

January 29, 1991

Docket Nos. 50-390  
and 50-391

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: SEVERE ACCIDENTS MITIGATION DESIGN ALTERNATIVES (SAMDAs) -  
WATTS BAR NUCLEAR PLANT (TAC NOS, 77222 AND 77223)

On December 13, 1990, the NRC staff (R. Pallas, L. Lois and P. Cortland) held a conference call with your staff (M. Bryan, R. Mays, and D. Koontz) to discuss issues related to SAMDAs. We agreed that we will provide an outline of the information that would be needed for the review of the SAMDAs (see enclosure). We also agreed that the most efficient way for TVA to address SAMDAs is in the Watts Bar Individual Plant Evaluation (Generic Letter 88-20 submittal). While you plan to submit your IPE in November 1992, we understand that pertinent information for our SAMDA evaluation will be available in November 1991. Hence, we request your response by November 30, 1991. Use of the plant-specific IPE would allow for a plant-specific assessment of the various SAMDAs by TVA, while the proposed schedule would still allow the NRC staff adequate review time. This is based in part on the assumption that the IPE submittal and review schedule will support closure of the SAMDA issue before issuance of the operating license for Watts Bar.

This requirement affects fewer than 10 respondents and, therefore, is not subject to Office of Management and Budget review 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

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PDR ADDCK 05000390  
P PDR

Enclosure:  
As Stated

cc w/enclosure:  
See next page

\*SEE PREVIOUS CONCURRENCE

OFC	:PDII-4/LA*	:PDII-4/PM*	:PRAB:BC*	:PDII-4/DD	:PDII-4/D
NAME	:MKrebs	:PTam:as	:WBeckner	:SBlack	:FHebbon
DATE	: 1/28/91	: 1/28/91	: 1/22/91	: / /91	: 1/29/91

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cc:

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Mr. Richard F. Wilson  
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Honorable Robert Aikman, County Judge  
Rhea County Courthouse  
Dayton, Tennessee 37321

Honorable Johnny Powell, County Judge  
Meigs County Courthouse, Route 2  
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Watts Bar Nuclear Plant  
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Route 2, Box 700  
Spring City, Tennessee 37381

Enclosure

## OUTLINE OF INFORMATION NEEDED FOR SAMDA REVIEW

- ° What are key differences between Sequoyah and Watts Bar that impact the plant risk profile and the value of SAMDAs?
  - ° Containment
    - containment ultimate pressure capacity
    - reactor cavity and seal table layout
    - concrete type
  - ° Support systems (including cross-connect capabilities)
    - diesel generators (Sequoyah has 1 spare)
    - grid
    - dc power system (Sequoyah has 1 additional bus, crosstied)
    - instrument air
    - service water systems
  - ° RCS features
    - ability to bleed/feed steam generators
    - ability to bleed/feed primary (NUREG/CR-5447)
    - dependence of above on ac power and air
    - ability to use diesel-driven fire pumps or other sources for core/containment injection
    - switchover to recirculation
    - high pressure/low pressure interfaces
- ° What SAMDAs have been considered by TVA?
- ° What are the associated risk reductions and costs?
- ° What are TVA's cost estimates for the potential SAMDAs in NUREG-0775, Table 1, and NUREG/CR-5589?
- ° What is the latest data regarding population density versus distance?

Distribution

Docket File

NRC PDR

Local PDR

S. Varga 14-E-4

G. Lainas 14-H-3

F. Hebdon

S. Black

B. Wilson RII

M. Branch RII

G. Walton RII

K. Barr RII

H. Livermore RII

M. Krebs

P. Tam

P. Cortland

OGC 15-B-18

E. Jordan MNBB-3701

ACRS (10)

L. Reyes, RII

WB Reading File

cc: Plant Service list