

2-1-1

PER/ Status	Id ORG	Id'd By	Causing ORG	Level	Resp ORG	INPO Code	Pri PGM- Code	Sec PGM Code	3rd PGM Code	Cat	MRC Review Date	Cause Code
01-000893-000	OPSS	LINE ORGANIZATION	UNKNOWN	D	MMG	MA5	CO	HK		PROCES	07-Feb-01	C2D
CD	<p>On 2/4/01 at approximately 1914, Hold Order 0-14-0075 was authorized for placement. A briefing was held with the ConDi Operator as to the plans for the tagout for the acid piping in the ConDi and the hazards present in draining the acid piping. A second AUO was briefed and dispatched to provide the necessary verification for the tagout. Due to the hazards present, there were lengthy instructions contained in the "Placement Instructions" on the Clearance cover sheet. Upon performance of the "Placement Instructions" it was determined that sufficient guidance and expertise was not available to properly remove the acid pumps/piping from service without significant risk to operations personnel.</p> <p>In particular, the hose used for draining the acid piping had improperly installed drain hoses/clamps which was leaking onto the floor resulting in discoloration/damage to floor coatings. Also, the ventilation in the area was insufficient to prevent acid vapors from building up in the local area and posing a hazard to personnel. A flange was also leaking acid in the vicinity of the work area which required repair prior to hanging of the clearance. The activity was secured and the Radwaste Supervisor was notified.</p> <p>Upon discussions with the Radwaste Supervisor, it was determined that the leaking flange would need to be repaired and additional measures taken to minimize risk to personnel and plant equipment. Based on the additional hardware deficiencies and the risk to plant equipment and personnel, the clearance activity was rejected from the schedule and the system was secured until the whole work activity could be replanned.</p> <p>It appears that someone from the Radwaste section, industrial safety and possibly a standby team of first responders (i.e. Fire Operations) should be staged to support the successful planning and execution of this work activity.</p>											
01-000911-000	OPS	LINE ORGANIZATION	ENG/MECH	C	ENG/MECH	FP1	FP			PROCES	07-Feb-01	B2B
* CD	<p>Sequoyah's App. R Fire Safe Shutdown analysis appears to conflict with current Westinghouse information/guidance regarding loss of RCP seal cooling. Specifically:</p> <ol style="list-style-type: none"> 1. Our App. R analysis credits seal injection as an available RCS makeup path following an App. R fire and prescribes manual actions to restore seal injection flow if it is lost. However, fires in some areas in the Aux Bldg appear to have the potential to cause a loss of both seal injection flow and thermal barrier cooling. The manual operator actions required to restore seal injection or thermal barrier cooling probably would not be completed in time to prevent the RCP seals from overheating. (WOG DW 94-011 predicts 13 minutes for the seal to heat up to near RCS Tcold). Therefore, the Appendix R analysis appears to require restoration of seal injection flow to an overheated RCP seal, which is contrary to the guidance contained in WOG DW-94-011. (This DW directs NOT restoring seal injection or thermal barrier cooling and requires performing an RCS cooldown to cool the seal package. This guidance appears to be incompatible with our Appendix R analysis). 2. If all seal cooling is lost as a result of an App. R fire, the total expected RCP seal leakage (84 gpm) may exceed the available makeup capacity credited in the App. R analysis. This problem would be aggravated if thermal contraction due to RCS cooldown is considered. <p>Additional information and possible solutions to this problem are contained in an attached document.</p>											
01-001244-000	OPS/FIRE	LINE ORGANIZATION	UNKNOWN	C	OPS/FIRE	FP1	FP			EQUIP	21-Feb-01	C2D
CD	<p>During performance of 0-SI-FPU-410-001.R (Fire Door Inspection) significant corrosion was identified on the interior skin of door D33. Upon closer inspection it was determined that the door skin could be penetrated by simply pushing with hand/finger pressure. This door is configured such that rain water can access the top of the door and drip down into the interior spaces of the door.</p>											

