



UNITED STATES
NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D.C. 20555-0001

March 12, 1997

LICENSEE: Tennessee Valley Authority

FACILITY: Watts Bar Nuclear Station, Unit 1

SUBJECT: SUMMARY OF FEBRUARY 26, 1997 MEETING - LICENSING ACTION STATUS

On February 26, 1997, Nuclear Regulatory Commission (NRC) and Tennessee Valley Authority (TVA) representatives met at the NRC office (One White Flint North) to discuss the status of licensing actions currently under review and planned for the near future. A list of attendees is provided in Enclosure 1. An agenda provided by TVA and explanation of the agenda topics are provided in Enclosure 2.

Lead Test Assemblies

The TVA Watts Bar plant (WBN) has recently been selected by the Department of Energy (DOE) to conduct a one-time confirmatory test, during the forthcoming Cycle 2, of components that could be used in the production of tritium. The proposed test would be a part of DOE's strategy to develop a new assured source of tritium to support national security requirements. As a part of developing this strategy, DOE is exploring the potential for producing tritium in a commercial light water reactor (CLWR). DOE presented its plans in this regard in a public meeting in Rockville, Maryland, on February 25, 1997. At that meeting the NRC staff also reported its activities in response to DOE's plans. A summary of that meeting is included in Enclosure 4, for background information.

TVA's licensing staff stated that they are evaluating whether the test would require amendment of the WBN license. In the event that TVA determines that an amendment is required, TVA indicated that it is considering proposing a modification to the Technical Specifications (TS) such as included in Enclosure 2, entitled "Lead Test Assembly."

TVA, NRC and DOE representatives discussed the process, pursuant to the Commission's regulations in 10 CFR §50.90, §50.91 and §50.92 for amendment of the license. The NRC staff indicated, in response to a TVA question, that the schedule for completing action on such an amendment request would be dependant on the date of its submittal, the acceptability of the amendment proposal and the time required for the exercise of the processes pursuant to the above regulations. Since these activities are as yet undetermined, the NRC staff could not commit to a schedule for processing such an amendment.

The DOE representative characterized the purpose of the one-time lead test assembly demonstration during WBN Cycle 2 as being to provide added confidence that tritium can be produced in CLWRs.

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Spent Fuel Pool Rerack

The spent fuel pool rerack application submitted on October 23, 1996 was discussed. The plant systems reviewer requested additional information, as described in Enclosure 3, to enable an independent assessment of the pool decay heat loads.

The staff noted that it would confirm the TVA commitments made to implement procedures for governing the time after shutdown before fuel can be removed from the reactor (based on the calculated fuel pool heat load).

TVA's letter dated February 10, 1997 provided additional information on radiological protection. The staff requested that the numerical values for the doses mentioned in the comparison between Regulatory Guide 1.25 and NUREG/CR-5009 be provided.

Additional information was also requested that would justify operation of the spent fuel pool and its associated systems at the new calculated pool temperatures. The requested information should address the ability of the equipment, systems and pool to perform their intended functions at the new temperatures. Information on the structural aspects of the pool and its systems should be included.

Appendix J

TVA's application submitted January 10, 1997 and noticed in the Federal Register on January 29, 1997 was discussed. The staff indicated that it expected to conduct its technical review of the application in the near future.

Cycle 2 Reload Changes

TVA indicated that it plans to submit an application by March 24, 1997 for changes to the Technical Specifications to support the Cycle 2 reload as described in Enclosure 2. The proposed changes were said to be based on an increase from 3.1 to 3.7% fuel enrichment and a desire to optimize operational margins. The NRC staff responded that the identified items appear consistent with those previously reviewed for other similar reactors. Accordingly, they would not appear to offer unique challenges to completion of their review prior to the start of Cycle 2.

Diesel Generator On-Line Testing

TVA indicated that it planned to submit, by March 31, 1997, an application that would allow the performance of surveillance requirement 3.8.1.14 during Modes 1 or 2. TVA provided extensive information, already in the public record, on the background of this issue for the WBN plant (SSERs 13 and 14, etc.) and for another plant (Amendment No. 72 for the Hope Creek plant).

