SNUPPS
Standardized Nuclear Unit
Power Plant System

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August 23, 1984

SLNRC 84- 0109 FILE: 0278
SUBJ: Fire Protection Review

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docket Nos.: STN 50-482 and STN 50-483

Reference:
1. SLNRC 82-046, dated November 15, 1982: Same Subject
2. NUREG-0881, Supplement No. 3, dated August 1983: Safety Evaluation Report Related to Operation of Wolf Creek Generating Station, Unit No. 1
3. NUREG-0830, Supplement No. 3, dated May 1984: Safety Evaluation Report Related to Operation of Callaway Plant, Unit No. 1
4. SLNRC 84-0106, Fire Protection Review, 8/10/84
5. NRC memorandum dated 8/13/84, Minutes of August 10, 1984 Meeting to Discuss the SNUPPS Safe Shutdown Analysis

Dear Mr. Denton:

An appeal meeting between the SNUPPS Utilities and the NRC Staff was held on August 14, 1984 to discuss the postulated new regulatory position on control room fire. Background on the issue is presented in Reference 4, which was the SNUPPS basis and request for the appeal meeting. As a result of that meeting, the SNUPPS Utilities agreed to reevaluate the control room fire based on the new regulatory position. This new evaluation has been completed and was discussed with the NRC at a meeting in Bethesda on August 22, 1984.

The enclosure to this letter provides the results of this evaluation and a summary of the response plan necessary to ensure achievement and maintenance of hot standby with the postulated fire damage. This submittal demonstrates that the SNUPPS plants, Callaway Plant Unit No. 1 and Wolf Creek Generating Station Unit No. 1, will fully comply with the NRC requirements defined in Reference 5.

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Union Electric and Kansas Gas & Electric each commits to installing five new isolation switches and modifying four existing isolation switches, as defined in the enclosure, to achieve further isolation of equipment needed for hot standby from potential spurious signals originating from the postulated control room fire. Subsequent to the August 22, 1984 meeting, it has been determined that isolation switches are not required for valves EF-HV-34 and 46. A simple means has been found to assure the valves are open from the Motor Control Center (MCC). Further amplification is provided in the enclosure.

Installation of these modifications will be accomplished at each SNUPPS plant during its first extended scheduled outage (greater than two weeks) after February 15, 1985. In the interim, until completion of these modifications, the functions accomplished by the new and modified isolation switches can be performed by manual actions at local panels, as described in the enclosure to this letter. Procedures for these manual actions will be prepared by Union Electric and Kansas Gas & Electric.

This submittal and the above commitment address and resolve the new concerns raised by the NRC on the SNUPPS control room fire hazards analysis.

Very truly yours,

Nicholas A. Petrick

JOC/nldl4a8&9
Attachment

cc:

D. F. Schnell	UE
G. L. Koester	KGE
D. T. McPhee	KCPL
J. Neisler/B. Little	USNRC/CAL
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SNUPPS

RESPONSE PLAN FOR IMMEDIATE EVACUATION OF THE CONTROL ROOM DUE TO FIRE

1.0 INTRODUCTION

As a result of the appeal meeting between the SNUPPS Utilities and the NRC Staff on August 14, 1984 to discuss the new regulatory positions on control room fire, the SNUPPS Utilities met with the NRC Staff on August 15 and 22, 1984 to discuss the staff positions and to review a new response plan for a postulated fire, which causes the immediate evacuation of the control room and any assumed single spurious signal upon evacuation of the control room. Control of the plant is transferred to the auxiliary shutdown panel and other local stations.

During the August 22, 1984 meeting, a response plan was reviewed in detail. The SNUPPS Utilities indicated that several new isolation switches would be required and several previously added isolation switches would require modification. The response plan is described in Section 2.0 and detailed in Table I.

During the meetings on August 15 and 22, 1984, the NRC provided clarification of the new NRC guidance on spurious operation and signals. This new guidance is documented in Section 3.0. The SNUPPS design provisions and response plan actions applicable to each of the new NRC guidance items is also described in Section 3.0

2.0 RESPONSE PLAN SUMMARY

This section describes the SNUPPS response plan for the postulated control room fire. The response plan is outlined in detail on Table I. As shown on Table I, the response plan is organized into Phases A through F which establish the priorities of actions during the first hour. Procedures will be developed to implement this plan at Callaway and Wolf Creek. These phases have been established as a result of an evaluation of the system and component mechanical and electrical characteristics, the need for support functions, and the consequences of spurious operation occurring upon evacuation of the control room. Implementation of the response plan will assure that the plant will not reach an unrecoverable condition which could result in core damage.

