

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9107090003 DOC. DATE: 91/07/03 NOTARIZED: NO DOCKET #
 FACIL: 50-438 Bellefonte Nuclear Plant, Unit 1, Tennessee Valley Au 05000438
 50-439 Bellefonte Nuclear Plant, Unit 2, Tennessee Valley Au 05000439

AUTH. NAME AUTHOR AFFILIATION
 WALLACE, E.G. Tennessee Valley Authority
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards listing of status of requests made on util position papers to determine scope of work required to complete & license plants.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 2
 TITLE: OR Submittal: General Distribution

NOTES:

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID CODE/NAME		LTTR	ENCL		ID CODE/NAME		LTTR	ENCL
	LA		1	1		PD		1	1
	THADANI, M		2	2					
INTERNAL:	ACRS		16	16		NRR/DET/ECMB 7D		1	1
	NRR/DET/ESGB		1	1		NRR/DOEA/OTSB11		1	1
	NRR/DST 8E2		1	1		NRR/DST/SELB 7E		1	1
	NRR/DST/SICB8H7		1	1		NRR/DST/SRXB 8E		1	1
	NUDOCS-ABSTRACT		1	1		OC/LFMB		1	0
	OGC/HDS1		1	0		OGC/HDS2		1	0
	REG FILE 01		1	1		RES/DSIR/EIB		1	1
EXTERNAL:	NRC PDR		1	1		NSIC		1	1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM PI-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 35 ENCL 32

MA 4

R
I
D
S
/
A
D
D
S

R
I
D
S
/
A
D
D
S



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

JUL 03 1991

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Gentlemen:

In the Matter of the Application of) Docket No. 50-438
Tennessee Valley Authority) 50-439

BELLEFONTE NUCLEAR PLANT (BLN) - SUMMARY OF REQUESTS MADE ON BLN POSITION PAPERS

During 1990 and 1991 TVA has been conducting an assessment of the status of construction and engineering at BLN to determine the scope of work required to complete and license the plant. As part of this effort, it is necessary to evaluate the impact of recently issued (i.e., since deferral) NRC and industry guidance and changes in the regulations governing construction and licensing of nuclear power plants, as well as advancements in engineering technology/methodology. TVA believes that NRC agreement as to the regulatory requirements and guidance for completion of BLN is needed to establish a stable regulatory environment and reduce the risk involved in completing the plant.

As a result of this effort and discussions with NRC, TVA has submitted 14 position papers, each requesting some action from the NRC. The purpose of the individual papers varies, but can be grouped into three general categories as follows.

- o NRC agreement that, for a given issue, the original licensing basis and TVA's method of implementation are acceptable.
- o NRC agreement that TVA's planned method(s) to meet new regulations is acceptable.
- o NRC agreement that a change(s) to the original licensing basis to take advantage of newer state-of-the-art engineering or construction methodologies/technologies is acceptable.

9107090003 910703
PDR ADOCK 0500043B
A PDR

Aool
11

U.S. Nuclear Regulatory Commission

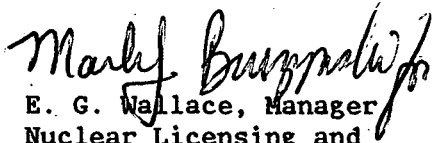
JUL 03 1991

NRC requested that TVA provide a summary of the requests made in the BLN position papers that have been submitted. The enclosed listing contains a matrix of the action/agreement requested in each position paper and a statement of the reason for the request. This matrix is intended for use as a briefing paper for NRC management on the position papers submitted to date and is not intended to be maintained/updated to reflect future activities.

If you have any questions please contact Bruce Schofield at (205) 574-8058.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


E. G. Wallace, Manager
Nuclear Licensing and
Regulatory Affairs

Enclosure

cc (Enclosure):

Ms. S. C. Black, Deputy Director
Project Directorate II-4
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

NRC Resident Inspector
Bellefonte Nuclear Plant
P.O. Box 2000
Hollywood, Alabama 35752

Mr. M. C. Thadani, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

Mr. B. A. Wilson, Chief, Project Chief
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

SUBJECT OF PAPER

REQUESTED ACTION FOR NRC STAFF

REASON FOR SUBMITTAL

Environmental
Qualification of
Equipment (TAC #
79273)

- Equipment
Qualification
Criteria

- Peak
Containment
Temperature

Accident Analysis
(TAC # 79274)

Seismic Design -
Ground Motion
(TAC # 79275)

Concurrence that electrical equipment can be qualified to standards of NUREG-0588, Category 2 with upgrade as required by 10 CFR 50.49 (1) after commercial operation.

