



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 3 TO FACILITY LICENSE NO. R-113

U. S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

DOCKET NO. 50-274

Introduction

By letter dated October 11, 1978, as supplemented February 20, 1979, the U. S. Department of the Interior, Geological Survey (the licensee or USGS) requested an amendment to License No. R-113 for the U. S. Geological Survey TRIGA Reactor (GSTR) Facility. The amendment would increase the maximum amount of special nuclear material (SNM) authorized, in the form of contained Uranium-235, from 4.0 kilograms to 5.0 kilograms.

The amendment would also define the maximum total authorized SNM and maximum SNM exempt and nonexempt categorized according to type of fuel and percent enrichment.

Discussion

The Technical Specifications (TS) authorize the operation of the reactor with a core configuration of TRIGA Mark III stainless steel clad fuel-moderator elements. In their letter of October 11, 1978, USGS has indicated that they intend to obtain surplus fuel elements from a facility which has converted to FLIP fuel. The fuel would be the same configuration as the fuel presently authorized for use in the reactor. The proposed additional fuel elements would be added to the core to maintain adequate excess reactivity for experimental programs. The excess amount of fuel that would not be placed in the core would be placed in storage in the pool or in the dry storage wells.

Evaluation

The proposed increase in total amount of Uranium-235 at this facility would not involve any change in core reactivity since excess core reactivity is limited by the TS. Moreover, the TS contain adequate provisions to assure safe storage of the additional fuel when it is not in use in the reactor and of any irradiated fuel removed from the core.

We find that the receipt, storage and use of the proposed additional Uranium-235 would not involve a safety consideration not previously addressed and would not reduce the margin of safety previously established in the TS for the use of this fuel.

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Based on our review of the factors involved in the request, we find that the proposed additional SNM would not increase the safeguard risks associated with the facility and therefore is acceptable. We find the proposed authorized SNM to be within the level of protection afforded by the licensee's approved security plan.

We find that the proposed change, as was discussed with the licensee, in the license relating to the specificity of authorized SNM appropriately defines the maximum total authorized SNM, the maximum SNM exempt and the maximum SNM nonexempt. We find this acceptable to accommodate implementation of the proposed regulation 10 CFR 73.47 and the objectives of the Nonproliferation Act of March 10, 1978.

In summary, the proposed amendment: (1) does not involve any reduction in the level of safety of the facility, (2) does not increase the safeguards risks associated with the facility, and (3) provides the specificity on maximum SNM authorized to accommodate the proposed Regulation 10 CFR 73.47 and the Nonproliferation Act of March 10, 1978, and, therefore is acceptable.

Environmental Consideration

We have determined that this amendment will not result in any significant environmental impact and that it does not constitute a major Commission action significantly affecting the quality of the human environment. We have also determined that this action is not one of those covered by 10 CFR §51.5(a) or (b). Having made these determinations, we have further concluded that, pursuant to 10 CFR §51.5(d)(4), an environmental impact statement or environmental impact appraisal and negative declaration need not be prepared in connection with issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: July 10, 1979

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