As shown on Table I, each phase is described as a window of time. With only a few exceptions, the actions of the operators at the individual locations may be taken without reliance upon communication with the ASP or switchgear room operators. The later phase valve alignments can be accomplished as soon as the operator(s) complete the actions of a higher priority phase.

The following paragraphs describe each phase of the response plan and include a description of the objective of each phase.

PHASE A: 0 to 5 Minutes

During Phase A, four operators will respond and act in parallel to effect the following plant conditions. Control of the plant will be established at the ASP and isolation of required instrumentation and other devices on the ASP will be accomplished. Auxiliary feedwater flow to steam generators B and D will be established. The emergency diesel generator will be started and loaded onto the 4160-B bus which will be isolated from the control room fire effects. Major loads will be shed from this bus to preclude equipment damage and to ensure the operability of pumps required for hot shutdown. The ESW pump is loaded onto the bus and cooling flow to the diesel generator established.

Also during Phase A, the primary side PORVs will be closed (if one spuriously opened) and prevented from reopening. The reactor coolant pumps (RCPs) will be tripped to help ensure the integrity of the RCP seals.

PHASE B: 0 to 10 Minutes

During Phase B, the plant operators will continue to mitigate/preclude a spurious operation or failure from adversely affecting hot standby conditions. The operators take actions to ensure cooling of the ESW pumphouse, the diesel generator room, the electrical penetration room, and the Class 1E switchgear and battery rooms. The RWST discharge valves to the RHR pumps will be closed to preclude the draining of the RWST to the containment recirculation sumps should a sump isolation valve spuriously open. Also, containment spray pump A will be stopped if it was operating due to a spurious signal. These actions help ensure the availability of RWST water for boration. Additionally, turbine trip will be verified.

PHASE C: 0 to 20 Minutes

During Phase C, the component cooling water (CCW) flow paths are verified to be available or manually aligned and a CCW pump started. The CCW system is required to cool the centrifugal charging pump and to cool the minimum flow from the charging pump which is directed to the seal water heat exchanger.

PHASE D: 0 to 30 Minutes

During Phase D, the charging system flow paths are verified to be available or manually aligned and the centrifugal charging pump started. Flow to the reactor coolant pump seals will then be established thereby precluding RCP seal damage.

Also the MSIVs will be closed (if open) and prevented from spuriously reopening through modifications at the valves. The manual block valves upstream of the secondary side PORVs for steam generators A and C will be closed to preclude/stop blowdown through a spuriously opened PORV.

PHASE E: 0 to 60 Minutes

During Phase E, the operators will assure the availability/operability of systems and components required for long term hot standby. ESW flow to the containment air coolers and containment air cooler fan operation will be established. The emergency fuel oil transfer pump will be made operable (if disabled).

The charging flow path to the RCS through the boron injection tank will be manually aligned to allow for boration.

Also, minor blowdown paths from the RCS and secondary sides will be isolated (if one is open) and prevented from opening due to spurious signals. These paths include the reactor vessel head vents, the excess letdown lines, the MSIV bypass valves and the steam generator blowdown lines.

PHASE F: 0 to 7 Hours

During Phase F, one operator will regain/assure the operability of the ESW self cleaning strainers to assure adequate long term flow rates in the ESW system.

At Callaway, the UHS cooling tower fans will be started after power and ventilation is reestablished to the cooling tower electrical equipment room.

3.0 SPURIOUS OPERATION DUE TO FIRE INDUCED ELECTRICAL FAILURES

The response plan described in Section 2.0 ensures that the plant can be maintained in a hot standby condition without repairs or modifications to systems directly required for short term hot standby and with minor repairs for extended hot standby equipment (greater than 1 hour). The response plan also ensures that only minor repairs would be required for cold shut down equipment (performed within 72 hours).