Concurrence that the proposed methodology for calculating containment conditions for intermediate and large main steam line breaks is acceptable.

Concurrence that the events described are the only events which require reanalysis and requests the staff to agree to commit sufficient resource to meet the review and approval schedule for the Loss of Coolant Accident (LOCA) analyses.

Concurrence that the existing seismic design ground motion as provided in the BLN Final Safety Analysis Report (FSAR) is acceptable for seismic design and analysis of the plant. TVA also seeks staff approval for use of a Seismic Margins Assessment (SMA) to verify the capability of the plant to withstand earthquakes which exceed the licensing basis safe shutdown earthquake.

Clarification and documentation of applicable requirements.

Revised methodology has not been accepted by NRC staff. Peak temperatures of previous analysis (>430°F) are overly conservative.

Revisions to several Commission regulations regarding LOCA analysis necessitate reanalysis. Submittal clarifies scope, methods and schedule for reanalysis.

The existing seismic design ground motion for BLN was established in the early 1970's and thus is not based on the latest earthquake records and methodologies. Seismic design ground motion was a significant licensing issue at other TVA plants. TVA believes existing analyses are conservative and prefers to avoid significant reanalysis, requalification and modifications of components, systems and structures already installed, and in some cases operational, in the plant.

SUBJECT OF PAPER

REQUESTED ACTION FOR NRC STAFF

REASON FOR SUBMITTAL

Seismic Analysis -
Category 1 Civil
Structures
(TAC # 79276)

Concurrence that TVA's approach for generating new floor response spectra and verifying the seismic design of category 1 structures is acceptable. (Note: Based on the results of recent studies and analyses, TVA has decided to broaden the peaks of the floor response spectra $\pm 15\%$, rather than $\pm 10\%$ as described in the position paper. A revised TVA position on this subject will be submitted to the NRC.)

The adequacy of the seismic design of Category 1 building structures was a significant issue at other TVA plants. Avoid rework of analysis and modification due to lack of understanding of ground rules.

Seismic Qualification
of Equipment (TAC #
79279)

Concurrence that TVA's criteria, as described in the BLN FSAR, for verifying the seismic adequacy of mechanical and electrical equipment (Particularly B&W supplied I&C equipment which was qualified to IEEE 344-1971 standards) is acceptable.

The current Standard Review Plan (SRP) requires such equipment to be qualified to IEEE 344-1975 standards. TVA believes that the existing qualification records are adequate and prefers to avoid requalification of equipment already installed, and in some cases operational, in the plant.

Seismic Interactions
(TAC # 79280)

This position paper was submitted for information. No specific staff approval is requested. Staffs comments on TVA's approach to performing a seismic interaction review prior to startup of the plant are welcome.

There are no definitive NRC or industry standards for performing such seismic interaction reviews. TVA's approach is intended to be a cost-effective method for identifying and correcting potential seismic interaction hazards.

Structural Analysis
Methods and Criteria
for Piping Tubing and
Supports (TAC #
79277)

Response Spectra Analysis
Methodology

Acceptance of variable damping as described in code case N-411 for use with uniform response spectrum analysis.

Response Spectra
Methodology

Avoid rework of analysis and modification due to lack of understanding of ground rules.

SUBJECT OF PAPER

REQUESTED ACTION FOR NRC STAFF

REASON FOR SUBMITTAL

Acceptance of combinations of modal and directional responses, including closely spaced modes, by square root of the sum of the squares (SRSS) method.

Permits use of results of current research in the planned reanalysis effort.

Acceptance of consideration of seismic anchor motion only if the piping system has anchors in independently responding structures.

Eliminate unnecessary expenditure of resources due to misinterpretation of NRC requirements.

Acceptance of peak spectral shifting of floor response spectra as an alternative to peak broadening.

