

# YANKEE ATOMIC ELECTRIC COMPANY

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November 22, 1989  
BYR 89-168

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

References: (a) License No. DPR-3 (Docket No. 50-29)  
(b) USNRC Letter to Yankee, dated October 19, 1989

Subject: Response to Generic Letter 89-21 Concerning Status of  
Implementation of Unresolved Safety Issue Requirements

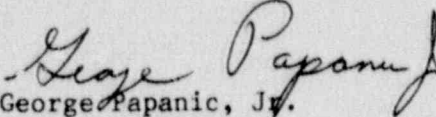
Dear Sirs:

The USNRC, in Reference (b), requested Yankee's assistance in determining the status of Unresolved Safety Issues (USIs) for Yankee Nuclear Power Station. The USNRC provided a list of USIs in which final resolution had been achieved and a table for Yankee to indicate the status for each of these USIs. The completed table is attached.

We trust that you will find the attachment satisfactory; however, if you have any questions, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

  
George Papanic, Jr.  
Senior Project Engineer  
Licensing

GP/tlp/0640v

Attachment

cc: USNRC Region I  
USNRC Resident Inspector, YNPS

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ENCLOSURE 1UNRESOLVED SAFETY ISSUES FOR WHICH A FINAL TECHNICAL RESOLUTION HAS BEEN ACHIEVED

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-1	Water Hammer	SECY 84-119 NUREG-0927, Rev. 1 NUREG-0993, Rev. 1 NUREG-0737 Item I.A.2.3 SRP revisions	A11	C	A-1
A-2/ MPA D-10	Asymmetric Blowdown Loads on Reactor Primary Coolant Systems	NUREG-0609 GL 84-04, GDC-4	PWR	C	A-2
A-3	Westinghouse Steam Generator Tube Integrity	NUREG-0844 SECY 86-97 SECY 88-272 GL 85-02 (No requirements)	W-PWR	N.C.	A-3
A-4	CE Steam Generator Tube Integrity	NUREG-0844, SECY 86-97 SECY 88-272 GL 85-02 (No requirements)	CE-PWR	N.A	
A-5	B&W Steam Generator Tube Integrity	NUREG-0844, SECY 86-97 SECY 88-272 GL 85-02 (No Requirements)	B&W-PWR	N.A.	
E A-6	Mark I Containment Short-Term Program	NUREG-0408	Mark I-BWR	N.A	

\* C - COMPLETE  
 NC - NO CHANGES NECESSARY  
 NA - NOT APPLICABLE  
 I - INCOMPLETE  
 E - EVALUATING ACTIONS REQUIRED

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-7/ D-01	Mark I Long-Term Program	NUREG-0661 NUREG-0661 Suppl. 1 GL 79-57	Mark I-BWR	N.A.	
A-8	Mark II Containment Pool Dynamic Loads	NUREG-0808 NUREG-0487, Suppl. 1/2 NUREG-0802 SRP 6.2.1.1C GDC 16	Mark II-BWR	N.A.	
A-9	Anticipated Transients Without Scram	NUREG-0460, Vol. 4 10 CFR 50.62	All	C	A-9
A-10/ MPA B-25	BWR Feedwater Nozzle Cracking	NUREG-0619 Letter from DG Eisenhut dated 11/13/80 GL 81-11	BWR	N.A.	
A-11	Reactor Vessel Material Toughness	NUREG-0744, Rev. 1 10 CFR 50.60/ 82-26	All	I	A-11
A-12	Fracture Toughness of Steam Generator and Reactor Coolant Pump Supports	NUREG-0577, Rev. 1 SRP Revision 5.3.4	PWP	N.C.	A-12
A-17	Systems Interactions	Ltr: DeYoung to licensees - 9/77 NUREG-1174, NUREG-1229, NUREG/CR-3922, NUREG/CR-4261, NUPEG/CR-4470, GL 89-18 (No requirements)	All	N. C.	A-17
A-24/ MPA B-60	Qualification of Class 1E Safety-Related Equipment	NUREG-0588, Rev. 1 SRP 3.11 10 CFR 50.49 GL 82-09, GL 84-24 GL 85-15	All	C	A-24