The occurrence of a spurious signal upon evacuation of the control room will not adversely affect these capabilities due to the response plan developed for this fire scenerio and the hardware modifications presently installed or identified as a result of this analysis. These items ensure that the plant will not reach an unrecoverable condition and that no core damage or breach of the primary system pressure boundary will occur. The following paragraphs address 1) Valves whose spurious operation could have an indirect effect on Hot shutdown; 2) Components (electrical devices, valves, dampers, fans and pumps) whose spurious operation or failure could adversely affect short term hot standby and 3) Similar components that could adversely affect long term hot standby.

3.1 Indirect Effect on Hot Standby

Recent NRC guidance allows minor modifications such as fuse replacement and wire cutting to mitigate the effects of a spurious operation of these items due to one hot short in any circuit, except for the RHR normal suction isolation valves in the lines from the primary loop hot legs where these valves are not allowed to open considering multiple failures.

The SNUPPS RHR normal suction valves (BB-PV-8702A and BB-PV-8702B) will have their 480 V power breakers tripped during normal power operation to preclude spurious operation due to multiple failures in the control room circuitry.

Spurious opening of the primary side PORVs (BB-PCV-455A and BB-PCV-456A) will be precluded/mitigated by throwing knife switches in the DC distribution system which will allow the valves to remain closed or fail closed. The normal letdown system is isolated by closing BG-HV-8152 at the ASP where the controls are isolated from the control room.

Other RCS pressure boundary valves (RCS head vent and excess letdown) would result in a relatively small loss of RCS inventory if multiple failures occurred involving at least two valves in series on one line. Spurious opening of one valve in each line is precluded/mitigated by pulling fuses and allowing the valve to remain in or fail to the closed position.

Finally, the integrity of the reactor coolant pump seals will be assured to preclude development of a significant RCS leak due to seal damage. Seal integrity is assured by verifying an open seal injection path to each RCP seal.

On the secondary side of the plant, a spurious opening of one of the valves down stream of the MSIVs (AB HV-11, 14, 17 and 20) could adversely affect the controlled cool-down of the plant. Therefore the MSIVs will be closed prior to leaving the control room or closed locally through the use of a portable power source. After MSIV closure, wires will be cut at each valve to ensure that the

valves do not spuriously reopen. Also, an MSIV bypass valve could spuriously open; however, the effects on cool-down would be minimal. To ensure that these valves remain closed or fail to the closed position, fuses will be pulled.

One secondary side PORV (AB-PV-1, 2, 3 and 4) is provided on each main steam line. The PORVs (AB-PV-2 and 4) on the B-train steam lines are provided with isolation at the ASP and will be operable during a control room fire. The PORVs on the A-train steam lines could open due to a spurious electronic signal within a control room cabinet. To mitigate the effect of this potential failure the manual valve immediately upstream of AB-PV-1 and AB-PV-3 will be closed. Also, the steam generator blowdown isolation valves will be manually closed from the radwaste building control room, thus precluding/mitigating a spurious valve opening.

3.2 Spurious Operations in Short Term Hot Standby Systems

Recent NRC guidance for systems and components required for short term hot standby (less than 1 hour) indicates that these items are to be independent of control room fire damage upon isolation from the control room by throwing an installed switch, breaker or by closing a valve manually or by interruption of a power source (air or electrical) to allow the valve to take a safe position. Only one hot short needs to be considered at one time; however, several more credible failures (e.g. grounds) should be considered as being possible prior to isolation.

The SNUPPS systems required for short term hot standby include the emergency diesel generators, electrical distribution systems, the essential service water system, component cooling water system, the charging system, and associated support cooling systems. Each of these systems has been reviewed in accordance with the new NRC guidance and operability of these systems has been assured through the addition of local switches and the response plan described in Section 2.0 above.

3.3 Spurious Operations in Long Term Hot Standby Systems

Recent NRC guidance allows minor modifications such as fuse replacement and wire cutting in systems required for long term hot standby in addition to the criteria defined in Section 3.2 above.

The SNUPPS systems and components required for long term hot standby include the containment air coolers, the emergency fuel oil transfer pump and the ESW self cleaning strainers. The Callaway ESW cooling tower equipment room and ventilation system and cooling tower fans are also in this category.

These components and systems have been reviewed in accordance with the new NRC guidance and operability of these items has been assured through the response plan described in Section 2.0, above, which includes wire cutting, installation of jumpers, and fuse replacement in addition to manual realignment of valves, and local breaker operations.