Obtain confirmation that peak spectral shifting as described in Appendix N of section III of the ASME Code is an acceptable approach.

OBE Load Cases

OBE Load Cases

Acceptance of limiting considerations of OBE load cases to the effect on piping fatigue and the contribution to seismic anchor motion.

Eliminate expenditure of resources having no safety benefit and simplify evaluation of analysis results. The proposed approach is consistent with proposed generic criteria under review by the NRC.

Reanalysis of ASME Piping

Reanalysis of ASME Piping

Acceptance of specific methodology for analysis to justify a site-specific equivalent static load factor for use with ASME Class 2 and 3 piping up to inches in diameter.

To clarify the methodology which can be used to justify a site-specific equivalent static load factor.

Acceptance of bounding analysis for supports for ASME Class 2 and 3 piping.

For the verification effort, permits analysis of bounding configuration to support the structural adequacy of less limiting configurations.

SUBJECT OF PAPER

REQUESTED ACTION FOR NRC STAFF

REASON FOR SUBMITTAL

Acceptance of utilization of NCIG-14 methodology for reevaluation of installed small bore piping concurrent with staff review of the NUMARC/EPRI request for generic approval.

Permits utilization of results of latest research in the reevaluation of small bore pipe to reduce the potential for more rigid constraint than actually needed. Utilization of NCIG-14 methodology will achieve substantial improvement of design (increased flexibility, reduce number of supports and improve access for ALARA benefits).

Reevaluation of Category 1(L) Piping

Reevaluation of Category 1(L) Piping

Acceptance of reevaluation of Category I(L) piping and supports by a field screening and bounding configuration approach.

Permit utilization of an approach which is appropriate for reevaluation of piping which must be constrained to stay in place and/or not leak during a seismic event, but is not safety related. Reduce undue conservatism and take advantage of lessons learned since the 1970s.

Reevaluation of Cable Trays, Conduit and HVAC Systems (TAC # 79278)

Acceptance of reevaluation of structural adequacy of cable trays, conduit, HVAC ducting, and associated supports by an approach which is based on the development of specific reevaluation criteria and critical parameters, full system walkdowns and analysis of bounding configurations.

Permit utilization of an evaluation methodology that has proven effective at other nuclear plant sites. Reduce undue conservatism and take advantage of lessons learned since the 1970s.

Cables in Conduit - Susceptibility to Pullby Damage (TAC # 79281)

Concurrence that no further investigative effort is needed to address this issue for BLN.

Previous significant licensing issue at other TVA plants. TVA desires to obtain agreement that the TVA assessment at BLN is sufficient to close this issue.

SUBJECT OF PAPER

REQUESTED ACTION FOR NRC STAFF

REASON FOR SUBMITTAL

Cable Damage due to
Sidewall Pressure and
Jamming
(TAC # 79282)

Concurrence that no further
investigative effort is needed
to address this issue for BLN.

Previous significant
licensing issue at other
TVA plants. TVA desires
to obtain agreement that
the TVA assessment at BLN
is sufficient to close
this issue.

Fire Protection
(TAC # 79283)

Concurrence as to the
applicable fire protection
requirements/guidance for BLN

Need to establish agreed-
upon basis for long-lead
program.

Allowable Cable Bend
Radius
(TAC # 79284)

Concurrence that described
approach provides reasonable
assurance cables will not
experience insulation failures
due to bending. Specific
concurrence with acceptance
criteria and inspection plan
is sought.

Previous significant
licensing issue at other
TVA plants. Extensive
replacement to ICEA
criteria is not
technically warranted.

Integrated Control
System
(TAC # 80219)

This position paper was
submitted for information
only. No specific staff
approval is requested.
Comments on plan to license
BLN with the existing ICS as
modified to implement Safety
and Performance Improvement
Program (SPIP) recommendations
are welcome.

NRC expressed interest in
TVA plans with respect to
the ICS

Safe Shutdown
Condition for BLN
(TAC # 80218)

This position paper was
submitted for information
only. No specific staff
approval is requested.
Comments on position that
licensing basis safe shutdown
is hot standby at BLN are
welcome.

NRC expressed interest in
TVA position on safe
shutdown