REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8504300201 DOC.DATE: 85/04/19 NOTARIZED: NO DOCKET #
FACIL:50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina 05000400
AUTH.NAME AUTHOR AFFILIATION
ZIMMERMAN,S.R. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards "Alternative Shutdown in Event of Fire Necessitating Control Room Evacuation", in response to Auxiliary Sys Branch request for addl info re util 850405 fire protection submittal.

DISTRIBUTION CODE: B002D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 37
TITLE: Licensing Submittal: Fire Protection

NOTES:

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	NRR LB3 BC		1	1	BUCKLEY,B	01	1	1
INTERNAL:	ACRS	10	6	6	ADM/LFMB		1	0
	ELD/HDS1		1	0	NRR/DE/CEB	06	2	2
	NRR/DSI/ASB		1	1	REG FILE	04	1	1
	RGN2		1	1				
EXTERNAL:	LPDR	03	1	1	NRC PDR	02	1	1
	NSIC	05	1	1				

TOTAL NUMBER OF COPIES REQUIRED: LTTR 18 ENCL 16

CP&L

Carolina Power & Light Company

SERIAL: NLS-85-132

APR 19 1985

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
UNIT NO. 1 - DOCKET NO. 50-400
FIRE PROTECTION

Dear Mr. Denton:

Carolina Power & Light Company (CP&L) hereby submits additional information concerning fire protection at the Shearon Harris Nuclear Power Plant (SHNPP). This information is submitted in response to a verbal request for clarification from the NRC Auxiliary Systems Branch reviewer concerning our fire protection submittal NLS-85-113, dated April 5, 1985.

The attached table contains a listing of equipment available to shut down the plant following a fire-induced evacuation of the Control Room. (i.e., Equipment that has no annotation under the columns "Potential Fire-Induced Failure Due to Fire in Area" is the minimum equipment available for Alternate Shutdown.) Additionally, the attached table includes equipment that may be available after transfer to the Alternate Shutdown System, but for which no credit is taken in the shutdown analysis. (i.e., Annotation in one of the three columns entitled "Potential Fire-Induced Failure Due to Fire in Area" indicates the area for which a fire could cause damage to that equipment.) Evacuation of the Main Control Room and shutdown by alternate means could be required if a fire occurs in any one of three fire areas (12-A-CR, 12-A-CRC1, 12-A-HVIR) as discussed in our response to NRC Question 410.45 submitted April 5, 1985.

The attached table indicates the alternative shutdown location providing controls or indication for the equipment listed. The following is a list of alternate shutdown locations included in the table:

1. Auxiliary Control Panel (ACP)
2. Auxiliary Transfer Panel 1A (ATP-1A)
3. Auxiliary Transfer Panel 1B (ATP-1B)
4. Diesel Generator Control Panel 1A (DGCP-1A)
5. Diesel Generator Control Panel 1B (DGCP-1B)
6. Local
7. Other

The Diesel Generator Control Panels (listed above) and their circuits are protected; however, additional failures must be postulated to necessitate actions from these panels. The Auxiliary Transfer Panels 1A and 1B are located in cable spreading rooms 1A and 1B, respectively. These Auxiliary Transfer Panels were added as a result of the safe shutdown analyses.

B002
1/1

411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

If you have any questions concerning this material or require additional information, please contact me.

Yours very truly,

S. R. Zimmerman
Manager
Nuclear Licensing Section

JHE/ccc (1395NLU)

Attachment

cc: Mr. B. C. Buckley (NRC)
Mr. G. F. Maxwell (NRC-SHNPP)
Mr. Norm Wagner (NRC-ASB)
Dr. J. Nelson Grace (NRC-RII)
Mr. Travis Payne (KUDZU)
Mr. Daniel F. Read (CHANGE/ELP)
Wake County Public Library
Mr. Wells Eddleman
Mr. John D. Runkle
Dr. Richard D. Wilson
Mr. G. O. Bright (ASLB)
Dr. J. H. Carpenter (ASLB)
Mr. J. L. Kelley (ASLB)

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: AFWS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
AFW Pump 1A	1	CS 1921.2								X	X
AFWP 1A Disch Press Vlv 3AF-P1-SA (PCV-2150A)	1							Note 1		X	X
AFWP 1A Recirc Vlv 3AF-V187 SA-1	1	CS 1923.2						Note 2		X	
AFWP 1A Supply Vlv 3SW-B74-SA-1	1	CS 2262.2								X	
AFWP 1A Supply Vlv 3SW-B75-SA-1	1	CS 2261.2								X	
AFW To SG 1A Reg Vlv 3AF-F1SA-1 (FCV-2051A2)	1	FK 2051A2								X	X
AFW To SG 1C Reg Vlv 3AF-F2SA-1 (FCV-2051C2)	1	FK 2051C2								X	X
AFW To SG 1A Isol Vlv 2AF-V10 SB-1	1	CS 1930.2								X	
AFW To SG 1C Isol Vlv 2AF-V23 SB-1	1	CS 1932.2								X	
SG A Wide Range Lvl Ind LI-1FW-0477 SA	1	LI-477.2									
SG C Wide Range Lvl Ind LI-1FW-0497 SA	1	LI-497.2								X	X
Cndst Stor Tk Lvl Ind LI-1CE-9010A1 SA	1	LI-9010A2								X	X
AFW Turbine Pump Stop Valve	2	CS 1976.2									
AFW Turbine Pump Control	2	PDK 2180.2									
AFW Turb 1X SG C Isol Vlv 2MS-V9-SB	2	CS 1974.2									

Note 1 - Valve modulates automatically according to pump discharge pressure.