Containment cooler fan operation will be ensured by closing an isolation switch and replacing a fuse. Essential service water flow to the containment air coolers will be established by verifying the position of the containment isolation valves. If an isolation valve outside containment has spuriously closed, it will be manually reopened. The isolation valves inside containment will be verified to be open at the MCC.

The only hot short that would cause the valve(s) to close does not cause a fuse failure; therefore, the addition of a jumper at the MCC and subsequent closing of the MCC contactor will cause the valve to reopen. Audible contact closure and subsequent opening (upon completion of the opening stroke) will alert the operator to throw the breaker, thus isolating the valve from the control room. If contactor operation does not occur, due to a failed fuse, the valve will remain open and will not spuriously close.

These actions can easily be accomplished prior to the need for containment cooling. As noted above, containment cooling is a long term hot standby item; therefore, the use of a jumper is deemed acceptable based on the above NRC guidance.

TABLE 1

SNUPPS

RESPONSE PLAN FOR A CONTROL ROOM FIRE
RESULTING IN IMMEDIATE EVACULATION

FOR EQUIPMENT DESCRIPTIONS AND ACRONYM LIST SEE TABLE 2

PHASES

A - 0 to 5 Minutes
B - 0 to 10 Minutes
C - 0 to 20 Minutes
D - 0 to 30 Minutes
E - 0 to 60 Minutes
F - 0 to 7 Hours

CONTROL ROOM ACTIONS

PHASE	ACTION
A	1. Trip the Reactor at RL004 or RL006
A	2. Close the MSIV's (AB-HV-11, 14, 17, 20), if Possible
A	3. Announce CR Evacuation and Activate Fire Brigade

PHASE	ROOMS 3302/5201 ACTION	ROOM	PANEL	NOTES	ROOM 1413 (ASP) ACTION	NOTES	OTHER ROOMS ACTION	ROOM	PANEL	NOTES
A	1. Verify LOSP and D.G. Start	3302	NB02		1. Throw RP HIS 1,2,3 to Isolate ASP from CR		1. Trip off RCP's	Turbine BLdg. EL.2033'	PA01,PA02 PK41,PK62	
	2. If Offsite Power is Still Available, Simulate LOSP on NB02	3302	NB02	1	2. Close AB-PV-1, 3	3	2. Trip off DC Power to NB02	3404	NK4401	2
	3. Throw Isolation Switch on NB02 to Isolate Loads	3302	NB02		3. Operate AB-PV-2,4		3. Close BB-PCV-455A	3408	NK5108	12
	4. Trip off PBG05B	3302	NB02		4. Isolate FC-HV-312	10	4. Close BB-PCV-456A	3404	NK4421	12
	5. Trip off PEG01B and D	3302	NB02		5. Open FC-HV-313					
	6. Trip off PEJ01B	3302	NB02		6. Isolate AL-HV-33	10				
	7. Trip of PEN01B	3302	NB02		7. Open AL-HV-34					
	8. Trip off NG08	3302	NB02	4	8. Open AL-HV-10					
	9. Assure MCC and Load Center Brkrs are Closed (NG02, NG04, NG06E)	3302	NB02		9. Open AL-HV-5					
	10. Throw Isolation Switch on NG02 and NG04 Load Centers and Manually Close Feeder Brkr, if Required	3302	NG02 NG04		10. Isolate AB-HV-5	10				
	11. Open EF-HV-38	3302	NG02A	8	11. Start PAL01B					
	12. Close EF-HV-26	3302	NG02A	8	12. Close BG-HV-8152					
	13. Close Brkr for PEF01B Unless Already Closed	3302	NB02		13. Continue to Monitor Plant With Isolated Instrumentation and Control Decay Heat Removal for Phases A thru F					
B	1. Open GD-TZ-11A	3302	Local Switch	8			1. Start SGK05B	1501	Local Switch	7
	2. Start CGD01B	3302	Local Switch	7			2. Start SGL15B	1409	NG02B	7
	3. Close BN-HV-8812B	3302	NG02A	8			3. Trip off PEN01A and Pull Fuse if Required	3301	NB01	
	4. Trip Power Off to GM-TZ-11A to Open	5201	NG04D				4. Trip Valve Brkr to BN-HV-8812A	3301	NG01A	
	5. Open GM-HZ-19	5201	Local Switch				5. Man. Close BN-HV-8812A	1111	N/A	
	6. Start CGM01B	5201	Local Switch	7			6. Verify Turbine Trip at Turbine and Manually Trip if Required	Turbine Bldg El.2065'	N/A	

