



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

April 4, 1991

Docket Nos. 50-438
and 50-439

LICENSEE: Tennessee Valley Authority (TVA)

FACILITY: BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2

SUBJECT: SUMMARY OF FEBRUARY 27, 1991 MEETING WITH TVA ON TWO POSITION PAPERS ON SEISMIC DESIGN AND SEISMIC ANALYSIS FOR BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2 (TAC NOS. 79275 AND 79276)

On February 27, 1991, the NRC staff met with the TVA staff to discuss two position papers submitted by TVA on February 14, 1991 for NRC review. The two position papers outline the TVA's position on the licensing basis of Bellefonte Nuclear Plant (BLN) for (1) seismic design ground motion, and (2) verification of the seismic design of seismic Category I structures. Enclosure 1 is a list of meeting attendees. Enclosure 2 outlines the present status of BLN, and objectives supporting the reactivation of BLN.

In the first position paper TVA indicated that the licensing basis ground motion spectra are essentially equivalent to the site-specific response spectra in the range of frequencies that are important. Comparison was also made with the more recent Electric Power Research Institute/Lawrence Livermore National Laboratory hazards studies to address issues raised by 'Charleston Earthquake' for Bellefonte Licensing basis. The TVA staff indicated that it also plans to perform a seismic margin assessment to further verify seismic adequacy of BLN. The viewgraphs for TVA's position on seismic design ground motion are enclosed (Enclosure 3).

In the second position paper TVA stated that it will revise and revalidate its existing seismic building models, and will generate a new set of response spectra for all Category I structures except the borated water storage tanks (BWST). TVA staff noted that BWST is a reinforced concrete structure supported on rock. It believes that the issues that will be considered in the new seismic analysis will have insignificant effect on a relatively simple structure such as BWST. Enclosure 4 is the position paper on seismic design of Category I structures.

The NRC staff expressed concern that the TVA's ground motion response spectra were based on 5% damping factor instead of 7% damping factor that the NRC staff uses. If 7% damping factor were used the BLN spectra appeared to be significantly higher than the site-specific spectra. The staff's concerns were illustrated in enclosure 5, which compares BLN design spectrum for reinforced concrete with site specific response spectra. The staff requested that the TVA staff revise the analysis using a damping factor of 7%.

NRC FILE CENTER COPY

Memo 4

The NRC staff requested that TVA identify all deviations from the standard review plan and explain its rationale for their acceptability. The NRC staff also requested that TVA provide some sample containment design calculation. The NRC staff indicated that there may be some outstanding NRC requests for additional information requiring a TVA response. The NRC staff will search the BLN docket to identify if there are any outstanding NRC questions requiring TVA response, and will forward the questions to TVA.

The TVA staff stated that it will respond to all the questions raised by the NRC staff.

Original signed by

Mohan C. Thadani, Project Manager
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Attendance List
2. Bellefonte Position Paper Discussion (Overview)
3. TVA Viewgraphs on Bellefonte Position on Seismic Ground Motion
4. TVA Position Paper on Seismic Design of Category I Structures
5. A Viewgraph Used by NRC Staff to Illustrate Ground Motion at 7% damping

cc w/enclosures:
See next page

OFC	:PDII-4/LA	:PDII-4/PM	:PDII-4/DD	:PDII-4/D	:
NAME	:MKrebs <i>mk</i>	:MThadani <i>MT</i>	:as:SBlack <i>SB</i>	:FHebdon	:
DATE	:2/2/91	:2/2/91	:2/3/91	:2/4/91	:

OFFICIAL RECORD COPY
Document Name: 2/27 BEL MTG SUMMARY

Distribution

Docket File	
NRC PDR	
Local PDR	
F. Miraglia	12-G-18
J. Partlow	12-G-18
S. Varga	14-E-4
G. Lainas	14-H-3
F. Hebdon	
S. Black	
M. Krebs	
M. Thadani	
B. Wilson	RII
J. Wescheberger	17-G-21
G. Walton	RII
K. Barr	RII
H. Livermore	RII
OGC	15-B-18
E. Jordan	MNBB-3701
T. Cheng	7-E-23
Goutam Bagchi	7-H-15
Gustaaf V. Giese-Kock	7-H-15
ACRS (10)	

CC:

Mr. Marvin Runyon, Chairman
Tennessee Valley Authority
ET 12A 7A
400 West Summit Hill Drive
Knoxville, Tennessee 37902

Mr. Edward E. Wallace
Manager, Nuclear Licensing
and Regulatory Affairs
Tennessee Valley Authority
5B Lookout Place
Chattanooga, Tennessee 37402-2801

Mr. John B. Waters, Director
Tennessee Valley Authority
ET 12A 9A
400 West Summit Hill Drive
Knoxville, Tennessee 37902

Mr. W. F. Willis
Senior Executive Officer
ET 12B
400 West Summit Hill Drive
Knoxville, Tennessee 37902

General Counsel
Tennessee Valley Authority
400 West Summit Hill Drive
ET 11H
Knoxville, Tennessee 37902

Mr. Dwight Nunn
Vice President, Nuclear Projects
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dr. Mark O. Medford
Vice President, Nuclear Assurance,
Licensing and Fuels
Tennessee Valley Authority
6N 38A Lookout Place
Chattanooga, Tennessee 37402-2801

Mr. Bruce Schofield, Site Licensing Manager
Bellefonte Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Hollywood, Alabama 35752

Mr. W. J. Museler, Site Manager
Bellefonte Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Hollywood, Alabama 35752

Chairman, Jackson County Commission
Courthouse
Scottsboro, Alabama 35752-0200

Claude Earl Fox, M. D.
State Health Officer
State Department of Public Health
State Office Building
Montgomery, Alabama 36130

Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, N.W.
Atlanta, Georgia 30323

Tennessee Valley Authority
Rockville Office
11921 Rockville Pike
Suite 402
Rockville, Maryland 20852

Mr. R. F. Wilson
Vice President, New Generation
and BLN Construction
Tennessee Valley Authority
6A Lookout Place
Chattanooga, Tennessee 37402-2801

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

NRC-TVA MEETING
BELLEFONTE NUCLEAR PLANT

February 27, 1991

ATTENDEES

W. R. Schmidt
F. J. Hebdon
S. Black
M. Waterman
R. P. Kennedy
G. R. Capodanno
Wen S. Tseng
John W. Johnson
Thomas M. Cheng
Robert L. Ruthman
Gustaaf V. Giese-Koch
Mohan C. Thadani
Bruce S. Schofield
Goutam Bagchi

ORGANIZATION

MPR Assoc. (TVA)
NRC/NRR/PDII-4
NRC/NRR/PDII-4
NRC/NRR/DST/SICB
RPK Struc. Mech. Consulting
TVA
CEC/MPR Consultant
MPR Assoc. Inc.
NRC/ED/ESGB
NRC/DET/ESG8
NRC-DET-ESGB
NRC/NRR/PDII-4
Bellefonte Licensing
NRC/DET/ESGB