Note 2 - Valve operates automatically via interlock with AFWP 1A.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: AFWS (Cont'd)

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
SW To AFWP 1X Supply Vlv 3SW-B72 SB-1	2	CS 2260.2									
SW To AFWP 1X Supply Vlv 3SW-B73 SB-1	2	CS 2259.2									
AFWP 1X To SG A Reg Vlv (NOTE 1) 3AF-F4-SB (FCV2071A)	2	FK 2071A2									
AFWP 1X To SG B Reg Vlv 3AF-F6-SB (FCV2071B)	2	FK 2071B2									
AFWP 1X To SG B Isol Vlv 2AF-V117 SA-1	2	CS 1934.2									
AFWP 1X To SG A Isol Vlv (NOTE 1) 2AF-V116 SA-1	2	CS 1935.2									
SG B Wide Range Lvl Ind LI-1FW-0487 SB	2	LI-0487.2									
Cndst Stor Tk Lvl Ind LI-1CE-9010B1 SB	2	LI-9010B2									
AFW TURBINE PUMP DIFF PRESSURE	2	PDI-2180.2									

NOTE 1: STEAM GENERATOR "A" USED FOR SHUTDOWN RATHER THAN STEAM GENERATOR "C"

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: CCW

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:1R
CCW Pump 1A-SA	1	CS 941.2									
CCW Pump 1C-SAB (SA Train)	1	CS 943.2									
CCS NESS Rtn Isol Vlv 3CC-B5SA-1 (1-9370)	1							None	X	X	
CCS NESS Sup Isol Vlv 3CC-B19SA-1 (1-9384)	1							None	X	X	
RHRS Clg Wtr Isol Vlv 3CC-V165SA-1 (1-9431A)	1							None	X	X	
CCW Pump 1B-SB	2	CS 942.2									
CCW Pump 1C-SAB (SB Train)	2	CS 944.2									
CCS NESS Rtn Isol Vlv 3CC-B6SB-1 (1-9371)	2			CS 834A							
CCS NESS Sup Isol Vlv 3CC-B20SB-1 (1-9385)	2			CS 834B							
RHRS Clg Wtr Isol Vlv 3CC-V167SB-1 (1-9431B)	2			CS 834C							

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: CRLT

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Lighting Panel LP-112 (ACP)	1							None Req			
Lighting Panel LP-113 (ACP)	2							None Req			

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: CVCS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Charging Pump 1A-SA	1	CS 221.2									
Charging Pump 1C-SAB (SA Train)	1	CS 223.2									
BA Transfer Pump 1A-SA	1	CS 229.2									
CSIP Suct Hdr Isol Vlv 2CS-V587SA (1-8130A)	1							None	X		
CSIP Disch Hdr Isol Vlv 2CS-V603 SA (1-8132A)	1							Note 2,6			
RWST To Chrg Pmp Vlv 2CS-L523 SA (LCV-115B)	1							None	X		
BAT To Chrg Pmp Vlv 2CS-V586 SB (1-8104)	1,2	CS 268.2									
VCT Out Isol Vlv 2CS-L520 SA (LCV-115C)	1							None	X	X	X
CSIP Suct Hdr Isol Vlv 2CS-V589SA (1-8131A)	1,2							Note 2,6			
CSIP Suct Hdr Isol Vlv 2CS-V590SB (1-8131B)	1,2							Note 2,6			
CSIP Suct Hdr Isol Vlv 2CS-V588SB (1-8130B)	1							None	X		
CSIP Disch Hdr Isol Vlv 2CS-V604SB (1-8132B)	1							Note 2,6			
CSIP Disch Hdr Isol Vlv 2CS-V605SA (1-8133A)	1							Note 2,6			
Chrg Hdr FCV 2CS-F524 SN (FCV-122)	1	FK 122.2									
CSIP To RCS Isol Vlv 2CS-V609SB-1 (1-8108)	1							Note 2,6			

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: CVCS (Cont'd)

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
CSIP To RCS Isol Vlv 2CS-V609SB (1-8108)	1							Note 2,6			
CSIP To RCS Isol Vlv 2CS-V610SA-1 (1-8107)	1							Note 2,6			
RCS Prz Aux Spray Vlv 2CS-V501SN-1 (1-8145)	1							Note 2,5			
RCS Norm Chrg Line Vlv 2CS-V502SN-1 (1-8146)	1	CS 282.2									
BA Xfer Pmp To Chrg Pmp Vlv 3CS-G5 SN	1							Note 3			
BA Xfer Pmp To Chrg Pmp Vlv 3CS-G6 SN	1							Note 3			
HHSI To RCS Hot Leg Vlv 2SI-V500SA (1-8884)	1							Note 2,6			
HHSI To RCS Cold Leg Vlv 2SI-V502SA (1-8885)	1							Note 2,6			
BIT Out Isol Vlv 2SI-V506 SA (1-8801A)	1							Note 2,6			
Charging Pump 1B-SB	2	CS 222.2									
Charging Pump 1C-SAB (SB)	2	CS 224.2									
BA Transfer Pump 1B-SB	2	CS 230.2									
BAT To Chrg Pmp Bypass Vlv 2CS-D278 SN	2						Manual				
VCT Outlet Isol Vlv 2CS-L521 SB (LCV-115E)	2			CS 831							
CSIP Disch Hdr Vlv 2CS-V606 SB (1-8133B)	2							Note 2,6			