TABLE I

SNUPPS

RESPONSE PLAN FOR A CONTROL ROOM FIRE
RESULTING IN IMMEDIATE EVACULATION

PHASE	ROOMS 3302/5201				ROOM 1413 (ASP)		OTHER ROOMS			
	ACTION	ROOM	PANEL	NOTES	ACTION	NOTES	ACTION	ROOM	PANEL	NOTES
C	1. Start PEG01B	3302	NB02	11			1. Trip Vlv Brkr to EF-HV-52	1501	NG04C	13
	2. Start PEG01D	3302	NB02	11			2. Trip Vlv Brkr to EG-HV-102	1501	NG04C	13
							3. Trip Vlv Brkr to EG-HV-16	1501	NG04C	13
							4. Trip Vlv Brkr to EG-HV-54	1501	NG04C	13
							5. Trip Vlv Brkr to EG-HV-15	1512	NG03C	13
							6. Manually Open EF-HV-52	1401	N/A	13
							7. Manually Open EG-HV-102	1402	N/A	13
							8. Manually Open EG-HV-16	1402	N/A	13
							9. Manually Open EG-HV-54	1401	N/A	13
							10. Manually Close EG-HV-15	1402	N/A	13
							11. Close EG-HV-70B	1409	Local Switch	9
D	1. Trip Vlv Brkr to BN-LCV-112E	3302	NG02A	13			1. Manually Open BN-LCV-112E	1107	N/A	13
	2. Trip Vlv Brkr to BG-HV-8111	3302	NG02A	13			2. Manually Close BG-LCV-112C	1318	N/A	13
	3. Trip Vlv Brkr to BG-LCV-112C	3302	NG02A	13			3. Manually Open BG-HV-8111	1107	N/A	13
	4. Start PBG05B	3302	NG02A	14			4. Take Manual Control of BG-FCV-121 Locally and Manually Open	1115	N/A	13
							5. Close F -HV-8843	1409	Local Switch	13
							6. Close EM-HV-8882	1410	Local Switch	13
							7. Trip Vlv Brkr to BG-HV-8105	1501	NG04C	13
							8. Manually Close BG-HV-8105	1323	N/A	13
							9. Trip Vlv Brkrs to BB-HV-8351A, B, C, D	1501	NG04C	13
							10. Manually Open BB-HV-8351A, B, C, D	1322	N/A	13
							11. Manually Close AB-V-018	1508	N/A	3,13
							12. Manually Close AB-V-029	1509	N/A	3,13
							13. Close MSIV'2 (AB-HV-11, 14, 17,20)	1508/ 1509	N/A	6,13
							14. Trip Vlv Brkr to AL-HV-36	1512	NG03C	10,13
							15. Manually Open Al-HV-36	1207	N/A	10,13
E	1. Trip Vlv Brkr to EF-HV-40	3302	NG02A	13,21			1. Trip Vlv Brkr to EF-HV-32	1409	NG02B	13
	2. Start PJE01B	5201	Local Repair				2. Trip Vlv Brkr to EF-HV-50	1409	NG02B	13
							3. Open EF-HV-34	1409	NG02B	13
							4. Open EF-HV-46	1409	NG02B	13
							5. Manually Open EF-HV-32	1322	N/A	13
							6. Manually Open EF-HV-50	1322	N/A	13
							7. Start SGN01B	1409	NG01B	13
							8. Start SGN01D	1409	NG01B	13
							9. Throw Switch to EM-HV-8801B	1501	NG04C	13

