

Facility: SONGS 2 & 3		Date of Examination: 02/02/2009
Examination Level SRO <input checked="" type="checkbox"/>		Operating Test Number: NRC
Administrative Topic (see Note)	Type Code*	Describe Activity to be Performed
Conduct of Operations	D, R	2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation (4.4).  JPM: Calculate a makeup to the RWST. (J215A)
Conduct of Operations	D, P, R	2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. (4.7).  JPM: Perform manual calculation of RCS flow rate. (J165A)
Equipment Control	N, R	2.2.13 Knowledge of tagging and clearance procedures (4.3).  JPM: Review clearance boundaries. (New).
Radiation Control	M, R	2.3.7 Ability to comply with radiation work permit requirements during normal or abnormal conditions. (3.6)  JPM: Determine stay time for work to be performed. (J216A).
Emergency Plan	N, R	2.4.41 Knowledge of emergency action level thresholds and classifications. (4.6)  JPM: Classify an emergency event. (New).
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		

*Type Codes & Criteria:	(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank ( $\leq 3$ for ROs; $\leq$ for 4 for SROs & RO retakes) (N)ew or (M)odified from bank ( $\geq 1$ ) (P)revious 2 exams ( $\leq 1$ ; randomly selected)
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Administrative Topics Outline  
Task Summary

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- A.1.a The candidate is directed to perform a blended makeup to the RWSTs at a total flow of 40 gpm. The Plant Monitoring System is not available. The candidate will determine the required Boric Acid Flow Rate and the Primary Makeup Water flow rate for the required RWST makeup. The critical tasks include determining Primary Water and Boric Acid flow rates and completing Prerequisites for SO23-3-2.2 Attachment 14. This is a modified bank JPM.
- A.1.b The candidate will be required to calculate RCS flow rate with the Plant Monitoring System (PMS) unavailable. The critical task will be to determine if the calculated flow rate is in compliance with Technical Specifications. This JPM was modified due to procedural changes and new RCP Pump curves.
- A.2 The Boric Acid Makeup Pump 2MP174 is to be cleared for mechanical work on the pump casing. The shift manager directs the candidate to review the clearance boundaries selected and report findings when complete. The critical task is to identify two errors in the clearance boundary. This is a new JPM.
- A.3 The candidate will determine stay time for work to be performed and take action for a change in radiological conditions. The critical task is to select the correct REP for work to be performed and determine stay time for the operator. This is a modified bank JPM.
- A.4 The candidate will perform an EPIP event classification based on lack of control room alarms, damage to ESF equipment and current plant conditions. The critical task is to determine the proper classification. This is a new JPM.

Facility:		SONGS Units 2 and 3		Date of Examination:		02/02/2009	
Exam Level:		RO <input type="checkbox"/> SRO(I) <input checked="" type="checkbox"/> SRO (U) <input type="checkbox"/>		Operating Test No.:		NRC	
Control Room Systems <sup>@</sup> (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U, including 1 ESF)							
System / JPM Title				Type Code*		Safety Function	
S-1	001 – Control Rod Drive System (J045FS) Dampen ASI oscillation			A, D, S		1	
S-2	013 – ESFAS (J042FS) Verify proper EFAS actuation			A, D, L, S		2	
S-3	EPE 009 – SBLOCA (J228FS) Perform Subcooled Pressure Control actions			A, D, E, L, S		3	
S-4	EPE – Steam Generator Tube Rupture (J094FS) Verify correct SG isolated following SGTR			A, D, E, L, S		4 – S	
S-5	026 – Containment Spray System (J145FS) Restore Containment Spray			A, D, E, L, S		5	
S-6	064 – Emergency Diesel Generators (J188S) Reenergize Bus 2A06 from Unit 3 Diesel Generator			M, P, S		6	
S-7	012 – Reactor Protection System (J047S) Channel A Narrow Range Pressure Transmitter failure			D, P, S		7	
In-Plant Systems <sup>@</sup> (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)							
P-1	039 - Main and Reheat Steam System (J022F) Manually open the Atmospheric Dump Valve			A, D		4-S	
P-2	APE 068 – Control Room Evacuation. (J122) Rad waste operator actions for SD from outside CR			E, M, R		1	
P-3	EPE 055 – Station Blackout (J202) SBO actions to cross connect to Unit 3			D, E		6	

@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.	
* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$
(EN)gineered safety feature	- / - / $\geq 1$ (control room system)
(L)ow Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)
(R)CA	$\geq 1 / \geq 1 / \geq 1$
(S)imulator	

**NRC JPM Examination  
Summary Description**

- S-1 The candidate will use the Control Rod Drive System to dampen an Axial Shape Index oscillation. The alternate path requires a Reactor Trip when two CEAs fall into the core. This is a bank JPM under the Control Rod Drive System – Reactivity Control safety function.
- S-2 The candidate will validate proper EFAS actuation per SO23-3-3.22 ESFAS System Operation, attachment #13. Validation check determines that AFW P-141 requires a manual start as well as A-394 AFW pump room fan. This is a bank JPM under the Engineered Safety Features Actuation System – Reactor Coolant System Inventory Control safety function.
- S-3 The candidate will perform Sub-Cooled Pressure Control actions per SO23-12-9, Functional Recovery, RCS Pressure Control using the HPSI System. The alternate path requires aligning HPSI valves and/or pumps to facilitate core cooling. This is a bank JPM under the Emergency Core Cooling System – Reactor Pressure Control safety function.
- S-4 The candidate will verify the correct SG is isolated following a Steam Generator Tube Rupture. The alternate path requires that the candidate recognize that the wrong SG was isolated and realigns for the ruptured SG. This JPM requires the operator to use an alternate means of SG pressure control due to a Main Steam Isolation Signal. This is a bank JPM under the Steam Bypass System – Secondary System Heat Removal from Reactor Core safety function.
- S-5 The candidate will restore Containment Spray per SO23-12-11, EOI Supporting Attachments, Floating Step 12, Monitor Containment Pressure. The alternate path requires the candidate to perform RNO actions for spray flow when it is determined that it cannot be initiated by normal means. This is a bank JPM under Containment Spray System – Containment Integrity safety function.
- S-6 The candidate will reenergize Bus 2A06 from the Unit 3 Emergency Diesel Generator per SO23-12-11, EOI Supporting Attachments, Attachment 24, Supplying 1E 4 KV Bus from Opposite Unit Diesel. Two critical steps added to load the diesel generator with the salt water cooling pump and the component cooling water pump. This is a modified JPM in the AC Electrical Distribution System – Electrical safety function.
- S-7 The candidate will take corrective actions for Channel “A” Narrow Range Pressurizer Pressure Transmitter failure per SO23-13-18 and SO23-3-2.12. This is a bank JPM under the Reactor Protection System – Instrumentation safety function.

**NRC JPM Examination  
Summary Description (cont)**

- P-1 The candidate will be required to manually open the Atmospheric Dump Valve per SO23-3-2.18.1. This is a bank JPM under the Heat Removal from Reactor Core safety function. The alternate path requires the candidate to open the ADV manually.
- P-2 The candidate will perform Shutdown From Outside the Control Room action for the Rad Waste Operator per SO23-13-2, Shutdown from Outside the Control Room. Four critical steps added to ensure Component Cooling Water is aligned to the Reactor Coolant Pumps. This is a modified JPM with a Reactivity Control safety function.
- P-3 The candidate will perform Station Blackout actions to energize 1E 480V bus 2B04 per SO23-12-11 from Unit 3 using MCC BQ for the cross connect. This is and AC Electrical Distribution electrical safety function. This is a bank JPM with a PRA significant action.