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-26/ MPA B-04	Reactor Vessel Pressure Transient Protection	DOP. Letters to Licensees 8/76 NUREG-0224 NUREG-0371 SRP 5.2 GL 88-11	PWR	C	A-26
A-31	Residual Heat Removal Shutdown Requirements	NUREG-0606 RG 1.113, RG 1.139 SRP 5.4.7	All OLs After 01/79.	N.A.	
A-36/ C-10, C-15	Control of Heavy Loads Near Spent Fuel	NUREG-0612 SRP 9.1.5 GL 81-07, GL 83-42, GL 85-11 Letter from DG Eisenhut dated 12/22/80	All	C	A-36
A-39	Determination of SRV Pool Dynamic Loads and Pressure Transients	NUREG-0802 NUREGs-0763,0783,0802 NUREG-0661 SRP 6.2.1.1.C	BWR	N.A.	
A-40	Seismic Design Criteria	SRP Revisions, NUREG/ CR-4776, NUREG/CR-0054, NUREG/CR-3480, NUREG/ CR-1582, NUREG/CR-1161, NUREG-1233, NUREG-4776 NUREG/CR-3805 NUREG/CR-5347 NUREG/CR-3509	All	C	A-40
A-42/ MPA B-05	Pipe Cracks in Boiling Water Reactors	NUREG-0313, Rev. 1 NUREG-0313, Rev. 2 GL 81-03, GL 88-01	BWR	N.A.	

<u>USI/MPA NUMBER</u>	<u>TITLE</u>	<u>REF. DOCUMENT</u>	<u>APPLICABILITY</u>	<u>STATUS/DATE*</u>	<u>REMARKS</u>
A-43	Containment Emergency Sump Performance	NUREG-0510, NUREG-0869, Rev. 1 NUREG-0897, R.G.1.87 (Rev. 0), SRP 6.2.2 GL 85-22 No Requirements	A11	N.C.	A-43
A-44	Station Blackout	RG 1.155 NUREG-1032 NUREG-1109 10 CFR 50.63	A11	C	A-44
A-45	Shutdown Decay Heat Removal Requirements	SECY 88-260 NUREG-1289 NUREG/CR-5230 SECY 88-260 (No requirements)	A11	I	A-45
A-46	Seismic Qualification of Equipment in Operating Plants	NUREG-1030 NUREG-1211/ GL 87-02, GL 87-03	A11	I	A-46
A-47	Safety Implication of Control Systems	NUREG-1217, NUREG-1218 GL 89-19	A11	E	A-47
A-48	Hydrogen Control Measures and Effects of Hydrogen Burns on Safety Equipment	10 CFR 50.44 SECY 89-122	A11, except PWRs with large dry containments	N.A.	A-48
A-49	Pressurized Thermal Shock	RGs 1.154, 1.99 SECY 82-465 SECY 83-288 SECY 81-687 10 CFR 50.61/ GL 88-11	PWR	C	A-49

- \* C- "C" is marked in the status column when an item is applicable to YNPS and the changes are complete. An item is considered complete when all activities have been performed which were necessary to satisfy the NRC's requirements made in its technical resolution of the USI. The note associated with the item will indicate the date completion was attained and any supporting documentation references.
- I- "I" is marked in the status column when an item is applicable to YNPS and is not fully implemented. The note associated with the item will provide the projected implementation date and a short statement identifying the outstanding work.
- E- "E" is marked in the status column when a USI resolution was only recently issued, such as A-47, and Yankee is evaluating its response. The note associated with the item will identify the expected response date.
- NC- "NC" is marked in the status column when an item is applicable to YNPS, but no changes were necessary.
- NA- "NA" is marked in the status column when an item is not applicable to YNPS.

#### NOTES

- A-1 Generic Letter 89-21 identified that this item was resolved with NUREG-0927 and SECY 84-119. SECY 84-119 concluded that the resolution of USI A-1 did not involve any hardware or design changes on existing plants. The staff, in their letter of February 5, 1980, resolved this issue for YNPS.
- A-2 Generic Letter 89-21 identified that this item was resolved with NUREG-0609. The staff issued a safety evaluation report for Westinghouse topical reports dealing with elimination of postulated pipe breaks in PWR primary loops (Generic Letter 84-04). The staff concluded that an acceptable technical basis was provided so that the asymmetric blowdown loads resulting from double-ended pipe breaks in main coolant piping need not be considered as a design basis for certain plants in the Westinghouse Owners Group, provided that the maximum bending moment be less than 42,000 in-kips for the highest stressed vessel nozzle/pipe junction, and that the Leak Detection System be sufficient to provide adequate margin to detect the leakage from the postulated throughwall flaw. YNPS was one of these plants and, using results from SEP (USNRC to Yankee, dated July 16, 1987), the staff determined that the highest stressed vessel nozzle/pipe junction was less than the 42,000 in-kips. The Leak Detection Systems at YNPS (Yankee letter to USNRC, dated May 9, 1985) was evaluated and accepted by the staff in SEP Topic V-5 and found to meet the intent of Generic Letter 84-04. The staff, in its letter of August 4, 1987, concluded that the primary loop piping in YNPS meets the requirements of the revised GDC-4.

