

NORTH CAROLINA STATE UNIVERSITY | AT RALEIGH

SCHOOL OF ENGINEERING

DEPARTMENT OF NUCLEAR ENGINEERING
NUCLEAR REACTOR PROGRAM
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7 December 1979

William Gammill
Acting Assistant Director for
Operating Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555

DOCKET 50-111

SUBJECT: Modification to Request for an Extension to the R-63 Reactor License.

- Re:
- a. Amendment No. 6 and Change No. 2 to License No. R-63 dated 18 March, 1974, Docket No. 50-111.
 - b. Letter from Dr. T.S. Elleman to Director Operating Reactors Branch dated 15 January, 1979, Docket 50-111.
 - c. Letter to Mr. J.R. Bohannon, Jr., from Mr. Robert Reid, Chief Operating Branch #4, Docket 50-111.

Reference a above changed the status of the R-3 reactor to "possess, but not operate" from an operating utilization facility. This amendment also stipulated the radiation detection systems to be maintained.

Reference b above requested an extension of the current R-63 license to February 1981 from 19 February 1979, and summarized our status regarding dismantling and decommissioning.

Reference c above acknowledged receipt of reference b and the continuation of our R-63 license pending review of our request.

The R-63 license authorized NCSU to "possess and store up to 4.002 kilograms of contained uranium 235 ...". The irradiated fuel assemblies, a total of 3027 grams U-235 contained in 26 assemblies, have been shipped to the Savannah River Plant, DOE, Aiken, S.C. The remaining four un-irradiated assemblies, containing approximately 567 grams of U-235, have been moved from the R-3 Bay to the PULSTAR Bay where these assemblies will be stored in a three combination lock safe. The purpose of moving these four assemblies to the PULSTAR Bay was to consolidate physical security of the SNM in our possession. All R-3 reactor fuel has been removed from the R-3 Bay.

The R-3 reactor biological shield with its contained activation products remain in the R-3 Bay. This shield has a 2" steel plate covering the reactor tank and each beam port is closed and locked by a three combination safe-type lock. The R-3 Bay also has a Gamma Irradiation Facility which is under a license issued by the State of North Carolina.

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The radiation sensing devices of this facility are connected to the Bay's evacuation horns. The R-3 Bay will be retained as a "Restricted Area" and controlled accordingly as in the past; i.e. Bay locked, personnel access controlled and routine security checks.

The next steps are the preparation of a dismantling plan for submission to NRC and the necessary budget action to obtain funding to implement the plan.

It is requested that reference b above, and our R-63 license, be modified as follows:

1. The R-3 Reactor area monitors and stack monitors currently required by reference a above be discontinued. Basis: All R-3 fuel has been removed from the R-3 Bay and the Gamma Facility detection system will be active.
2. The daily air samples and weekly smear survey in the R-3 Bay be discontinued. Basis: See #1.
3. The R-63 license be amended to reduce the amount of SNM authorized to be possessed to 567 grams contained U-235 from 4002 grams. Basis: To retain the four unirradiated fuel assemblies.
4. The expiration date be extended to 19 February, 1983 instead of to 19 February 1981 as requested in Ref. b above.

R.F. Saxe

R.F. Saxe, Head
Department of Nuclear Engineering

RDC:ns

cc: J.R. Bohannon, Jr.
R.D. Cross
T.C. Bray

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