ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9109260175 DOC.DATE: 91/09/19 NOTARIZED: NO DOCKET #
FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
AUTH.NAME AUTHOR AFFILIATION
SORENSEN,G.C. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Provides response to request for addl info re Generic Ltr 89-10,Suppl 3, "Consideration of Results of NRC-Sponsored Tests of Motor-Operated Valves."

DISTRIBUTION CODE: A064D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 4
TITLE: Response to Generic Ltr 89-10, "Safety-Related MOV Testing & Surveill

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD5 LA	1	0	PD5 PD	1	1
	ENG,P.L.	1	1			
INTERNAL:	ACRS	1	1	BAER,B RES	1	1
	NRR GODY,A., JR	1	1	NRR/DET/EMEB 7E	1	1
	NRR/LPEB/BC	1	1	REG FILE	1	1
	RES/DSIR/EIB/B	1	1			
EXTERNAL:	NRC PDR	1	1	NSIC	1	1

R I D S / A D D S

R I D S / A D D S

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 12 ENCL 11

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352-0968 • (509) 372-5000

September 19, 1991
G02-91-169

Docket No. 50-397

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NPF-21
RESPONSE TO GENERIC LETTER 89-10, SUPPLEMENT 3,
REQUEST FOR ADDITIONAL INFORMATION (TAC NO. 77801)

References: 1) Letter, G02-91-050, "Response to Generic Letter 89-10, Supplement 3 (TAC Nos. 75738 and 77801)", dated March 12, 1991

2) Letter, PL Eng (NRC) to GC Sorensen (SS), "Request for Additional Information Regarding Generic Letter 89-10, Supplement 3: Consideration of the Results of NRC-Sponsored Tests of Motor-Operated Valves", dated August 7, 1991

Reference 1 submitted the Supply System's response to Generic Letter 89-10, Supplement 3. The Staff in reviewing this submittal identified five additional questions and forwarded them to the Supply System in Reference 2. Accordingly, the attached provides responses to the Reference 2 request for additional information.

Very truly yours,

G. C. Sorensen, Manager
Regulatory Programs

PLP/MRG/bk
Attachment

cc: JB Martin - NRC RV
NS Reynolds - Winston & Strawn
PL Eng - NRC
DL Williams - BPA/399
NRC Site Inspector - 901A

A064 1/1

Attachment

REQUEST FOR ADDITIONAL INFORMATION
GENERIC LETTER 89-10, SUPPLEMENT 3

1. Identify any modifications (e.g., torque switch setting adjustments, gearing changes, or motor/actuator replacement) for each MOV within the scope of Supplement 3 to GL 89-10 since June 1990 or those planned for the future.

   The outboard RCIC isolation valve operator and possibly the valve, (RCIC-MO-8 and RCIC-V-8), are planned to be replaced in the future due to a stroke time concern with the MOV. Engineering for this modification is scheduled to be completed by the end of 1992.

   Torque and limit switch setpoints for Supplement 3 valves have been adjusted programmatically in a similar manner to other GL 89-10 MOV's.

2. Are thermal overload protection devices installed and used?

   Yes, thermal overload protection devices are installed and used at WNP-2.

   The WNP-2 method (Burns and Roe Tech Memo #1129) of sizing the thermal overloads at three sizes larger than normal (approximately 140% full load amps (FLA)) was chosen to assure that the overload would be capable of bounding variations in motor current due to uncertainties such as: tight packing, reduced voltage, setpoint drift, as well as accommodating increased torque (200% FLA) for approximately 200 seconds. The upstream fuse (sized at 125% FLA) provides protection from locked rotor currents and branch circuit faults. The Supply System is reviewing the thermal overloads settings for safety related valve operators in its GL 89-10 Program.

3. Provide actuator and motor type/size for the 4 inch RCIC MOV.

   The following information is provided for the 4 inch RCIC outboard isolation motor operated valve identified as RCIC-MO-8.

   Actuator Type/Size: Limitorque Model SMB-00

   Motor Type/Size: Porter Peerless, 125 VDC Motor
   1900 RPM, 7.5 Ft-Lb Starting Torque

4. Has the leakage rate with an RCIC MOV closed 98% been determined? Does the leakage rate with the valve 98% closed meet the leakage limits of Appendix J and the ASME Code?

The leakage rate with an RCIC MOV closed 98% has not been determined and therefore the leakage rate cannot be compared to the leakage limits of Appendix J and the ASME Code.

The information supplied in our 120 day response to Supplement 3 concerning torque switch bypass in the closing direction was for the purpose of discussing circuitry which assures the valve performs a majority of its closing stroke before the torque switch can interrupt motor operation. No credit was implied or taken for meeting 10CFR50 Appendix J, Type C leakage criteria or any ASME seat leakage test criteria.

The HELB (high energy line break) isolation valves have two independent safety functions. The first is primary containment isolation to maintain the radiological boundary of containment following a LOCA. This isolation can be manually initiated from the control room when RCIC is not required or available. The second is to close during an RCIC HELB to isolate flow into secondary containment. BWR's are not designed for a concurrent LOCA with a HELB outside containment.

During a LOCA, when the containment is pressurized and a source term is present, these valves will not have to close against a significant differential pressure or flow as the valve receives no LOCA isolation signal. If a remote, manual close signal is initiated under these conditions, the valves will fully close and Appendix J leakage limits will be maintained.

During a HELB outside containment, fuel damage does not occur and a source term is not created. Therefore, it is not critical to maintain leakage limits to Appendix J criteria after a HELB. The torque switches are set up to provide the thrust corresponding to the differential pressure present during the HELB. However, if the valve operators were to torque out at the 98% closed position, the design function of the valves under this accident would be accomplished since the valve port would be covered and flow would be isolated. Subsequent actions as outlined in the Emergency Operating Procedures would be performed to insure containment integrity.

5. How have you addressed the rate of loading phenomenon in MOV sizing and torque switch settings?

In general, the "rate of loading" phenomenon has not been addressed in MOV sizing and torque switch settings.

The "rate of loading" issue has been the subject of considerable debate within the industry and is currently the subject of the utility sponsored EPRI MOV Performance/Prediction Program. The Supply System is participating in the EPRI MOV Performance/Prediction Program and will review the results of this and other industry efforts concerning "rate of loading" when they are available. Should definitive results be produced, it is anticipated that we would incorporate the information into the MOV setup methodology as deemed appropriate. In the interim, we are considering reviews of past static and dynamic diagnostic test results of valves in the GL 89-10 Program in an attempt to identify an appropriate sizing factor which may be used to account for the "rate of loading" effect.