- A-3 Generic Letter 89-21 identified that this item was resolved with NUREG-0844. The staff attached NUREG-0844 to Generic Letter 85-02, and Yankee responded on August 12, 1989.
- A-9 Generic Letter 89-21 identified that this item was resolved with the publication of 10CFR50.62. Yankee, by letters dated October 15, 1985, January 21, 1987, January 22, 1988, and April 25, 1988 requested an exemption from the requirements of 10CFR50.62. The staff, in their letter of May 26, 1988, concluded that an exemption to 10CFR50.62 should be granted.
- A-11 Generic Letter 89-21 identified that this item was resolved with NUREG-0744. The staff attached NUREG-0744 to Generic Letter 82-26. In NUREG-0569, the staff performed an Appendix G evaluation of the Yankee reactor vessel based on data from the surveillance program. The evaluation showed that the fracture toughness of the vessel plate material at end of life is well above that required by an Appendix G analysis. It was therefore concluded that the plate material has acceptable fracture toughness properties. However, as a result of the Yankee PLEX Program, it is our intent to re-evaluate the upper shelf energy issue. This evaluation is expected to be submitted to the staff with our PLEX application in June 1991.
- A-12 Generic Letter 89-21 identified that this item was resolved with the publication of NUREG-0577, October 1983. The NUREG resolution required no backfit requirements for existing plants.
- A-17 Generic Letter 89-21 identified that this item was resolved with the publication of Generic Letter 89-18. The generic letter did not require any action by Yankee.
- A-24 Generic Letter 89-21 identified that this item was resolved with the revision to 10CFR50.49. The staff, in their SER of December 12, 1985, concluded that YNPS's Electrical Equipment Environmental Qualification Program complies with the requirements of 10CFR50.49.
- A-26 Generic Letter 89-21 identified that this item was resolved with the publication of NUREG-0224. The staff issued a license amendment to YNPS's Technical Specifications on September 14, 1979 to address overpressure protection. The SER concluded that changes to the Technical Specifications did provide adequate protection from overpressure transients.
- A-36 Generic Letter 89-21 identified that this item was resolved with the publication of NUREG-0612. The staff issued an SER on February 19, 1985 addressing NUREG-0612 for YNPS. The SER concluded that Phase 1 of NUREG-0612 is acceptable at Yankee.

The staff issued Generic Letter 85-11 on June 28, 1985 which closed Phase 2 for all licensees.

- A-40 Generic Letter 89-21 identified that this item was resolved with the publication of NUREG/CR-5347 and NUREG-1233. The generic letter also identified that the only change that was applicable to existing plants was the design of above ground vertical tanks, and this item was transferred to USI A-46.
- A-43 Generic Letter 89-21 identified that this item was resolved with the publication of NUREG-0897. The NUREG did not require any action by Yankee.
- A-44 Generic Letter 89-21 identified that this item was resolved with the publication of 10CFR50.63 in June 1988. Yankee responded on April 13, 1989 to 10CFR50.63. Our analysis did not identify any hardware modifications.
- A-45 Generic Letter 89-21 identified that this item was resolved by SECY 88-260. The SECY did not impose any new licensing requirements other than the individual plant examination. Yankee responded on October 27, 1989 that YNPS's severe accident submittal will be sent to the NRC by December 29, 1989.
- A-46 Generic Letter 89-21 identified that this item was resolved with the issuance of Generic Letter 87-02. Yankee responded on September 30, 1988 with plant-specific seismic verification plans and schedule for YNPS. Yankee plans to perform the seismic verification plant walkdown by the conclusion of the second refueling outage after receipt of the final NRC SER supplement resolving all open issues. This NRC SER has not been issued to date.
- A-47 The staff issued Generic Letter 89-19 on September 20, 1989 which addresses the resolution of USI A-47. Yankee is scheduled to respond to the generic letter in March 1990.
- A-48 Generic Letter 89-21 identified that large dry PWR containments were excluded from USI A-48. However, Yankee has installed taps to the containment which would allow the use of a hydrogen recombiner unit to control hydrogen in the containment atmosphere following an accident. An exemption from seismic and redundancy requirements was granted on October 30, 1984.
- A-49 Generic Letter 89-21 identified that this item was resolved with the publication of 10CFR50.61. The staff SER, issued on March 10, 1987, concluded that the calculated RT (PTS) is acceptable.