TABLE 1

SNUPPS

RESPONSE PLAN FOR A CONTROL ROOM FIRE
RESULTING IN IMMEDIATE EVACULATION

PHASE	ROOMS 3302/5201 ACTION	ROOM	PANEL	NOTES	ROOM 1413 (ASP) ACTION	NOTES	OTHER ROOMS ACTION	ROOM	PANEL	NOTES
E Continued							10. Throw Switch to EM-HV-8803B	1501	NG04C	13
							11. Manually Open EM-HV-8801B	1323	N/A	13
							12. Manually Open EM-HV-8803B	1126	N/A	13
							13. Close BM-HV-1,2,3,4	Radwaste Control Room	BM157	13,15
							14. Close BB-HV-8001A, 2A	3408	NK5100	13,16
							15. Close BG-HV-8153A, 4A	3408	NK4100	13,17
							16. Close BB-HV-8001B, 2B	3404	NK4400	13,18
							17. Close BG-HV-8153B, 4B	3404	NK4400	13,19
							18. Close AB-HV-12,15,18,21	1320/ 1402	RP209/ RP210	13,20
							19. Manually Close EF-HV-40	3101	N/A	13,21
F	1. Close Brkr to NG08	3302	NB02	4	1. Open AL-HV-30	5	1. Trip Damper Brk to GD-TZ-61A to Open	U304	NG08F	21
							2. Start CGD02B	U304	NG08F	21
							3. Start CEF01B	U304	NG08F	21
							4. Start CEF01D	U304	NG08F	21
							5. Start FEF02B	U104/ K105	NG06E	13

NOTES

1. If diesel does not start upon simulating LOSP then a manual start of the diesel in room 5201 will be required. Press start or emergency start or manually open one primary airstart valve after Action 13 in Room 3302.
2. DC power to NB02 should be tripped after Action 9 in Room 3302 so that breakers can be electrically tripped by hand to the desired position. Once DC power is killed operator shall reverify correct breaker positions and manually trip/close any breakers which have spuriously moved.
3. Regardless of the position of AB-PV-1,3 after ASP action and operator shall go to rooms 1508 and 1509 to manually close AB-V-018 and AB-V-029.
4. NG08 load center services the UHS cooling tower equipment (Callaway only). This will be tripped off to prevent overheat of cooling twr equipment room and reestablished at the end of the scenario. NG08 will be reloaded on NB02 after Action 4 of Phase F under the "Other Rooms" heading.
5. This valve must be opened when CST reaches low level (long term action).
6. MSIVs will be closed with portable 125 V DC source. Wires to the valves will then be cut to leave valves in closed position.
7. Modified switch with redundant fusing, for the interim throw iso switch and replace blown fuse.
8. New iso/open-close switch including redundant fusing, for the interim trip the valve breaker and manually open/close valve.
9. New iso switch including redundant fusing for solenoid valve, for the interim pull fuse #13 on NK44 in Room 3404 to kill DC power to the valve and cause it to close.
10. FC-HV-312 and AB-HV-5 will not be opened until it is verified that AL-HV-36 is open. Likewise, AL-HV-33 will not be opened until the CST reaches low level to avoid fouling the steam generator with ESW. AFP B will be operating during this time supplying steam generator D with a CST source.
11. PEG01B and D will not be started until action 10 of Phase C under the "Other Rooms" heading has been completed.
12. A knife switch will be thrown to kill DC power to these valves which will cause them to close.
13. Actions referenced to this note may be performed prior to the phase under which they are listed if an operator is in the area of these actions and can perform then without significantly delaying higher priority actions.
14. PBG05B will not be started until Action 3 of Phase D under the heading "Other Rooms" has been completed.
15. Throw switches on BM157 to deenergize non I/E solenoid and cause main valve to close.
16. Pull fuse #9 to kill DC power and cause valve(s) to close.
17. Pull fuse #19 to kill DC power and cause valve(s) to close.
18. Pull fuse #14 to kill DC power and cause valve(s) to close.
19. Pull fuse #7 to kill DC power and cause valve(s) to close.
20. Pull fuse from either RP209 or RP210 to deenergize solenoid and cause main valve(s) to close.
21. Callaway only.