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: CVCS (Cont'd) Safe Shutdown Equipment	Division No.	Alternative Shutdown Location Providing Controls or Indication - ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	Potential Fire-Induced Failure Due to Fire in Area 12-A-CR	12-A-CRC1	12-A-HV:IR
HHSI To RCS Hot Leg Vlv 2SI-V501SB (1-8886)	2							Note 2,6			
BIT In Isol Vlv 2SI-V504 SB (1-8803B)	2							None	X		
BIT Out Isol Vlv 2SI-V505 SB (1-8801B)	2							Note 2,6			
RWST To Chrg Pmp Vlv 2CS-L522 SB (LCV-115D)	2						Note 4		X	X	
Boric Acid Tank LvL Ind	2	LI-161									
Instrument Air Compressor 1A	1						Local Panel	Note 7			
Instrument Air Compressor 1C	2						Local Panel	Note 7			
CHARGING FLOW INDICATION	1	FI-122.2									
SI FLOW INDICATION (FI-943)	2							NONE			

Note 2 - Valve control disconnected upon transfer to ACP to prevent spurious operation. Operator to verify proper position locally.

Note 3 - Controls charging located on Waste Processing Control Board.

Note 4 - Valve will be opened locally if B.A. Tank Level goes low.

Note 5 - Valve Fails closed

Note 6 - Valve Fails As Is

Note 7 - Manually align Emergency Service Water Valves and manually load on Diesel Generator

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: CWS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Chiller WC-2 (1A-SA)	1	CS2601.2							X	X	
Chiller WC-2 (1B-SB)	2	CS2631.2									
Cndsr Wtr Svp Vlv 3SW-B300SA-1	1	CS2612.2							X	X	
Cndsr Wtr Svp Vlv 3SW-B303SB-1	2	CS2642.2									
Condenser Water Pump P7 (1A-SA)	1							Note 1	X	X	X
Condenser Water Pump P7 (1B-SB)	2							Note 1			
Chilled Water Pump P4 (1A-SA)	1	CS2604.2									
Chilled Water Pump P4 (1B-SB)	2	CS2634.2									
Chilled Wtr Vlv 3CX-W1 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W3 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W7 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W10 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W9 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W14 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W8 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W5 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W13 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W15 SA	1							Note 2		X	X
Chilled Wtr Vlv 3CX-W22 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W16 SA	1							Note 2		X	X
Chilled Wtr Vlv 3CX-W23 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W17 SA	1							Note 2		X	X
Chilled Wtr Vlv 3CX-W24 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W18 SA	1							Note 2		X	X
Chilled Wtr Vlv 3CX-W25 SB	2							Note 3			
Chilled Wtr Vlv 3CX-W20 SA	1							Note 2		X	X
Chilled Wtr Vlv 3CX-W27 SB	2							Note 3			

Note 1: Pump operates automatically via interlock with respective chiller.

Note 2: Valves operate automatically via interlock with respective AH units.

Note3: Valves fail open upon transfer from the MCB.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: CWS (Cont'd)

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Chilled Wtr Vlv 3CX-W21 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W29 SB	2							Note 2			
Chilled Wtr Vlv 3CX-W2 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W4 SB	2							Note 2			
Chilled Wtr Vlv 3CX-W32 SA	1							Note 2		X	
Chilled Wtr Vlv 3CX-W33 SB	2							Note 2			
Chilled Wtr Vlv 3CX-V121 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3CX-V247 SB	2							Note 2			
Chilled Wtr Vlv 3CX-V83 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3CX-V63 SB	2							Note 2			
Chilled Wtr Vlv 3CX-V122 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3CX-V244 SB	2							Note 2			
Chilled Wtr Vlv 3CX-V243 SB	2							Note 2			
Chilled Wtr Vlv 3CX-B4 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3CX-B1 SB	2							Note 2			
Chilled Wtr Vlv 3CX-V114 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3CX-V110 SB	2							Note 2			
Chilled Wtr Vlv 3CH-V128 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3CH-V85 SB	2							Note 2			
Chilled Wtr Vlv 3CH-B3 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3CH-B1 SB	2							Note 2			
Chilled Wtr Vlv 3SW-V868 SA	1							Note 2	X	X	
Chilled Wtr Vlv 3SW-V869 SB	2							Note 2			

Note 2: Valves operate automatically via interlock with respective AH units

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: EDGS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Emerg Diesel Generator 1A-SA	1						NOTE 1				
Emerg Diesel Generator 1B-SB	2						NOTE 1				
DG FO Transfer Pump 1A-SA	1				CS2549.2						
DG FO Transfer Pump 1B-SB	2					CS2550.2					
DG FO Day Tk in Vlv 3FO-V27 SA-1	1				CS2553.2						
DG FO Day Tk in Vlv 3FO-V28 SB-1	2					CS2554.2					
DG Aux LO Pump 1A-SA	1				CS1983.2						
DG Aux LO Pump 1B-SB	2					CS2003.2					
DG LO Circ Pump 1A-SA	1				CS1984.2						
DG LO Circ Pump 1B-SB	2					CS2004.2					
DG Water Jacket Circ Pump 1A-SA	1				CS1985.2						
DG Water Jacket Circ Pump 1B-SB	2					CS2005.2					

Note 1: Local pushbutton starter available at diesel generator.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: EFAS

