F. Wegst, UCLA, "order
Authorizing Phase I of the Dismantling of Facility and
Disposition of Component Parts - UCLA."
2. Memorandum from L. J. Cunningham, DRPEP, "Request for
Additional Information (RAI) UCLA Decommissioning Plan
Phase II," dated September 23, 1988, to A. Adams, DRPSP.
3. UCLA letter from J. E. McLaughlin, "UCLA Responses to
RAI," NRC Document Control Desk, dated December 7, 1988.

The Radiation Protection Branch (PRPB) has reviewed the UCLA's Decommissioning Plan Phase II (see subject) dated June 10, 1988, and their December 7, 1988 (see reference 3) response to NRR staff questions. Phase I was approved in July 14, 1986 (see reference 1). We find UCLA's response to our questions adequate and acceptable. Our evaluation is based on Regulatory Guides 8.8, "Information Relevant to Ensuring That Occupational Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable," and 1.86, "Termination of

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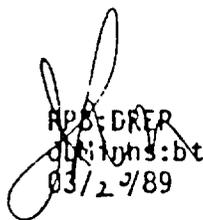
Operating Licensees for Nuclear Reactors." Enclosed is our Safety Evaluation in which the staff concludes that the UCLA request is acceptable providing that the weaknesses identified in the Quality Assurance program are addressed. We consider our efforts in this subject to be complete.

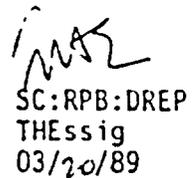
Original signed by LeMoine J. Cunningham

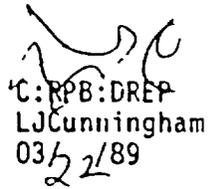
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ENCLOSURE

SAFETY EVALUATION REPORT
FOR THE UCLA TRAINING REACTOR
DECOMMISSIONING PHASE II

The staff has reviewed UCLA's plan and associated tasks to dismantle the Argonaut Reactor Facility, dispose of its fuel component parts and radioactive material and decontaminate the facility.¹ The licensee provided additional information in response to the staff questions on this application.² The objective of Phase II is the dismantlement and removal of the concrete biological shield and complete decontamination of the reactor room, its appurtenances, and the remaining equipment. For Phase II, UCLA intends to complete decommissioning of the facility for "unrestricted" use by availing the service of an outside contractor. "SAFSTOR" is no longer under consideration. The selected decommissioning alternative is "DECON".

Towards this end, the review considered management responsibilities and commitment to follow the regulations, and relevant regulatory guides and standards; the health physics program including procedures, equipment, instrumentation, survey techniques, training, personnel dosimetry, waste disposal, and final survey.

Although the aforementioned items of review were ongoing during operation of the Argonaut reactor, they will be maintained and remain in effect during its dismantlement.

HEALTH AND SAFETY MANAGEMENT

The Radiation Protection Program for the Dismantling and Decommissioning Program is an extension of the existing Radiation Protection Program. The organization for the dismantling and decommissioning of the reactor facility is managed by a certified Health Physicist, with 37 years of experience in health physics and reactor experience, who will recommend and enforce radiological safety policy. He will be responsible for assigning health physics technicians to specific tasks, implementing the environmental survey program and maintaining radiation exposure records. He will also oversee subcontractor health physics operations associated with dismantling and decommissioning operations. The combined UCLA health physics staff, will consist of seven people among whom will be a certified health physicist and three senior health physics technicians.

It is UCLA's policy that all operations will be planned and executed to conform to Commission regulations and appropriate Regulatory Guides and to maintain occupational exposure to as low as is reasonably achievable (ALARA) levels.

SOURCES

Radioactive material from the reactor concrete biological shield will consist of less than 13 curies of primarily Co-60, H-3, C-14 and Eu-152. It will be monitored, packaged and shipped, in accordance with applicable regulatory requirements, to an approved storage facility or radioactive waste disposal site.

RADIATION PROTECTION PROGRAM

The Radiation Protection Program which include personnel dosimetry, instrumentation, industrial safety and hygiene program is acceptable and is in accordance with Regulatory Guide 8.8. The program was acceptable in Phase I and the staff finds that the proposed instruments, calibrations and procedures are adequate to characterize the status of the facility during Phase II.

The collective dose equivalent to the licensee's staff and public for the Phase II is estimated to be 2 person-rem.

QUALITY ASSURANCE

In order to meet the requirement of Regulatory Guide 1.33, "Quality Assurance Program Requirements" (Decommissioning), the licensee (see reference 3) has committed to having the capability to assure the accuracy of all measurements as part of his final report to the NRC. Consequently, instruments used to measure levels of radiation for release of materials, equipment, structure, radiation survey, sample analysis instrumentation, and related areas should be subject to QA. These areas must be addressed in the final report. A recent inspection (see reference 4) indicated a weakness in this area.

SAFSTOR

There will be no further requirement for Safe Storage since all radioactivity will be removed from the UCLA facility and the facility released for unrestricted use.

CONCLUSION

Based on our review of the facility health physics organization, equipment, and procedures, the staff concludes that the licensee's health physics program follows the guidelines of Regulatory Guides 1.86 and 8.8 for providing adequate protection to assure a radiologically safe program for dismantling the UCLA facility, disposing of associated radioactive material, and decontamination for unrestricted use. The staff, therefore, finds the licensee's plans to be acceptable, providing that the weaknesses identified in the Quality Assurance Section of this report are addressed.

The staff further concludes that the termination of this license involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR 51.22(c)(9), no environmental impact statement or negative environmental impact appraisal need be prepared in connection with the issuance of a termination order.

REFERENCES

1. NRR letter, F. J. Miraglia to Dr. F. Wegst, UCLA, "Order Authorizing Phase I of the Dismantling of Facility and Disposition of Component Parts - UCLA."
2. Memorandum from L. J. Cunningham, DRPEP, "Request for Additional Information (RAI) UCLA Decommissioning Plan Phase II," dated September 23, 1988, to A. Adams, DRPSP.
3. UCLA letter from J. E. McLaughlin, "UCLA Responses to RAI," NRC Document Control Desk, dated December 7, 1988.
4. NRR letter, G. P. Yuhas to J. E. McLaughlin, "NRC Special Inspection," dated February 27, 1989. (Inspection Report No. 50-142/89-01).