TABLE 2

SNUPPS

RESPONSE PLAN FOR A CONTROL ROOM FIRE RESULTING IN IMMEDIATE EVACUATION
REQUIRED EQUIPMENT LEGEND

EQUIPMENT NO	DESCRIPTION	PHASE
RL004	MAIN CONTROL BOARD	A
RL006	MAIN CONTROL BOARD	A
NB02	4.16 kV SWITCHGEAR FOR SAFETY RELATED PUMPS AND MCC'S TRAIN B	A
NG06E	MCC FOR ESW PUMP ROOMS	A
NG02	LOAD CENTER TO SAFETY RELATED MCC'S AND A/C UNITS	A
NG04	LOAD CENTER TO SAFETY RELATED MCC'S	A
NG02A	MCC	A
NG08	LOAD CENTER FOR CALLAWAY COOLING TWR EQUIPMENT	A
PA01, PA02	13.8 kV SWITCHGEAR FOR REACTOR COOLANT PUMPS (RCPS)	A
PK41, PK62	DC CONTROL POWER BUSSES TO PA01, PA02	A
NK4401	DC CONTROL POWER BATTERY TO NB02	A
NK5108	DC CONTROL POWER BATTERY TO BB-PCV-455A	A
NK4421	DC CONTROL POWER BATTERY TO BB-PCV-456A	A
BB-PCV-455A	PRESSURIZER PORV TRAIN A	A
BB-PCV-456A	PRESSURIZER PORV TRAIN B	A
EF-HV-38	ESW RETURN TO ULTIMATE HEAT SINK	A
EF-HV-26	ESW/SW ISOLATION	A
PEF01B	ESW PUMP B	A
RP-HIS-1,2,3	CR/ASP ISOLATION SWITCHES	A
AB-PV-1,2,3,4	STEAM GENERATOR ATMOSPHERIC RELIEF VALVES	A
FC-HV-312	TAFP TRIP AND THROTTLE VLV	A
FC-HV-313	TAFP GOVERNOR VLV	A
AL-HV-33	ESW TRAIN B TO TAFP	A
AL-HV-34	CST TO AFP B	A
AL-HV-10	TAFP TO STEAM GEN. B	A
AL-HV-5	AFP B TO STEAM GEN. D	A
AB-HV-5	STEAM GEN B STEAM LINE STEAM SUPPLY TO TAFP	A
PAL01B	AFP B	A
BG-HV-8152	RCS NORMAL LETDOWN ISO VLV	A
PBG05B	CCP B	A&D
PEJ01B	RHR PUMP B	A
PEG01B, PEG01D	CCW PUMPS B&D	A&C
PEN01B	CONTAINMENT SPRAY PUMP B	A
SGK05B	CLASS I/E ELEC. EQMT A/C UNIT (FOR SWGR-RM 3302)	B
SGL15B	ELECTRICAL PENETRATION ROOM COOLER (RM 1409)	B
PEN01A	CONTAINMENT SPRAY PUMP A	B
BN-HV-8812A,B	RWST TO RHR PUMPS A,B SUCTION ISO VLV	B
GD-TZ-11A	ESW PUMP ROOM SUPPLY AIR INLET DAMPER	B
CGD01B	ESW PUMP ROOM SUPPLY FAN	B
GM-TZ-11A	D.G. ROOM SUPPLY AIR INLET DAMPER	B
GM-HZ-19	D.G. ROOM SUPPLY AIR EXHAUST DAMPER	B
CGM01B	D.G. ROOM SUPPLY FAN	B
NG02B	MCC	B
NB01	4.16 kV SWITCHGEAR FOR SAFETY RELATED PUMPS & MCC'S TRAIN A	B