Safe Shutdown Equipment	System/ Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Charging Isol Va 2CS-V610SA (1-8107)	CVCS 1							Note 1,2			
Charging Isol Va 2CS-V609SB (1-8108)	CVCS 1							Note 1,2			
BIT Tank Isol Va 2SI-V506SA (1-8801A)	CVCS 2							Note 1,2			
Accumulator 1A Disch Va 2SI-V537SA (1-8808A)	SIS 1							Note 1,2			
Accumulator 1B Disch Va 2SI-V536SB (1-8808B)	SIS 1							Note 1,2			
Accumulator 1C Disch Va 2SI-V535SA (1-8808C)	SIS 1							Note 1,2			
Cnmt Sump Isol Va 2SI-V573SA (1-8812A)	RHRS 1							Note 1,2			
CCW Pump 1B-SB	CCW 2							Note 1,4			
CCW Pump 1C-SAB (SB Train)	CCW 2							Note 1,4			
Cnmt Sump Isol Va 2SI-V572SB (1-8812B)	RHRS 2							Note 1,2			

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION:

System: EFAS (Cont'd)

Safe Shutdown Equipment	System/ Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:1R
AFW Turbine Pump 1XSAB	AFWS-2							Note 1,8			●
Stm Supp Va 2MS-V9SB											
Stm Supp Va 2MS-V8SA	AFWS-2 (Alternate)							Note 1,8			
Emer DG 1A-SA	EDGS-1							Note 1,2			
Emer DG 1B-SB	EDGS-2							Note 1,2			
Norm SW HDR Isol Va 3SW-B5SA	ESWS-1							Note 1,2			
Norm SW HDR Isol Va 3SW B6SB	ESWS-2							Note 1,2			
Norm SW Return HDR Isol Va 3SW B14SB	ESWS-2							Note 1,2			
Norm SW Return HDR Isol Va 3SW B8SA	ESWS-1							Note 1,2			
ESW Return HDR Isol Va 3SW B15SA	ESWS-1							Note 1,2			●
ESW Return HDR Isol Va 3SW B16SB	ESWS-2							Note 1,2			

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: EFAS (Cont'd)

Safe Shutdown Equipment	System/ Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Emergency Load Sequencer ESS Cabinet 1A-SA	PDSAC 1							Note 1,2,6			●
Emergency Load Sequencer ESS Cabinet 1B-SB	PDSAC 2							Note 1,2,6			
Stm Gen 1A AFW Isol Va 2AF-V116SA	AFWS 1 (Alternate)							Note 1,7			
Stm Gen 1B AFW Isol Va 2AF-V117SA	AFWS 2							Note 1,7			
Stm Gen 1C AFW Isol Va 2AF-V118SA	AFWS 2							Note 1,7			
Stm Gen 1A AFW Reg Va 3AF-F4SB (FCV 2071A)	AFWS 1 (Alternate)							Note 1,7			
Stm Gen 1B AFW Reg Va 3AF-F6SB (FCV 2071B)	AFWS 2							Note 1,7			
Cnmt Instrument Air Isol Va 2IA-V34SA	-							Note 1,9			●

Note 1 - Solid State protection cabinet outputs are disconnected upon transfer to the ACP
Note 2 - Safety Injection Signal Actuation
Note 3 - Pressurizer Press. Interlock
Note 4 - RWST Lo-Lo Level Interlock
Note 5 - CCW Lo Pressure Interlock
Note 6 - Containment Spray Actuation Signal
Note 7 - AFW Isolation Signal
Note 8 - SG 2/3 Low-Low Level
Note 9 - Containment Isolation Phase A

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: ESWS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
ESW Pump 1A-SA	1	CS2211.2									
ESW Pump 1B-SB	2	CS2212.2									
ESWP 1A Aux Rsvr Vlv 3SW-B1 SA-1	1	CS2217.2									
ESWP 1B Aux Rsvr Vlv 3SW-B2 SB-1	2	CS2218.2									
Strainer 3SW S21-SA	1						Strainer Cntl Pnl				
Strainer 3SW S22-SB	2						Strainer Cntl Pnl				
ESWP 1A Strainer Vlv 3SW-H2 SA-1	1						Strainer Cntl Pnl				
ESWP 1B Strainer Vlv 3SW-H3 SB-1	1						Strainer Cntl Pnl				
SW Vlv to Aux Rsvr 3SW-B15 SA-1	1							Note 3,4			
SW Vlv to Aux Rsvr 3SW-B16 SB-1	2							Note 3,4			
SW Main Hdr Isol Vlv 3SW-B8 SA-1	1							Note 3,4			
Return to NSW Hdr 3SW-B14 SB-1	2							Note 3,4			
ESW Booster Pump 1A-SA	1							Note 4		X	
ESW Booster Pump 1B-SB	2							Note 4			
Cnmt Fan Clr AH-2, In Vlv 3SW-B45 SA-1	1							None	X		
Cnmt Fan Clr AH-4 In Vlv 3SW-B51 SB-1	2							Note 1			
Cnmt Fan Clr AH-3 In Vlv 2SW-B46 SA-1	1							None	X		
Cnmt Fan Clr AH-1 In Vlv 2SW-B52 SB-1	2							Note 1			
Cnmt Fan Clr AH-3 Out Vlv 2SW-B47 SA-1	1							None	X		
Cnmt Fan Clr AH-1 Out Vlv 2SW-B48 SB-1	2							Note 1			

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: ESWS (Cont'd)

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Cnmt Fan Clr AH-2 Out Vlv 2SW-B49 SA-1	1							None	X		
Cnmt Fan Clr AH-4 Out Vlv 2SW-B50 SB-1	2							Note 1			
ESW Screen Wash Pump 1A-SA-1	1							Note 2			
ESW Screen Wash Pump 1B-SB-1	2							Note 2			
ESW Aux Reservoir Travelling Screen 1A-SA	1						Screen Cntl Pnl				
ESW Aux Reservoir Travelling Screen 1B-SB	2						Screen Cntl Pnl				
ESW Aux Rsvr Bay 8 Scrn Vlv 3SC-V26 SA-1	1							Note 2			
ESW Aux Rsvr Bay 6 Scrn Vlv 3SC-V31 SB-1	2							Note 2			
ESWP 1A Seal Wtr Vlv 3SC-V638 SA-1	1							Note 2			
ESWP 1B Seal Wtr Vlv 3SC-V639 SB-1	2							Note 2			

Note 1 - Valve control disconnected upon transfer to ACP to prevent spurious operation

Note 2 - Equipment interlocked with ESW pumps to operate automatically upon transfer to the ACP.

