

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8207260275 DOC. DATE: 82/07/15 NOTARIZED: NO DOCKET #  
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397  
 AUTH. NAME AUTHOR AFFILIATION  
 BOUCHEY, G. D. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION  
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Summarizes util commitments made at 820520 meeting w/Mark II owners group & NRC re resolution of vacuum breaker cycling issue. Final resolution to be documented in FSAR.

DISTRIBUTION CODE: 80018 COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 2  
 TITLE: PSAR/FSAR AMDTS and Related Correspondence

NOTES:

RECIPIENT		COPIES		RECIPIENT		COPIES	
ID CODE/NAME		LTTR	ENCL	ID CODE/NAME		LTTR	ENCL
A/D LICENSNG		1	0	LIC BR #2 BC		1	0
LIC BR #2 LA		1	0	AULUCK, R.	01	1	1
INTERNAL: ELD/HDS2		1	0	IE FILE		1	1
IE/DEP EPDS	35	1	1	IE/DEP/EPLB	36	3	3
NRR/DE/CEB	11	1	1	NRR/DE/eqB	13	3	3
NRR/DE/GB	28	2	2	NRR/DE/HGEB	30	2	2
NRR/DE/MEB	18	1	1	NRR/DE/MTEB	17	1	1
NRR/DE/QAB	21	1	1	NRR/DE/SAB	24	1	1
NRR/DE/SEB	25	1	1	NRR/DHFS/HFEB	40	1	1
NRR/DHFS/LQB	32	1	1	NRR/DHFS/OLB	34	1	1
NRR/DHFS/PTRB	20	1	1	NRR/DSI/AEB	26	1	1
NRR/DSI/ASB	27	1	1	NRR/DSI/CPB	10	1	1
NRR/DSI/CSB	09	1	1	NRR/DSI/ETSB	12	1	1
NRR/DSI/ICSB	16	1	1	NRR/DSI/PSB	19	1	1
NRR/DSI/RAB	22	1	1	NRR/DSI/RSB	23	1	1
NRR/DST/LGB	33	1	1	<del>REG FILE</del>	04	1	1
RGNS		2	2	RM/DDAMI/MIB		1	0
EXTERNAL: ACRS	41	16	16	BNL (AMDTS ONLY)		1	1
DMB/DSS (AMDTS)		1	1	FEMA-REP DIV	39	1	1
LPDR	03	1	1	NRC PDR	02	1	1
NSIC	05	1	1	NTIS		1	1

A black and white photograph of a large, open field, possibly a sports field or a park. In the background, there is a dense line of trees. The field itself is mostly empty, with a few small, dark figures scattered across it, suggesting a group of people or animals. The sky is very bright and appears overexposed, with some faint, wispy clouds visible. The overall composition is simple and captures a wide, open space.

## Washington Public Power Supply System

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

July 15, 1982  
G02-82-608

Docket No. 50-397

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Schwencer:

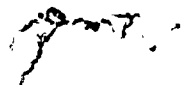
Subject: NUCLEAR PROJECT NO. 2  
VACUUM BREAKER MODIFICATION

Reference: (a) G02-82-367, dated April 6, 1982,  
G. D. Bouchey to A. Schwencer  
(b) NRC Memorandum, dated June 14, 1982,  
F. Eltawila to W. Butler, "Containment  
Systems Branch"

Reference (a) advised you the Supply System anticipated reaching a decision point on resolution of the vacuum breaker cycling issue by July 15, 1982. On May 20, 1982, the Mark II Owners Group met with members of the NRC staff to (a) provide an update on ongoing efforts to define predicted opening and closing impact velocities for valve actuations during pool swell and chugging, (b) to apprise the staff as to the status of the Anderson Greenwood vacuum breaker test program, and (c) to summarize each Mark II plant's position and anticipated course of action to resolve this issue. At this meeting, the Supply System advised the staff of the following:

- (1) WNP-2 is proceeding with efforts to adapt a damping device to the dry-well-to-wetwell vacuum breakers to reduce impact loads to tolerable levels during postulated pool swell and chugging events.
- (2) Downcomers upon which vacuum breakers are mounted (nine total) will remain uncapped.
- (3) Supply System participation in the Anderson Greenwood vacuum breaker test program is confined to Phase I and II only (i.e., initial structural analysis, and testing to establish valve capacity and dynamic response). The Supply System is not participating in Phase III and IV of this program (i.e., redesign of valve to increase structural capacity, and impact testing of the modified valve) because of differences between the WNP-2 vacuum breaker, and the vacuum breakers used in

Boo1



Mr. A. Schwencer  
Page Two  
July 15, 1982  
G02-82-608

Susquehanna, Limerick, and Shoreham (i.e., no external spring cylinder, use of magnets to attain setpoint pressure, and use of a bottom pivot rear disc.)

At the May 20th meeting, the Supply System provided results of preliminary analysis by Dr. Bilanin of Continuum Dynamics, Incorporated, which indicated the use of dampers was a viable approach to upgrade the existing vacuum breakers by reducing impact velocities of the valve disc to within tolerable levels. (Results of this preliminary analysis are included in the attachments to reference b).

At the present time, the Supply System is proceeding along the course outlined in the May 20th meeting. A particular damper has not yet been selected, but several promising candidates manufactured by various vendors, and available "off-the-shelf" are being evaluated. Once the dual disc vacuum breaker model being developed by Continuum Dynamics, Incorporated under the Mark II Owners Group Program is finalized, the damper type will be selected and implementation of the vacuum breaker modification will begin.

In addition to installation of a damper, replacement of some internal structural components with higher strength materials (i.e. the shaft, and components in the shaft-to-disc linkage) is being evaluated. These modifications are of a relatively minor nature, and will be implemented if required by structural analysis and/or recommendation of the valve manufacturer.

At the current time, it is anticipated that material procurement, valve modifications, and testing to verify valve performance will be carried out by the Anderson Greenwood Company at their manufacturing and test facilities.

These modifications will be completed, and valves reinstalled in the wetwell prior to fuel load.

Final resolution of this issue will be documented in the FSAR.

Very truly yours,

  
G. D. Bouchey  
Deputy Director, Safety and Security

EAF:kjt

cc: R. Auluck - NRC  
WS Chin - BPA  
R. Feil - NRC Site  
M. Humm - NRC  
F. Eltawila - NRC  
JJ Verderber- B&R NY  
JA Forrest - B&R RO  
RA Snaith - B&R NY

1951

