REGULAT● INFORMATION DISTRIBUTION ●YSTEM (RIDS)

ACCESSION NBR:8203290237 DOC.DATE: 82/03/18 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: Responds to S Rhow 820226 concerns re load shedding & load sequencing of emergency loads to Class IE buses.Table 6.3-1, operational sequence of ECCS for DBA encl.

DISTRIBUTION CODE: B001S COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 3
TITLE: PSAR/FSAR AMDTS and Related Correspondence

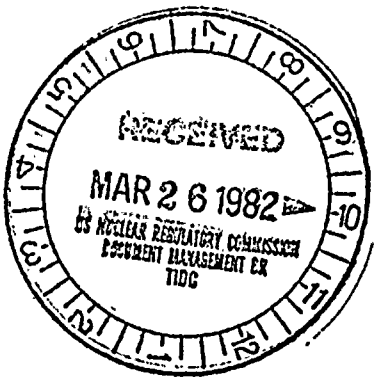
NOTES:2 copies all matl:PM. 05000397

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES 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		1	0	IE	06	1	1
	IE/DEP/EPDB	35	1	1	IE/DEP/EPLB	36	3	3
	MPA		1	0	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
	REG FILE	04	1	1	RGN5		2	2
EXTERNAL:	ACRS	41	16	16	BNL(AMDTS ONLY)		1	1
	FEMA-REP DIV	39	1	1	LPDR	03	1	1
	NRC PDR	02	1	1	NSIC	05	1	1
	NTIS		1	1				

TOTAL NUMBER OF COPIES REQUIRED: LTTR ~~63~~ 65 ENCL ~~58~~ 60

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

March 18, 1982
G02-82-328



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
PSB SER OPEN ITEMS

This letter addresses concerns expressed by Sang Rhow, NRC PSB Electrical Reviewer, during a conference call on Friday, February 26, 1982.

Power System Branch Technical Position 1, Item 2, deals with load shedding and load sequencing of the emergency loads to the Class IE Buses. Load shedding and load sequencing applies to critical buses SM-7 and SM-8 only.

WNP-2 retains the load shedding feature during the sequencing of emergency loads onto the Class IE Buses following a loss of offsite power. Load shedding in this situation would be instituted only if bus voltage were to dip below 69% of the nominal bus voltage. A voltage drop of this magnitude would occur only if major problems were to occur to the onsite power source. In this case load shedding would be necessary.

Bus voltage during motor starting is not expected to drop to less than 80% of nominal bus voltage. The eight (8) second time delay for the second level of under-voltage protection will prevent it from operating on motor starting voltage dips.

The following addresses the second paragraph of Position 1, Item 2, which is concerned with under-voltage setpoints, tolerances and their documentation.

Tolerances for the first level of under-voltage protection is ± 3%. Tolerances for the second level under-voltage protection have recently been supplied to the NRC. These setpoints and tolerances are documented in drawing E-514, Protective Relay Setpoint Log.

B001
S/1

Attached is the amended Table 6.3-1. Note 2 addresses the eight (8) second time delay of the second level under-voltage protection in relation to the ECCS analysis.

Very truly yours,

G. D. Bouchey
Deputy Director, Safety and Security

TLM/jca
Attachment

cc: R Auluck - NRC
WS Chin - BPA
R Feil - NRC Site
S Rhow - NRC

TABLE 6.3-1

OPERATIONAL SEQUENCE OF EMERGENCY CORE COOLING SYSTEMS
FOR DESIGN BASIS ACCIDENT

Time (sec)	Events
0	Design basis loss-of-coolant accident assumed to start; offsite power assumed to be lost.
0	Drywell high pressure and reactor low water level reached. All diesel generator signaled to start; scram; HPCS, LPCS, LPCI signaled to start on high drywell pressure.
3	Reactor low-low water level reached. Main steam isolation valves close; HPCS receives second signal to start.
7	Reactor low-low-low water level reached. Second signal to start LPCI and LPCS; auto-depressurization sequence begins.
10 (Note 2)	All diesel generators ready to load; energize HPCS pump motor; open HPCS injection valve: begin energizing LPCI and LPCS pump motors.
27	HPCS injection valve open and pump at design flow, which completes HPCS startup.
40	LPCI and LPCS pumps at rated flow, LPCI and LPCS injection valves open, which completes the LPCI and LPCS startups.
See Figure 6.3-21a	Core effectively reflooded assuming worst single failure; heatup terminated.
600	Operator shifts to containment cooling.

Notes: 1) For the purpose of all but the next to last entry on this table, all ECCS equipment is assumed to function as designed. Performance analysis calculations consider the effects of single equipment failures. (See 6.3.2.5 and 6.3.3.3).

2) Thirteen (13) seconds for DG-1 and DG-2 and eleven (11) seconds for DG-3 (HPCS DG) if the offsite grid voltage is degraded, but not totally lost. (See 8.3.1.2.4.3.2.) This is acceptable based on five (5) second motor starting time and twelve (12) second valve opening time, thus allowing an HPCS injection time of less than twenty-seven (27) seconds and LPCS and LPCI injection time of less than forty (40) seconds.