Note 3 - Valve interlock with ESW Pump to operate automatically.

Note 4 - Status indicating light on ACP.

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: HCFC

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Cntmt Fan Cooler AH-2 (1A-SA)	1	CS2673.2								X	
Cntmt Fan Cooler AH-4 (1A-SB)	2	CS2745.2									
Cntmt Fan Cooler AH-2 (1B-SA)	1	CS2675.2									
Cntmt Fan Cooler AH-4 (1B-SB)	2	CS2747.2									
Cntmt Fan Cooler AH-3 (1A-SA)	1	CS2741.2									
Cntmt Fan Cooler AH-1 (1A-SB)	2	CS2669.2									
Cntmt Fan Cooler AH-3 (1B-SA)	1	CS2743.2									
Cntmt Fan Cooler AH-1 (1B-SB)	2	CS2671.2									
Damper CV-D4 SA	1							Note 1		X	
Damper CV-D8 SB	2							Note 1			
Damper CV-D3 SA	1							Note 1		X	
Damper CV-D7 SB	2							Note 1			
Damper CV-D6 SA	1							Note 1		X	
Damper CV-D2 SB	2							Note 1			
Damper CV-D5 SA	1							Note 1		X	
Damper CV-D1 SB	2							Note 1			

Note 1 - Damper operates automatically via interlock with fan.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: HCRC

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:1R
Typical All Components	1,2	Note 1						See Note	X	X	X

Note 1 - This system is not required during alternative shutdown. Controls are provided on the ACP, but are not necessary for safe shutdown.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: HCRM

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Typical All Components	1, 2							See Note	X	X	X

Note: This system is not required during alternative shutdown. No controls outside of the Control Room are necessary.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: HDGB

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Elec Equip. RM Sup Fan AH-85 1A-SA	1		CS 826C								
Elec Equip. RM Sup Fan AH-85 1B-SA	1		CS 826D								
Elec Equip. RM Sup Fan AH-85 1C-SB	2			CS 844A							
Elec Equip. RM Sup Fan AH-85 1D-SB	2			CS 844C							
DG Room Damper DG-D3 (SA-1)	1							Note 1			
DG Room Damper DG-D3 (SB-1)	2							Note 1			
DG Room Damper DG-D4 (SA-1)	1							Note 1			
DG Room Damper DG-D4 (SB-1)	2							Note 1			
Day Tank Room Exhaust Fan E-61 (1A-SA)	1		CS 850A								
Day Tank Room Exhaust Fan E-61 (1B-SA)	1		CS 850B								
Day Tank Room Exhaust Fan E-61 (1C-SB)	2			CS 845A							
Day Tank Room Exhaust Fan E-61 (1D-SB)	2			CS 845B							
DG Room Exhaust Fan E-86 (1A-SA)	1		CS 826A								
DG Room Exhaust Fan E-86 (1B-SA)	1		CS 826B								
DG Room Exhaust Fan E-86 (1C-SB)	2			CS 844B							
DG Room Exhaust Fan E-86 (1D-SB)	2			CS 844D							
DG Room Damper DG-D2 (SA-1)	1							Note 2			
DG Room Damper DG-D2 (SB-1)	2							Note 2			
DG Room Damper DG-D1 (SA-1)	1							Note 2			
DG Room Damper DG-D1 (SB-1)	2							Note 2			
AH-85 SA Chl Wtr Vlv 3SW-V649 SA-1	1							Note 3			
AH-85 SB Chl Wtr Vlv 3SW-V652 SB-1	2							Note 3			

Note 1 - Damper operates automatically via interlock with DG Room supply fan.

Note 2 - Damper operates automatically via interlock with DG Room exhaust fan.

Note 3 - Valve operates automatically via interlock with Elec. Equip. Room supply fan.

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: HFOB

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:1R
Exhaust Fan E-85 (1A-SA)	1		CS 850C								
Exhaust Fan E-85 (1B-SA)	1		CS 850D								
Exhaust Fan E-85 (1C-SB)	2			CS 845C							
Exhaust Fan E-85 (1D-SB)	2			CS 845D							

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: HHCC

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication						Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
MCC B-35 Fan Cooler AH-92 (1A-SA)	1							None	X	X	X
MCC B-35 Fan Cooler AH-92 (1B-SB)	2			CS 841C							
Local Cooling Unit AH-23 (1X-SA)	1							None			
Local Cooling Unit AH-29 (1X-SB)	2			CS 843C					X	X	X
Local Cooling Unit AH-11 (1A-SA)	1							None			
Local Cooling Unit AH-11 (1B-SB)	2			CS 841A					X	X	X
Local Cooling Unit AH-24 (1X-SA)	1							None			
Local Cooling Unit AH-25 (1X-SB)	2			CS 843D							