TABLE 2

SNUPPS

RESPONSE PLAN FOR A CONTROL ROOM FIRE RESULTING IN IMMEDIATE EVACUATION
REQUIRED EQUIPMENT LEGEND

EQUIPMENT NO	DESCRIPTION	PHASE
NG01A	MCC	B
NG04D	MCC	B
EG-HV-70B	CCW TO RADWASTE BLDG ISO VLV	C
EF-HV-52	ESW SUPPLY TO CCW HX ISO VLV	C
NG04C	MCC	C
EG-HV-102	CCW SUPPLY TO RHR HX ISO VLV	C
EG-HV-16	RETURN TO TRAIN B ISO VLV	C
EG-HV-54	CCW SUPPLY TO CONTAINMENT ISO VLV	C
EG-HV-15	CCW RETURN TO TRAIN A ISO VLV	C
NG03C	MCC	C
BN-LCV-112E	RWST TO CCP B SUCTION ISO VLV	D
BG-LCV-112C	VCT TO CCP B SUCTION ISO VLV	D
BG-HV-8111	CCP B MINIFLOW ISO VLV	D
BG-FCV-121	CCP DISCHARGE HEADER TO RCP SEALS CONTROL VLV	D
EM-HV-8843	BIT PATH SI TESTLINE ISO VLV	D
EM-HV-8882	BIT PATH SI TESTLINE ISO VLV	D
BG-HV-8105	NORMAL CHARGING ISO VLV	D
BB-HV-8351A, B,C,D	CCP TO RCP SEALS ISO VLVS	D
AB-V-018	MAN. ISO VLV UPSTREAM OF AB-PV-1	D
AB-V-029	MAN. ISO VLV UPSTREAM OF AB-PV-3	D
AL-HV-36	CST TO TAFP	D
AB-HV-11,14, 17,20	MSIV'S	D
PJE01B	EMERGENCY FUEL OIL TRANSFER PUMP	E
EF-HV-32,34	ESW SUPPLY TO CONTAINMENT COOLERS	E
EF-HV-46,50	ESW RETURN FROM CONTAINMENT COOLERS	E
EF-HV-40	ESW/SW RETURN ISO VLV	E
SGN01B,D	CONTAINMENT COOLERS	E
EM-HV-8801B	BIT DISCHARGE ISO VLV	E
EM-HV-8803B	BIT INLET ISO VLV	E
NG02T	MCC	E
NG04T	MCC	E
NG01B	MCC	E
BM-HV-1,2,3,4	STEAM GENERATOR BLOWDOWN ISO VLVS	E
BM157	LOCAL CONTROL PANEL	E
BM-HV-8001A,B	REACTOR HEAD VENT ISO VLVS	E
BB-HV-8002A,B	REACTOR HEAD VENT ISO VLVS	E
BG-HV-8153A,B	EXCESS LETDOWN ISO VLVS	E
BG-HV-8154A,B	EXCESS LETDOWN ISO VLVS	E
NK5100	125 V DC SWITCHBOARD	E
NK4400	125 V DC SWITCHBOARD	E
NK4100	125 V DC SWITCHBOARD	E
AB-HV-12,15 18,21	MSIV BYPASS VLVS	E

TABLE 2

SNUPPS

RESPONSE PLAN FOR A CONTROL ROOM FIRE RESULTING IN IMMEDIATE EVACUATION
REQUIRED EQUIPMENT LEGEND

EQUIPMENT NO	DESCRIPTION	PHASE
RP209	AUX RELAY RACK	E
RP210	AUX RELAY RACK	E
NG06E	MCC	E
NG08F	MCC	E
GD-TZ-61A	CALLAWAY COOLING TWR ELEC. EQMT RM SUPPLY AIR INLET DAMPER	F
CGD02B	CALLAWAY COOLING TWR ELEC. EQMT RM SUPPLY FAN	F
CEF01B,D	CALLAWAY COOLING TOWERS FOR ESW UHS	F
AL-HV-30	ESW SUPPLY TO AFP B	F
FEF02B	ESW PUMP DISCHARGE SELF CLEANING STRAINER	F

NOTE: MCC's are listed only under the phase when action is first taken on them.

TABLE 2

SNUPPS

RESPONSE PLAN FOR A CONTROL ROOM FIRE RESULTING IN IMMEDIATE EVACUATION
REQUIRED EQUIPMENT LEGEND

ACRONYMS

RWST - REFUELING WATER STORAGE TANK
RHR - RESIDUAL HEAT REMOVAL
ESW - ESSENTIAL SERVICE WATER
D.G. - DIESEL GENERATOR
MCC - MOTOR CONTROL CENTER
CCW - COMPONENT COOLING WATER
VCT - VOLUME CONTROL TANK
CCP - CENTRIFUGAL CHARGING PUMP
BIT - BORON INJECTION TANK
CR - CONTROL ROOM
ASP - AUXILIARY SHUTDOWN PANEL
TAFP - TURBINE DRIVEN AUXILIARY FEEDWATER PUMP
CST - CONDENSATE STORAGE TANK
AFP - MOTOR DRIVEN AUXILIARY FEEDWATER PUMP
RCS - REACTOR COOLANT SYSTEM
SWGR - SWITCHGEAR
MSIV - MAIN STEAM ISOLATION VALVE
UHS - ULTIMATE HEAT SINK
LOSP - LOSS OF OFFSITE POWER
BRKR - BREAKER
RCP - REACTOR COOLANT PUMP