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01-001268-000	B&WP/SEC	LINE ORGANIZATION	B&WP/SEC	C	B&WP/SEC	SE1	SE			PEOPLE	21-Feb-01	F1E
CD	ON 02/16/01 A SECURITY MOTOR PATROL VEHICLE WAS BACKING UP AND MADE A RIGHT HAND TURN BUMPING INTO A BLACK ELECTRICAL BOX COVER (THE COVER IS LOCATED NEAR MANHOLE 14B AT THE BOTTOM OF THE HILL BETWEEN THE DIESEL BUILDING AND THE DAW) AND MOVING IT APPROXIMATELY 2 FEET. THE METAL BOX WAS NOT BOLTED DOWN. THERE WAS EXPOSED WIRING UNDER THE ELECTRICAL COVER THAT WHEN THE COVER WAS MOVED, IT DAMAGED SOME OF THE WIRES, THEREBY CAUSING A SHORT WHICH CAUSED A BREAKER TO TRIP. SECURITY SUPERVISOR WAS IMMEDIATELY NOTIFIED AND IN TURN, NOTIFIED FIRE OPERATIONS.											
01-001352-000	OPS/FIRE	LINE ORGANIZATION	UNKNOWN	D	ENG/SUPP	EN4	DO	AP		PEOPLE	27-Feb-01	M2G
CD	UNID SQN-0-XS-013-0028A is an ionization type smoke detector. This is reflected in the Fire Protection Report and ECN 7190. However, the Asset Bill Of Material link for this ID in EMPAC indicates TIIC # ATE-071R which is described as a DS-2 photoelectric type smoke detector. In addition the noun qualifier field is in error in that it indicates 0-XS-013-0028A to be a motion detector..											
00-007928-000	ENG	SELF ASSESSMENT	ENG/MECH	B	ENG/MECH	EN2	DE			PEOPLE	01-Mar-01	M1E
H2	Some inconsistencies between Appendix R safe shutdown data sources such as calculations, procedures, cable routing programs, and design output were identified and noted in the Safe Shutdown Corporate self-assessment. The apparent cause appears to be the multi-discipline nature of the analysis, the complexity of the analysis, the multiple documents required to understand the analysis, and the multi-organization impacts of changes.											
	In addition 0-GO-8, Appendices L, M, and N contain generic manual actions credited in the SQN Appendix R Safe Shutdown Analysis. Some of these actions appear difficult to implement. (It is noted that the original approach in responding to an Appendix R fire was to utilize Operations "knowledge-based" response as opposed to a prescriptive "rule-based" approach. This approach was presented to and approved by the NRC before restart of SQN from the extended 1985-1988 shutdown). It is also noted in discussions with the Appendix R program development lead that operator staffing requirements for these generic actions was not individually or collectively analyzed since staffing needs were considered bounded by the MCR abandonment sequence. Since the MCR abandonment sequence (AOP-C.04) requires a minimum of four AUOs, the current AUO staffing level (minimum of seven per ODM-4.5) is believed to be adequate.											
01-002369-000	MAINTSUP	SELF ASSESSMENT	MMG	D	MMG	MA3	CP	IS		PEOPLE	08-Mar-01	F2B
CD	During management observation MMG installation of RCW replacement pipe several problems were observed and corrected: The crew observed had discussed hearing protection but another MMG crew working on the CRDM cooler did not and were not wearing ear protection and one individual did not have his hard hat on. These were COTS. The rolling scaffold had a requirement on the permit to tie the scaffold down when not in use. The foreman did not communicate this to the workers and they did not tie the scaffold down before leaving for the day. The foreman was coached on fire watch duties because the fire watch was occupied with other activities and a third person was assigned as fire watch. Documentation of work was not as expected and discussed with the crew. This PER is generated for trending and the foreman and MMG manager initiated briefings associated with these issues											

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01-009660-000	OPS/FIRE	LINE ORGANIZATION	B&WP/IS	D	B&WP/IS	EP1	EP			EQUIP	27-Oct-01	A2H
CD	The 3911 emergency speakers in Fire Protection, Security, Radcon, and Medical offices did not function during the medical emergency call at 0850 on 10/26/2001. The 3911 emergency phone system functioned properly to the Control Room. Response was not delayed due to alternate communications via telephone and radio.											
01-009666-000	MMG	LINE ORGANIZATION	MMG	D	MMG	OR2	IS			PEOPLE	27-Oct-01	F3D
CD	On 10/26/01, at approximately 0830 hrs. , a temporary contract worker injured his left knee while climbing the RCP #4 access ladder inside Unit 1 Lower Containment. The individual was enroute to his work area at the Lower Ice Condenser. Normally, access would have been via Upper Containment and down the subhatch , but FME controls are in place in Upper Containment at this time that causes lower ice workers to be rerouted thru Lower Containment to get to their work area. The injured individual exited Containment under his own power, and was escorted to Fire Ops. where he was diagnosed with a contusion to the left knee area. During medical treatment, the worker was questioned as to how the accident happened. He said that he was hurrying up the ladder and hit his knee on a ladder rung , and realizes now that he should have been taking more time to climb it. The worker has been released for work when he feels that he is able to negotiate ladder climbing safely. He has been instructed as to the importance of ladder safety and told to take additional time when climbing. As additional corrective measure, the affected work group will be reminded once again, of the importance of ladder safety. (Required first aid)											
01-009670-000	ENG/MECH	LINE ORGANIZATION	ENG/MECH	C	ENG/MECH	FP1	FP			PROCES	27-Oct-01	M1E
* CD	The current SQN Appendix R program does not credit the use of control air for Appendix R compliance. Therefore, manual actions are required for operation of the Steam Generator (SG) Atmospheric Relief Valves (ARVs). Also, one of the three associated pressure indicators is required for the SGs being used for cooldown. The ARVs are located in the West Valve Vaults (PCV-1-5 and -30 for SGs 1 and 4, respectively) and the East Valve Vaults (PCV-1-12 and -23 for SGs 2 and 3, respectively). Remote valve actuators and associated emergency lights have been installed for SGs 1 and 4, but not for SGs 2 and 3. Subsequently, SGs 1 and 4 are the only steam generators credited in the analysis. In two plant fire areas, FAA-31 and -39 (U1 and U2 El. 690 Pipe Gallery), all three pressure indicators for SGs 1 and 4 have essential cables terminating in panels located within the fire areas. Twenty foot separation between the redundant trains of indication does not exist for these areas. However, it has been verified on the Appendix R drawings (1-45E890-304-2 and 2-45E890-314-4) that these cables are in fact located in the subject rooms. This cable routing information was also verified on the conduit and grounding drawings. For additional details see attached writeup in Curator.											
01-009653-000	MODS	LINE ORGANIZATION	MODS	D	MODS	OR2	IS			PEOPLE	28-Oct-01	F1E
CD	U1C11RFO Injury, 10/25/01, 0300 - While laying out hangers from a scaffold for the Seal Oil Unit defoaming tank vent modification, a Modifications steamfitter turned his head and brushed against a fire protection sprinkler head causing a small laceration to the right side of his head, to the right of his eye. Employee was sent to medical for first aid treatment and returned to work.											
01-009622-000	RADCHEM	LINE ORGANIZATION	RADCON	D	RADCON	OR2	IS			PEOPLE	29-Oct-01	F1E
CD	Radcon Technician was providing "Rover" coverage IPCW around loop #3 when he stepped over some piping on the floor level and struck his shin on a hanger. Individual had two small abrasions on his shin. Individual received first aid treatment at Fire Ops.											