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: HRAA

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
SWGR RM A Sup Fan AH-12 (1A-SA)	1		CS 828A								
SWGR RM B Sup Fan AH-13 (1A-SB)	2			CS 846A							
SWGR RM A Sup Fan AH-12 (1B-SA)	1		CS 827A								
SWGR RM B Sup Fan AH-13 (1B-SB)	2			CS 842B							
Damper AC-D3 SA	1							Note 1			
Damper AC-D5 SB	2							Note 1			
Damper AC-D7 SA	1							Note 1			
Damper AC-D9 SB	2							Note 1			
Damper AC-D8 SA	1							Note 1			
Damper AC-D10 SB	2							Note 1			
ACP Redun Vent VLV Damper AC-D21 SA	1		CS 3054A								
ACP Redun Vent VLV Damper AC-D22 SA	1		CS 3054B								
Damper AC-D4 SA	1							None	X	X	
Damper AC-D6 SB	2							None	X	X	
Damper AC-D11 SA	1							Note 1			
Damper AC-D14 SB	2							Note 1			
Batt RM A EXH Fan E-28 (1A-SA)	1		CS 827B								
Batt RM B EXH Fan E-29 (1B-SB)	2			CS 842D							
Batt RM A EXH Fan E-28 (1B-SA)	1		CS 827C								
Batt RM B EXH Fan E-29 (1A-SB)	2			CS 842A							
Damper AC-D17 SA	1							Note 2			
Damper AC-D19 SB	2							Note 2			
Damper AC-D15	1							Note 3			
Damper AC-D16	2							Note 3			
SWGR RM A EXH VLV 3AC-B1 SA	1							Note 3			
SWGR RM B EXH VLV 3AC-B2 SB	2							Note 3			

Note 1 - Damper is energized upon transfer to ACP to prevent spurious closure; normal control is disconnected.

Note 2 - Damper control disconnected upon transfer to ACP to prevent spurious operation, and assure damper opening.

Note 3 - Associated control interlock disconnected to prevent spurious operation of essential equipment.

0763R

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: HRAS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Local Cooling Unit AH-6 (1A-SA)	1							None	X	X	X
Local Cooling Unit AH-6 (1B-SB)	2			CS 840B							
Local Cooling Unit AH-7 (1A-SA)	1							None	X	X	X
Local Cooling Unit AH-7 (1B-SB)	2			CS 840D							
CSIP A Fan Cooler AH-9 (1A-SA)	1							None	X	X	X
CSIP A Fan Cooler AH-9 (1B-SB)	2			CS 841B							
CSIP B Fan Cooler AH-10 (1A-SA)	1							None	X	X	X
CSIP B Fan Cooler AH-10 (1B-SB)	2			CS 841D							
Local Cooling Unit AH-19 (1A-SA)	1							None	X	X	X
Local Cooling Unit AH-19 (1B-SB)	2			CS 842C							
Local Cooling Unit AH-20 (1A-SA)	1							None	X	X	X
Local Cooling Unit AH-20 (1B-SB)	2			CS 843B							
Local Cooling Unit AH-28 (1A-SA)	1							None	X	X	X
Local Cooling Unit AH-28 (1B-SB)	2			CS 843A							
Local Cooling Unit S-64 (1X-SA)	1							None	X	X	X
Local Cooling Unit S-65 (1X-SB)	2			CS 840A							
Local Cooling Unit AH-8 (1X-SB)	2			CS 846B							

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: HRHR

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Local Cooling Unit AH-5 (1A-SA)	1							None	X	X	X
Local Cooling Unit AH-5 (1B-SB)	2			CS 840C							

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: HSWI

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Air Handler AH-86 (1A-SA)	1							Note 1			
Air Handler AH-86 (1B-SB)	2							Note 1			
ESW Intk Elec Equip. RM VLV 3SW V646 SA	1							Note 4			
ESW Intk Elec Equip. RM VLV 3SW V647 SB	2							Note 4			
ESW Intk Elec Equip. RM VLV 3MP V217 SA	1							Note 2			
ESW Intk Elec Equip. RM VLV 3MP V218 SB	1							Note 2			
Exhaust Fan E-88 (1A-SA)	1							Note 1			
Exhaust Fan E-88 (1B-SB)	2							Note 1			
Damper EV-D1 SA-1	1							Note 3			
Damper EV-D1 SB-1	2							Note 3			
Damper EV-D2 SA-1	1							Note 3			
Damper EV-D2 SB-1	2							Note 3			

Note 1 - Equipment interlocked to operate automatically upon transfer to the ACP.

Note 2 - Valve control disconnected upon transfer to ACP to prevent spurious operation and ensure valve closure.

Note 3 - Dampers powered from ATP upon transfer.

Note 4 - Valve control disconnected upon transfer to ACP to prevent spurious operation and ensure valve opening.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: MSS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:1R
SG A ATM Relief VLV PORV 2MS-P18 SA	1	PK 0308A2									
SG B ATM Relief VLV PORV 2MS-P19 SB	2	PK 0308B2									
SG C ATM Relief VLV PORV 2MS-P20 SA	1	PK 0308C2							X	X	X
SG A PRESS IND PI 1MS-0474 SB (Alternate)	1	PI 0474.2									
SG B PRESS IND PI 1MS-0484 SB	2	PI 0484.2									
SG C PRESS IND PI PI 1MS-0494 SB	2	PI 0496.2									
MSIV 2MS-V1 SAB	1,2	CS 1001.2									
MSIV 2MS-V2 SAB	1,2	CS 1003.2									
MSIV 2MS-V3 SAB	1,2	CS 1005.2									
2MS-F1 SAB 1,2	1,2							Note 1			
2MS-F2 SAB 1,2	1,2							Note 1			
2MS-F3 SAB 1,2	1,2							Note 1			
2MS-V9 SB 2	1,2	CS 1974.2						Note 2			

Note 1 - Valve disconnected on transfer to prevent spurious operation and ensure valve closure.
Note 2 - Automatic function disconnected on transfer to prevent spurious operation.