Containment Air Lock

TVA indicated that it planned to submit, by April 15, 1997, an application to allow both air lock doors open during core alterations and during movement of


irradiated fuel assemblies within containment. The staff reviewer indicated that, consistent with recent practice on another plant application, the staff would require that plant administrative controls ensure that:

- a. Appropriate personnel are aware that both personnel air lock doors are open.
- b. A specified individual(s) is designated and available to close the air lock following a required evacuation of containment, and
- c. Any obstruction(s) (e.g., cables and hoses) that could prevent closure of an open air lock can be quickly removed.

The staff indicated that this should be reflected in the licensee's application.

Other Items

TVA addressed a question on how to make additions to the Technical Requirements Manual (TRM). The staff noted that the TRM is included within the scope of Final Safety Analysis Report (FSAR) Chapter 16.3. As stated in FSAR Section 16.3: "Changes to the requirements of the relocated material are evaluated in accordance with 10 CFR 50.59." and "Changes to the TRM are reported as part of the 10 CFR 50.59 annual report."


Robert E. Martin, Senior Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosures: 1. Attendance List
2. TVA Agenda and Explanations
3. Request for Additional Information - SFP Rerack
4. Summary of NRC, DOE Public Meeting on February 25, 1997

cc w/Enclosures: See next page

WATTS BAR NUCLEAR PLANT

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LIST OF PARTICIPANTS

NRC - TVA MEETING ON WATTS BAR UNIT 1

FEBRUARY 26, 1997

| <u>Name</u> | <u>Affiliation</u> |
|----------------|---|
| R. Martin | NRC/NRR/DPRE Project Manager |
| D. Matthews | NRC/NRR/DRPM Acting Deputy Director |
| S. Turk | NRC/OGC |
| J. Minns | NRC/NRR/DRPM/PERB |
| F. Akstulewicz | NRC/NRR/DRPM/PGEB |
| K. Kavanagh | NRC/NRR/DSSA/SRXB |
| J. Wilson | NRC/NRR/DRPM/PGEB |
| C. Willis | NRC/NRR/DRPM/PERB |
| D. Kehoe | WBN - Nuclear Assurance and Licensing Manager |
| J. Chardos | TVA LTA Project Manager |
| G. Sorensen | PNNL Task Manager |
| M. Clausen | DOE Tritium Project Office |
| P. Pace | TVA - Watts Bar |
| G. Hubbard | NRC/NRR/DSSA/SPLB |
| D. Shum | NRC/NRR/DSSA/SPLB |
| M. Chatterton | NRC/NRR/DSSA/SRXB |

ENCLOSURE 1

irradiated fuel assemblies within containment. The staff reviewer indicated that, consistent with recent practice on another plant application, the staff would require that plant administrative controls ensure that:

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| NAME | RMartin | BClayton | | FHebdon | | | | | |
| DATE | 3/12/97 | 3/11/97 | | 3/12/97 | | | | | |

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REQUEST FOR ADDITIONAL INFORMATION

INPUT PARAMETERS FOR USING 1993 AMERICAN NATIONAL STANDARDS

INSTITUTE 5.1 MODEL TO CALCULATE DECAY HEAT

RELATED TO SPENT FUEL POOL CAPACITY EXPANSION

WATTS BAR UNIT 1

DOCKET NO. 50-390

Provide and justify the values for the following 1993 ANS 5.1 input parameters:

1. δQ (net recoverable energy) = ??? MeV/fission)
2. δP (net power from fission of nuclide) = ??? (MeV/fission)
3. Fractional fission product for: U235, U238, Pu239 and Pu241
4. R-factor (the actinide production multiplier)
5. G-factor (a decay heat multiplier to account for the effect of neutron capture in fission products)
6. Si (a multiplier applied to the G-factor equation)
7. Power history (length of full-power operation before shutdown)

Distribution

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Docket
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E-MAIL w/Enclosures 1 and 3)

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D. Matthews (DBM)
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K. Kavanagh (KAK)
J. Wilson (JFW1)
C. Willis (CAW)
G. Hubbard (GTH)
D. Shum (DHS)
M. Chatterton (MSC1)
G. Tracy (GMT)
A. Hodgdon (APH)