Docket No. 50-390 October 19, 1990

Mr. Oliver D. Kingsley, Jr.
Senior Vice President, Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: WATTS BAR UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION ON FSAR CHAPTER 12, AMENDMENT 63 (TAC 63647 AND 77061)

By letter dated June 26, 1990, Mr. E. G. Wallace of your staff submitted FSAR Amendment 63. Our review of it, as well as Amendments 54-62, is continuing. Enclosed is a list of comments and requests for additional information compiled by our reviewer Mr. R. Pederson. Please address these requests and provide your response within 45 days from receipt of this letter.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than 10 respondents; therefore OMB clearance is not required under P. L. 96-511.

Sincerely,
Original signed by

Peter S. Tam, Senior Project Manager
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

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ENCLOSURE

CHAPTER 12 WATTS BAR FSAR REVIEW

REQUEST FOR ADDITIONAL INFORMATION

1. Amendment 63 made two substantial revisions to the description of the calibration and maintenance of area radiation monitors in Section 12.3.4.1.3 on page 12.3-22. The Watts Bar commitment to functionally test each monitor on a monthly schedule was relaxed to a quarterly functional test. No basis for this change was given. Also the discussion of a two point calibration for each monitor (consistent with industry standard ANSI 6.8.1-1981) was deleted.

   Clarify whether your calibration and maintenance of area radiation monitors is consistent with ANSI 6.8.1-1981 or provide a basis for the adequacy of the proposed alternative methods. Provide a basis for the determination that quarterly functional tests will provide sufficient assurance of monitor stability to support an 18 month calibration frequency.

2. Amendment 63 deleted the description of the health physics operating facilities at Watts Bar in section 15.5.1.

   Provide a description of the health physics operating facilities to the level of detail prescribed in Regulatory Guide 1.70 Section 12.5.2.

3. Amendment 63 deleted the Watts Bar commitment to have health physics technician on site for 6 months prior to fuel loading in section 15.5.1. Also, discussions of qualification requirements and resume of key individuals (including the Radiation Protection Manager) have been deleted from Chapter 13.

   Provide a resume for the Watts Bar Radiation Protection manager and his backup. Provide a description of the number of fully qualified Health Physics Technicians assigned to Watts Bar (identify how many of these are contractors). Clarify whether the minimum qualifications of all health physics personnel are consistent with Regulatory Guide 1.8 or, if not, provide a basis for judging your alternate criteria acceptable.

4. Amendment 56 revised the description of the processing and handling of personnel dosimetry TLD badges in Section 12.5.2. Two statements in this revision need clarification. They are the relaxation of processing frequency for personnel TLD's from monthly to quarterly, and the processing "in accordance with ANSI 13.11".

   Clarify whether personnel dosimetry at Watts Bar will be processed with a program that is accredited for all radiation categories under the National Voluntary Laboratory Accreditation Program consistent with 10 CFR 20.202(c). Provide the justification that shows that quarterly processing of TLDs is adequate to insure that radiation doses received by plant personnel are within the limits of 10 CFR 20.101 and are ALARA.

5. Amendment 63 revised the specification in Section 12.5.2 for the sensitivity of whole body counters used at Watts Bar from 1 percent of a maximum permissible body burden (MPBB) to 5 percent of a MPBB.

   Provide a justification for this change. Typically, well run whole body counting programs have sensitivities much less than 1 percent of a MPBB for isotopes normally found in a power plant.

6. Amendment 63 revised the description of controlling access to high radiation areas in Section 12.5.3. The controls described are a significant relaxation from the requirements of 10 CFR 20.203(c) or the provisions for high radiation area access control in the Standard Technical Specifications.

   Provide the basis for determining that this alternative control is adequate. Also 12.5.3 is inconsistent with notes on Table 12.3-2 "Access Control Areas"; resolve this discrepancy.

   Identify each area in the plant where dose rates can exceed 100 rads per hour during normal operations and refueling outage conditions and describe the controls employed to prevent unauthorized personnel access to each.

7. Amendment 56 revises the description of contamination control in Section 12.5.3. The last sentence in the first paragraph on page 12.5-6 states that "all items which have been in controlled areas except personal items which leave the plant site will be monitored" (for contaminants).

Provide justification for exempting personal items from contamination monitoring.

8. Amendments 55 and 56 revised the ventilation flow rates specified in Table 12.3-3 for various areas within the plant. These flow rates are provided as one parameter in the calculated expected airborne radioactive source term stated in Section 12.2.2 of Regulatory Guide 1.70. However, the reviewer noted that there is no discussion of airborne radioactive source terms in the Watts Bar FSAR (Section 12.2.2 is completely missing). Estimated average airborne concentrations for plant buildings are provided in Tables 12.2-19 through 12.2-22. These estimates are not of sufficient detail for the reviewer to determine if the acceptance criteria in the Standard Review Plan have been met by the applicant.

Using the revised data in Table 12.3-3 provide the airborne radionuclide concentrations expected during normal operation, anticipated operational occurrences, and accident conditions for equipment cubicles, corridors, and operating areas normally occupied by operating personnel. For each area determined to be considered an airborne radioactivity area, as defined by 10 CFR 20 Section 20.203(d)(1)(ii), show why additional process or engineering controls, as required by Section 20.103(b)(1) are not warranted to reduce radioactive airborne concentrations.

9. Figures 12.3-5 and 12.3-6 appear to indicate two accessible areas in the auxiliary building adjacent to the spent fuel transfer tube. Figure 12.3-5 shows accessible areas on the 729.0 ft elevation just outside the reactor buildings (near the 270° point). Figure 12.3-6 shows two passage ways leading to the cask decon equipment that pass just below the transfer canal (692.0 ft elevation).

   Provide an estimate of the peak dose rate in these areas during transfer of "fresh" spent fuel bundles.