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02-000576-000	ENG/MECH	LINE ORGANIZATION	ENG/MECH	C	ENG/MECH	FP1	FP			PROCES	23-Jan-02	M1A

CD In order to meet Appendix R safe shutdown requirements for RCS inventory control and RCP seal cooling, CCP suction supply from either the VCT or RWST must be ensured. Control logic for the VCT outlet isolation valves (LCV-62-132 and -133) and RWST outlet isolation valves (LCV-62-135, -136) is interlocked such that prior to closing either LCV-62-132 or -133 valve, LCV-62-135 or -136 will open.

In the southeast corner of FAA-29 (690-A01), cables exist for all four Unit 2 LCVs as well as CCP 2A-A and 2B-B. Thermo-Lag protects the control cables for the -135 and -136 valves, but not the power cables. Also, CCP 2A-A is protected by Thermo-Lag in this area. Subsequent to an Appendix R fire, a spurious closure signal could be generated through cables controlling valves LCV-62-132 and -133. If a low level VCT tank level signal were to occur, valves LCV-62-132 and 133 would close. Since the power cables for -135 and -136 are not protected, automatic opening can not be guaranteed. Therefore, an interaction exists such that suction to both the VCT and RWST could be lost. If CCP 2A-A is running at the time of the valve closure, it could be destroyed due to loss of suction, and at the same time, CCP 2B-B could be unavailable due to the fire.

The current Fire Hazards Analysis credits manual actions to ensure suction for the CCPs. During the development of a manual action timeline analysis for the recent Appendix R re-verification effort, it was identified that this is a time-critical action (i.e., less than 10 minutes). However, due to the availability of normal charging and letdown (availability of Control Air has been verified), additional time for the manual action is available. The reliance on time-critical operator actions increases the risks associated with mitigation of an Appendix R event in the subject fire area. This PER is a result of extent of condition of PER 00-007928-000. For operability discussions, see "Immediate Actions Taken".

02-000824-000	OPSS	LINE ORGANIZATION	UNKNOWN	C	OPS	FP1	BA	FP		PROCES	30-Jan-02	J1E
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H2 The Diesel building rooms have CO2 fire suppression installed. Outside each room there are stations that allow the manual actuation of the individual systems. At one time there were labels that specified dump times to prevent overflow of the areas. These labels have been removed, however these dump times are still a procedure requirement of 0-SO-39-2, along with a warning of the potential for overflowing an area. During a fire emergency it is not realistic to expect that a person will go and look up the CO2 dump times. This information needs to be posted at the actuation station.

02-000920-000	OPS/FIRE	NUCLEAR ASSURANCE	ENG/MECH	C	OPS/FIRE	FP1	FP			PROCES	30-Jan-02	B2B
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H2 SQN Fire Protection Report, Part VI, section 3.3.11, appears to have an incorrect reference to Part VII, section 2.1. It appears that the correct reference should be section 2.6 of Part VII. Identified during SSA0201.

02-000822-000	OPS	LINE ORGANIZATION	ENG/ELECT	D	OPS	FP1	FP			PROCES	31-Jan-02	B2F
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CD The current Appendix - R program requires the Reactor Vessel Head Vent Valve fuses to be removed as a pre-emptive manual action for any declared Appendix-R fire. For fires in the 6.9 kv Shutdown Board Rooms, the accomplishment of this action may require the use of fire fighter 'turn-out' gear. Operations shift personnel are no longer qualified to utilize 'turn-out' gear nor does Operations maintain 'turn-out' gear for Operations shift personnel.