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: NIS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:1R
Neutron Flux Ind	1	NI-60A2									

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: PDSAC

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
6.9 kV Bus 1A Breaker 106	1				CS1702.2						
6.9 kV Bus 1A Breaker 105	1				CS1727.2						
6.9 kV Bus 1A Breaker 1A1A	1	CS 1741.2									
6.9 kV Bus 1A Breaker 1A2A	1		CS 849C								
6.9 kV Bus 1A Breaker 1A3A	1		CS 849D								
6.9 kV Bus 1B Breaker 126	2				CS1750.2						
6.9 kV Bus 1B Breaker 125	2				CS1752.2						
6.9 kV Bus 1B Breaker 1B1A	2	CS 1745.2									
6.9 kV Bus 1B Breaker 1B2A	2			CS 837B							
6.9 kV Bus 1B Breaker 1B3A	2			CS 837C							
480 V Bus 1A1 Breaker 1A1B	1		CS 848C								
480 V Bus 1A2 Breaker 1A2B	1		CS 849E								
480 V Bus 1A3 Breaker 1A3B	1		CS 848A								
480 V Bus 1B1 Breaker 1B1B	2			CS 839D							
480 V Bus 1B2 Breaker 1B2B	2			CS 837E							
480 V Bus 1B3 Breaker 1B3B	2			CS 838B							
480 V Bus 1A1 Breaker 1A24	1							Note 1			
480 V Bus 1A3 Breaker 1A21	1		CS 848B								
480 V Bus 1A3 Breaker 1A22	1							None	X		
480 V Bus 1A3 Breaker 1A23	1		CS 848D								
480 V Bus 1A3 Breaker 1A31	1		CS 849B								
480 V Bus 1A3 Breaker 1A32	1		CS 849F								
480 V Bus 1A3 Breaker 1A34	1							None	X		
480 V Bus 1A3 Breaker 1A35	1		CS 849A								
480 V Bus 1A3 Breaker 1A36	1							None	X		
480 V Bus 1B1 Breaker 1B24	2							Note 1			
480 V Bus 1B3 Breaker 1B21	2			CS 838D							
480 V Bus 1B3 Breaker 1B22	2			CS 838A							

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: PDSAC

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
480 V Bus 1B3 Breaker 1B23	2			CS 838C							
480 V Bus 1B3 Breaker 1B31	2			CS 839A							
480 V Bus 1B3 Breaker 1B32	2			CS 839C							
480 V Bus 1B3 Breaker 1B34	2			CS 839B							
480 V Bus 1B3 Breaker 1B35	2			CS 837A							
480 V Bus 1B3 Breaker 1B36	2			CS 837D							
Power Panel PP-1A-321 SA	1							None Req			
Power Panel PP-1A-231 SA	1							None Req			
Power Panel PP-1A-311 SA	1							None Req			
Power Panel PP-1A-211 SA	1							None Req			
Power Panel PP-1B-321 SB	2							None Req			
Power Panel PP-1B-231 SB	2							None Req			
Power Panel PP-1B-311 SB	2							None Req			
Power Panel PP-1B-211 SB	2							None Req			
DG Load Sequencer ESS-1A SA	1						ESS-1A				
DG Load Sequencer ESS-1B SB	2						ESS-1B				

Note 1 - Manual Breaker; Has Status Indication on ACP.

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: PDSDC

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Battery 1A-SA	1							None Req			
Battery 1B-SB	2							None Req			
Distr Pnl DP-1A-SA	1							None Req			
Distr Pnl DP-1A1-SA	1							None Req			
Distr Pnl DP-1A2-SA	1							None Req			
Battery Charger 1A-SA	1						Battery Chgr				
Distr Pnl DP-1B-SB	2							None Req			
Distr Pnl DP-1B1-SB	2							None Req			
Distr Pnl DP-1B2-SB	2							None Req			
Battery Charger 1B-SB							Battery Chgr				

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: RCSPC

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
Pressurizer Heater Backup Group A	1	CS 152.2									
Pressurizer Heater Backup Group B	2	CS 153.2									
PRZ LVL IND LI-1RC-0459-A1 SA	1	LI 0459A2									
PRZ LVL IND LI-1RC-0460-A1 SB	2							NONE			
PRZ Press Ind PI-1RC-0455-A1 SA	1	PI-455.2									
PRZ Press Ind PI-1RC-0456-A1 SB	2							NONE			
PORV 1RC-P529 SN (PCV 444B)	2	CS 156.2									
PORV 1RC-P527 SN (PCV 445A)	1	CS 157.2									
PORV 1RC-P528 SN (PCV 445B)	1	CS 158.2									
PRZ Relief Isol Vlv 1RC-V526 SN (1-8000A)	2	CS 160.2									
PRZ Relief Isol Vlv 1RC-V527 SN (1-8000B)	2	CS 161.2									
PRZ Relief Isol Vlv 1RC-V528 SN (1-8000C)	1	CS 162.2									
RV Head Vent Vlv 2RC-V281 SA	1							Note 1			
RV Head Vent Vlv 2RC-V280 SB	1							Note 1			
PRZ Vent Vlv 2RC-V283 SA	1							Note 1			
PRZ Vent Vlv 2RC-V282 SB	1							Note 1			
Vent to ATM Vlv 2RC-V284 SA	2							Note 1			
Vent to PRZ Relief Tank Vlv 2RC-V285 SB	2							Note 1			

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: RCSPC (Cont'd)

