



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

AUG 22 1990

DOCKET NOS: 70-2910
70-2928

LICENSEE: Tennessee Valley Authority (TVA)
Chattanooga, Tennessee

FACILITY: Watts Bar Nuclear Plant, Units 1 and 2

SUBJECT: SAFETY EVALUATION REPORT, LICENSE AMENDMENT APPLICATION DATED
AUGUST 1, 1990, RE FIRE PROTECTION PROGRAM

Background

TVA is licensed under NRC Materials License Nos. SNM-1861 and SNM-1873 to receive, possess, inspect, and store uranium enriched in the U-235 isotope contained in fuel assemblies and loose fuel rods at the Watts Bar Nuclear Plant, Units 1 and 2. In section 1.2.4 of the application, the licensee has described the fire protection equipment which is available in the two principal areas of the plant where licensed activities are performed, as well as other fire protection equipment available outside the plant which are common resources for the plant as a whole. By application dated June 8, 1990, the licensee requested deletion of the aforementioned outside fire protection equipment, changes in the operational control of the fire pump, and changes in the number and types of portable fire extinguishers. Following discussions with the NRC staff, TVA submitted a revised application dated August 1, 1990, which supersedes the June 8, 1990, application.

Discussion

The areas where licensed activities will be performed are the fuel cask receipt area at elevation 729 and the fuel unloading and storage area at elevation 757. These areas are common usage areas for both reactor units, and indeed the fire protection equipment mentioned in the two licenses are common to both. The fire loads in the areas are expected to be light, increasing somewhat at cask receiving and refueling times.

The licensee requests deletion of reference to fire protection equipment outside the immediate areas of licensed activities, including portable extinguishers and other equipment in fire equipment house No. 4, fire hydrants, and pumper trucks. Such equipment, listed in the plant's Final Safety Assessment Report and reviewed in the NRC Safety Evaluation Report of June 1982, is part of the fire protection system of the plant as a whole and will continue to be available in an emergency to the areas of licensed activities under the two SNM licenses.

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TVA has proposed that the number of 100-pound CO₂ or dry chemical wheeled extinguishers at elevation 757 be changed from two to one. Even with the reduction, four 10-pound dry chemical extinguishers, one 100-pound CO₂ or dry chemical wheeled extinguisher, and two 1.5-inch hose outlets with 100²-feet of hose and fog nozzles are judged adequate for the fuel unloading and storage area at elevation 757. Likewise, five 10-pound dry chemical extinguishers and two 1.5-inch hose outlets with 100 feet of hose and fog nozzles are judged adequate for the fuel cask receiving area at elevation 729.

The licensee has requested elimination of the fire pump start stations identified in Section 1.2.4, located at both elevations, on grounds that plant procedures now provide for unit operators to start fire pumps from the control room after verification of fire. Such operational control is judged satisfactory and may obviate inadvertent operation of the pumps.

The licensee has developed procedures for the maintenance and surveillance testing of the fire protection equipment listed in the license, using applicable NFFA codes as guidelines. There is thus reasonable assurance of reliable operation of the equipment in the event of a fire emergency.

Other changes requested by the licensee involve correction of errors. The portable fire extinguishers described as "dry powder" type should have been dry chemical type extinguishers for the type of combustibles expected in the area, and they are actually of the latter type.

Recommendation

The staff finds that the proposed changes will have no adverse effect on the protection provided for public health and safety or for the environment. Approval of the amendment application is recommended.

The Project Manager, Division of TVA Projects, NRR, has no objection to the proposed amendments.

Original Signed By:

Amar Datta
Uranium Fuel Section
Fuel Cycle Safety Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

Approved by: Original Signed By:
George H. Bidinger, Section Leader

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