

OCT 29 1981

Docket Nos. 50-390  
and 50-391

APPLICANT: Tennessee Valley Authority

FACILITY: Watts Bar Nuclear Plant, Units 1 and 2

SUBJECT: SUMMARY OF STRUCTURAL ENGINEERING AUDIT ON THE WATTS BAR  
NUCLEAR PLANT, UNITS 1 AND 2

On July 28 thru 31, 1981, Sang Bo Kim and N. D. Romney of SEB conducted a structural design audit of the Watts Bar Nuclear Power Plant at the Knoxville, Tennessee offices of the Tennessee Valley Authority (applicant). As part of the audit a site visit was made to the Watts Bar NPP on July 30, 1981. The purpose of the Watts Bar NPP structural design audit was to investigate in detail the manner in which TVA implemented the structural design criteria that was committed to use for this facility. A list of attendees is attached.

Items discussed during the audit were: The Sequoyah-Watts Bar Design Comparison Report; design of the ERCW Intake Structure/Pumphouse; a question raised by HGEB concerning unsuitable soil deposits along the ERCW pipeline; Containment Building design; containment shell buckling (a generic issue); design calculations for Auxiliary/Control Building; Diesel Generator Building, Category I Tanks; and additional questions raised as a result of the site visit.

The exit meeting took place on July 30, 1981, following the site visit. Representing TVA at the exit meeting were Don Williams, Howard Hutchinson, and Larry Katcham. At the exit meeting the following action items were identified:

1. The missile barrier design of the diesel generator building air intake hoods;
2. The diesel generator building base mat foundation design;
3. The lack of a torsion analysis for the diesel generator building;
4. The design of the containment building equipment hatch door;
5. The auxiliary building wall line C-3, elev. 729.0 resisting main steam ship restraint loads, not considered in the original design of the wall;

*MEMO 4*

OFFICE ▶	.....	.....	.....	.....	.....	.....
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OCT 29 1981

- 6. The seismic analysis model of the containment building polar crane;
- 7. Steel containment building buckling; and
- 8. Masonry wall design.

It was agreed that these action items would be discussed with the responsible engineers in TVA's Knoxville offices on Friday morning, July 31, 1981, with the purpose of attaining a possible resolution. It was further agreed that any items not resolved on July 31, 1981, would be carried as open SER items unless formal resolution was achieved prior to the SER issuance.

On Friday, July 31, 1981, all 8 action items were discussed with items 1, 3 and 5 being resolved. Items 2, 4, 6, 7 and 8 remain open pending further discussion via conference calls.

We were notified by the applicant that evaluation of masonry wall and subsequent submittal to the NRC of their finding will not be ready before September. The SEB reviewers gave TVA a copy of SEB staff design criteria on masonry wall and requested that the SEB criteria be compared with TVA criteria. TVA will be required to justify any deviations resulting from this comparison.

*TJK*  
 Thomas J. Kenyon, Project Manager  
 Licensing Branch #4  
 Division of Licensing

Enclosure:  
 List of Attendees

cc: See next page

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OFFICE	DL:LB#4	DL:LB #4					
SURNAME	T Kenyon, T	E Adams, M					
DATE	10/7/81	10/7/81					

STRUCTURAL ENGINEERING REVIEW

WATTS BAR NUCLEAR PLANT

July 28 - July 30, 1981

<u>NAME</u>	<u>ORGANIZATION</u>
V. A. Bianco	TVA - EN DES
Asgeir Jonnson	TVA - SWP
Larry Katcham 3866	TVA - SWP
Howard Hutchinson	TVA - SWP
Norman D. Romney	NRC - NRR/SEB
Sang Bo Kim	NRC - NRR/SEB
Lytle a Rather	CDB - TVA
Russell D. Myers	CDB - TVA
Frank P. Levandowski	SEP - TVA
Dennis L. Terrill	TVA - POWER
T. J. Kenyon	NRC - NRR/Div. of Licensing
Don R. Denton	TVA - EN DES
Allan R. Young	TVA - EN DES
Loretta V. Cecilia	TVA - EN DES
Mike Mcalister	TVA - EN DES/Licensing
Norman E. Stone	TVA - CE B
Dennis Carlin	TVA - CE B
Nat Foster	TVA - CE B
Victor Davis ex 2268	TVA/MDB
Steve Doyle	TVA/CDB
Jeo Peyton	TVA/YCP
Wayne Leslie	TVA/YCP
Frank Hand	TVA/CEB
Leonard Brown	TVA/MDB
R. A. Deweese	TVA/MDB
Robert Enis	EN DES (CEB)
Ira M. Heatherly	EN DES (NEB-NW)
Raymond K. Alexander	EN DES (CEB)

MEETING SUMMARY DISTRIBUTION



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NRC/PDR  
Local PDR  
TIC/NSIC/TERA  
LB #4 r/f  
H. Denton  
E. Case  
D. Eisenhut  
R. Purple  
B. J. Youngblood  
A. Schwencer  
F. Miraglia  
J. Miller  
G. Lainas  
R. Vollmer  
J. P. Knight  
R. Bosnak  
F. Schauer  
R. E. Jackson  
Attorney, OELD  
OELD  
OIE (3)  
ACRS (10)  
R. Tedesco  
N. Hughes

NRC Participants:

G. Lear  
S. Pawlicki  
V. Benaroya  
Z. Rosztoczy  
W. Haass  
D. Muller  
R. Ballard  
W. Regan  
R. Mattson  
P. Check  
O. Parr  
F. Rosa  
W. Butler  
W. Kreger  
R. Houston  
T. Murphy  
L. Rubenstein  
T. Speis  
W. Johnston  
S. Hanauer  
W. Gammill  
T. Murley  
F. Schroeder  
D. Skovholt  
M. Ernst  
K. Kniel  
G. Knighton  
A. Thadani  
D. Tondi  
J. Kramer  
D. Vassallo  
P. Collins  
D. Ziemann  
A. Toalston  
V. Moore  
M. Srinivasan  
Chief, SPEB:DST

bcc: Applicant & Service List

E. Adensam  
Project Manager T. Kenyon  
Licensing Assistant M. Duncan