



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 24 TO FACILITY OPERATING LICENSE NO. DPR-3

YANKEE ATOMIC ELECTRIC COMPANY

YANKEE NUCLEAR POWER STATION (YANKEE-ROWE)

DOCKET NO. 50-29

Introduction

By letter dated August 19, 1975, and supplement dated March 15, 1976, Yankee Atomic Electric Company (the licensee) proposed changes to the Technical Specifications and amendment to the license conditions for the receipt, possession, and use of special nuclear, source, and byproduct materials at the Yankee Nuclear Power Station (Yankee-Rowe). The licensee proposed the changes in response to our letter dated November 21, 1974.

Discussion

Our letter dated November 21, 1974, provided the licensee with a recommended license format for special nuclear, source, and byproduct material to be incorporated in License No. DPR-3 for the Yankee-Rowe facility. The recommended language would replace specific descriptions of special nuclear, source, and byproduct materials which appear in the license with generalized descriptions. The generalized descriptions included limits of 100 millicuries for byproduct material and 100 milligrams of source or special nuclear material. Any amounts greater than these would still be specifically described in the license. Our letter also requested that the licensee submit the information indicated in Regulatory Guide 1.70.3 in support of an amendment to the Yankee-Rowe facility license that would incorporate the new format and add sealed source leak testing requirements to the Technical Specifications.

By letters dated August 19, 1975, and March 15, 1976, the licensee submitted the recommended license amendment for our approval. The submittals included the information indicated in Regulatory Guide 1.70.3. This information involved descriptions of the laboratory facilities and equipment, survey and measuring instruments, personnel and procedures, and the byproduct, source, and special nuclear material at the facility.

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Evaluation

The facility license for Yankee-Rowe, similar to all other facility licenses, has always authorized possession of such byproducts as may be produced by operation of the facility. This includes the fission products in the spent fuel and the small fraction of fission products that escape the fuel cladding and enter the primary coolant. It also includes activation products from neutron bombardment of reactor internal structures, reactor vessel, piping, shielding, and reactor coolant. Some of this radioactivity in the primary coolant contaminates primary system components such as piping, valves, pumps, and heat exchangers. The associated source strength for the above items can be very large.

We have reviewed the information submitted by the licensee in support of the license amendment request. We find that this information conforms with Regulatory guidance in Regulatory Guide 1.70.3 and provides reasonable assurance that radioactive materials will be stored and used in a manner to meet applicable radiation protection requirements in 10 CFR Parts 20, 30, and 70. During the 15 years of facility operation which included handling and working with large and varied types of byproduct sources, the licensee has demonstrated that low occupational exposures, well within the limits of 10 CFR Part 20, can be achieved. This further supports our finding that the radiation protection program at the Yankee-Rowe facility is acceptable.

Based upon the above considerations, we have modified the proposed license amendment to delete the specific 100 millicurie and 100 milligram limits on byproduct and source materials. Such limits represent insignificant sources compared to the sources normally being handled as byproducts produced by operation of the facility and are therefore unnecessary. We discussed this modification with the licensee and they concurred in the modification.

We have added page 509:4 "Radioactive Source Leak Test" to Section 509 of the Facility Hazards Summary Report which is incorporated in the Technical Specification appended to License DPR-3 for the Yankee-Rowe facility. Page 509:4 specifies the testing requirements for sealed sources. We have also added to Section E in Appendix A the requirements for reporting of source leakage test results.

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the change 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 change 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.

Date: April 26, 1976