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
LTDN ORF Isol Vlv 2CS-V511 SA (1-8149A)	1	CS 284.2									
LTDN ORF Isol Vlv 2CS-V512 SA (1-8149B)	1	CS 285.2									
LTDN ORF Isol Vlv 2CS-V513 SA (1-8149C)	1	CS 286.2									
Loop A Hot Leg Temp Ind TI-1RC-0413.1 SA	1	TI 413.2									
Loop A Cold Leg Temp Ind TI-1RC-0410.1 SB	2	TI 410.2									
Loop B Hot Leg Temp Ind TI-1RC-0423.1 SA	1	TI 423.2									
Loop B Cold Leg Temp Ind TI-1RC-0420.1 SB	2	TI 420.2									
RCS Press Ind PI-1RC-0402.1 SA	1	PI 402.2									
RCS Press Ind PI-1RC-0403.1 SB	2	PI 403.2								X	X
LTDN Line Isol Vlv 2CS-L500 SN (1-LCV-460)	2							None	X	X	
RCS Aux Spray Va 2CS-V501SN (1-8145)	1							Note 1			

Note 1: Valve control disconnected upon transfer to ACP to prevent spurious operation and ensure valve closure.

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: RHRS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
RHR Pump 1A-SA	1	CS 321.2									
RHR Pump 1B-SB	2	CS 322.2									
RHR PMP 1A Mini Flo Vlv 2RH-F513SA(FCV-602A)	1	CS 323.2									
RHR PMP 1B Mini Flo Vlv 2RH-F512SB(FCV-602B)	2	CS 324.2									
LH SI to RCS Cold Leg Vlv 2SI-V579SA(1-8888A)	1	CS 444.2									
LH SI to RCS Cold Leg Vlv 2SI-V578SB(1-8888B)	2	CS 445.2									
RESID HX A Byp Cntl Vlv 2RH-F500SN(FCV-605A)	1	FK 605A2							X	X	X
RESID HX B Byp Cntl Vlv 2RH-F501SN(FCV-605B)	2	FK 605B2									
RHR HX Out Flo Vlv 2RH-B501SN (HCV-603A)	1	HC 603A2							X	X	X
RHR HX Out Flo Vlv 2RH-B500SN (HCV-603B)	2	HC 603B2									
RHRS In Isol Vlv 1RH-V503SA(1-8701A)	1	CS 325.2							X	X	X
RHRS In Isol Vlv 1RH-V502SB(1-8702B)	1	CS 327.2							X	X	X
RHRS In Isol Vlv 1RH-V501SA(1-8701B)	2	CS 326.2									
RHRS In Isol Vlv 1RH-V500SB(1-8702B)	2	CS 328.2									
RHRS To CVCS Chrg Pmp Suct Vlv 2RH-V507SA(1-8706A)	1	CS 329.2							X		
RHRS To CVCS Chrg Pmp Suct Vlv 2RH-V506SB(1-8706B)	2	CS 330.2									
CNMT Sump To RHRP A Isol Vlv 2SI-V573SA(1-8812A)	1							Note 1			
CNMT Sump To RHRP B Isol Vlv 2SI-V572SB(1-8812B)	2							Note 1			
RWST To RHRP-A Isol Vlv 2SI-V575SA(1-8809A)	1							None	X		
RWST To RHRP-A Isol Vlv 2SI-V574SB(1-8809B)	2							None			
Instrument Air Compressor 1A	1						Local Panel	Note 2			
Instrument Air Compressor 1C	2						Local Panel	Note 2			
RHR HX A BY-PASS FLOW INDICATION	1	FI-605A2							X	X	X
RHR HX B BY-PASS FLOW INDICATION	2	FI-605B2									

Note 1 - Valve control disconnected upon transfer to ACP to prevent spurious operation.

Note 2 - Manually align Emergency Service Water Valves and manually load on Diesel Generator.

0763R

ALTERNATIVE SHUTDOWN IN THE
EVENT OF A FIRE NECESSITATING
CONTROL ROOM EVACUATION

System: RTS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-MV:IR
Reactor Trip Switchgear 1A-SA	1							Note 1,2		X	
Reactor Trip Switchgear 1B-SB	2							Note 1,2		X	

Note 1: Reactor Breaker tripped automatically upon transfer to ACP.
NOTE 2: REACTOR CAN ALSO BE TRIPPED BY DE-ENERGIZING
POWER TO THE M-G SETS

ALTERNATIVE SHUTDOWN IN THE EVENT OF A FIRE NECESSITATING CONTROL ROOM EVACUATION

System: SIS

Safe Shutdown Equipment	Safe Shutdown Division No.	Alternative Shutdown Location Providing Controls or Indication							Potential Fire-Induced Failure Due to Fire in Area		
		ACP	ATP-1A	ATP-1B	DGCP-1A	DGCP-1B	Local	Other	12-A-CR	12-A-CRC1	12-A-HV:IR
ACCUM 1C Disch Vlv 2SI-V535 SA (1-8808C)	1		CS 833B								
ACCUM 1B Disch Vlv 2SI-V536 SB (1-8808B)	1			CS 833C							
ACCUM 1A Disch Vlv 2SI-V537 SA (1-8808A)	1		CS 833A								
ACCUM 1A N2 Sup Isol Vlv 2SI-V532 SN (1-8875A)	2							None	X		
ACCUM 1B N2 Sup Isol Vlv 2SI-V533 SN (1-8875B)	2							None	X		
ACCUM 1C N2 Sup Isol Vlv 2SI-V534 SN (1-8875C)	2							None	X		
ACCUM N2 Sup HDR Isol Vlv 2SI-V530 SB (1-8880)	2							None	X		
ACCUM Vent Valve 6SI-V531 SN (HCV-936)	2							None	X		