

WASHINGTON STATE UNIVERSITY

PULLMAN, WASHINGTON 99164

NUCLEAR RADIATION CENTER

May 15, 1979

Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket 50-27
License No. R-76

Gentlemen:

In accordance with the provisions of 10 CFR 50.51, 2.109, and the letter dated April 6, 1979 from R. W. Reed, Chief, Operating Reactors Branch #4, U.S. Nuclear Regulatory Commission, application is herewith submitted for the renewal of Facility License R-76 for the Washington State University Modified TRIGA Reactor. A 40 year renewal term is requested under 10 CFR 50.51. A detailed renewal application is attached which provides the information specified by the enumerated sections of Title 10 of the Federal Regulations as applicable in the sequence specified in "License Renewal Review Items" supplied by the Commission.

Sincerely,

W. E. Wilson

W. E. Wilson
Associate Director

WEW:eb
enclosures

APPROVED:

C. D. Nyman
C. D. Nyman, Dean of the
Graduate School

APPROVED:

R. D. Sande
R. D. Sande, Chairman
Reactor Safeguards Committee

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on a biannual basis and amounted to \$152,766,672.00 for the current biennium. The most recent financial report of W.S.U. is attached.

- b. The current annual budget for the Nuclear Radiation Center in which the Facility is located is \$332,814.98 as shown in the attached budget statements. The Nuclear Radiation Center budget covers a variety of activities including the TRIGA reactor facility.

(2) Operating Costs

The cost of operating the W.S.U. TRIGA reactor facility and attendant research projects during the current year is \$153,000. The funds come from Program 10D of the university budget entitled "Other Organized Research." Since all funding for W.S.U. is by action of the State Legislature, it is not possible to guarantee funding for any program within the university. However, the State of Washington is an Agreement-State and has in the past chosen to comply with all Federal regulations and commitments along with the costs thereof. It is thus deemed that it would be incumbent upon the State to continue to provide the necessary funding for operation of the facility.

(3) Decommissioning Costs

It is assumed that the core structure and other radioactive portions of the reactor are removed and shipped off-site for disposal. The fuel is on loan from the Government and thus the cost of the ultimate disposal of the spent fuel has in the past been borne by the government and it is assumed that it will continue to be so. After removal of the radioactive components, the empty pool structure is assumed to be filled with concrete and the facility used for a university laboratory. If the facility is shut down by action of the university, the funds required to decommission the facility would be provided from university sources.

a. Removal and shipment of 4-rod fuel clusters @ \$5,000/cluster - 50 x \$5,000	\$250,000
b. Removal and disposal of bridge and core box	100,000
c. Removal and disposal of thermal column, beam port plugs, etc.	25,000
d. Decontamination	50,000
e. Dismantling and removal of cooling system	25,000
f. 350 cubic yards of concrete installed to fill pool, etc. - 350 x \$400/yard	140,000
g. Unexpected expenses	100,000
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Total Decommissioning Costs	\$690,000

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(4) Long Term Shutdown Costs

It is assumed that the radiation levels at the shut down facility will be reduced to background by the filling of the pool with concrete. However, in order to insure the health and safety of the public, the Radiation Safety Office will continue to perform the existing environmental and facility radiation monitoring programs for a period of 5 years. No extra costs will be incurred for personnel as Radiation Safety personnel required for other activities will perform the surveys. It is estimated that the cost of the site monitoring devices would amount to \$1,000/year, the funds for which would be provided by the university.

Total Cost = 5 x \$1,000 \$5,000

2. FILING OF APPLICATION (10 CFR 50.30)

- (a) Three notarized signed copies of the letter of application for the renewal of Facility License R-76 are herewith submitted in accordance with Paragraph (b) of 10 CFR 50.30.
- (b) 20 copies of the application information constituting this document including the information required by 50.33 are hereby submitted.
- (c) 20 copies of the SAR required by 50.34 will be submitted as hereinafter specified.
- (d) The applicant hereby claims to be exempt from the Filing Fees specified by 50.30 (e) under the provisions of 170.11 (a.4).
- (e) 20 copies of the applicant's "Environmental Impact Appraisal" is hereby submitted to fulfill the requirements of 50.30 (f).

3. TECHNICAL INFORMATION

- (a) Safety Analysis Report (10 CFR 50.34 (b)). A revised and upgraded Safety Analysis Report for the facility is in the process of being prepared and will be sent under separate cover by June 30, 1979.
- (b) Emergency Plan (10 CFR 50.34 (b)). Twenty copies of an Emergency Plan embodying the requirements of Section IV of Appendix E to 10 CFR Part 50 and following the format of ANS 15.16 "Standard for Emergency Planning for Research Reactors" as well as Regulatory Guide 2.6 "Emergency Planning for Research Reactors" are submitted with the application.
- (c) Technical Specifications (10 CFR 50.36). A revised set of Technical Specifications as specified by 10 CFR 50.36 based on the existing TS approved on June 26, 1975 is attached.

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