Facility:	SONGS Units 2 and 3	Date of Examination:	09/22/08
Exam Level:	RO ☐ SRO(I) ☐ **SRO (U)** ☐	Operating Test No.:	NRC

Control Room Systems@ (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	**005 - Residual Heat Removal System (J152FS)** **Respond to Shutdown Cooling System High Temperature**	**A, L, M, S**	**4-P**
S-2	064 - Emergency Diesel Generators System (J011FS2) Parallel the Emergency Diesel Generator to Bus 2A04	A, M, S	6
C-3	**001 - Control Rod Drive System (New)** **Respond to Control Element Drive Mechanism Alarm**	**A, C, N**	**1**
S-4	**013 - Engineered Safety Feature Actuation System (J069S)** **Reset SIAS and CCAS**	**D, EN, S**	**2**
S-5	045 - Main Turbine Generator System (New) Perform a Manual Turbine Runback	N, S	4-S
S-6	022 - Containment Cooling System (J182FS2) Initiate Containment Cooling System	A, D, S	5
S-7	006 - Emergency Core Cooling System (J086S2) Pressurize the Safety Injection Tank	D, S	3
S-8	008 - Component Cooling Water System (J140S) (RO only) Place Train A CCW / SWC In Standby	D, S	8
In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
P-1	064 - Emergency Diesel Generators (J190) Perform EDG Cross-Tie Permissive Switch Alignment	D, E	6
P-2	**061 - Auxiliary / Emergency Feedwater System (J061F)** **Initiate Manual Auxiliary Feedwater Flow**	**A, D, E**	**4-S**
P-3	**015 - Nuclear Instrumentation System (J230)** **Align Power to EPPM and NI Startup Channel**	**E, D, R**	**7**

@	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	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥ 1 (control room system)
(L)ow Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

NRC JPM Examination
Summary Description

S-1 The candidate will perform actions for a Loss of Shutdown Cooling System per Abnormal Operating Instruction SO23-13-15, Loss of Shutdown Cooling. The alternate path includes responding to fluctuating Shutdown Cooling Pump amps when the pump is restarted. This is a modified bank, low-power JPM under the Residual Heat Removal System – Primary System Heat Removal from Reactor Core safety function. This is a PRA significant action.

S-2 The candidate will parallel the Emergency Diesel Generator to Bus 2A04 per SO23-3-3.23, Diesel Generator Monthly and Semi-Annual Testing, Attachment 1. The alternate path requires operator action when the Emergency Diesel Generator load control governor fails. This is a modified bank JPM under the AC Electrical Distribution System - Electrical Systems safety function.

C-3 The candidate will respond to a Control Element Drive Mechanism (CEDM) cooling alarm per SO23-15-60.A1.14, CEDM Cooling Air Flow Low from the Control Room. The alternate path includes actions to align the standby CEDM Cooling Unit. This is a new JPM under the Control Rod Drive System – Reactivity Control safety function.

S-4 The candidate will perform a reset of the Safety Injection Actuation Signal (SIAS) and Containment Cooling Actuation Signal (CCAS) per SO23-3-2.22, ESFAS Operation. This is a bank JPM under the Engineered Safety Features Actuation System – Reactor Coolant System Inventory Control safety function.

S-5 The candidate will perform a Manual Turbine Runback per SO23-3-2.28, Digital Control System Operation. This is a new JPM under the Main Turbine Generator System - Secondary System Heat Removal from the Reactor Core safety function.

S-6 The candidate will be required to initiate a Containment Cooling Actuation Signal per SO23-1-4.1, Containment Emergency Cooling, Step 6.5. The alternate path requires that the candidate start the Train A Containment Emergency Cooling Fans and the Train A Containment Dome Air Circulator Fans. This is a bank JPM under the Containment Cooling System – Containment Integrity safety function.

S-7 The candidate will pressurize Safety Injection Tank T-008 per SO23-3-2.7.1, Safety Injection Tank Operations. This is a bank JPM under the Emergency Core Cooling System – Reactor Pressure Control safety function.

S-8 The candidate must place the Train A Component Cooling Water / Saltwater Cooling Critical Loop in Standby per SO23-2-17, Component Cooling Water System Operation. This is a bank JPM under the Component Cooling Water System– Plant Service Systems safety function.

P-1 The candidate will perform the Diesel Generator Cross-Tie Permissive Switch Alignment per Emergency Operating Instruction SO23-12-11, EOI Supporting Attachments, Attachment 24, Supplying 1E 4 kV Bus with Other Unit Diesel. This is a bank JPM under the Emergency Diesel Generators – Electrical Systems safety function. This is a PRA significant action.

P-2 The candidate will perform Auxiliary Feedwater System actions per Abnormal Operating Instruction SO23-13-2, Shutdown from Outside the Control Room. This is a bank JPM under the Auxiliary Feedwater System – Secondary Heat Removal from the Reactor Core safety function. This is a PRA significant action.

P-3 The candidate will align power to the Essential Plant Parameters Monitoring Panel (EPPM) to power a Nuclear Instrument Startup Channel per Emergency Operating Instruction SO23-12-11, EOI Supporting Attachments, Floating Step 26, Connect G005 Portable Generator to L-411 EPPM / Startup Channel. This is a Nuclear Instrumentation System – Instrumentation safety function. This is a PRA significant action.

Facility:	SONGS 2 & 3	Date of Examination:	09/22/2008
Examination Level	RO ☐	Operating Test Number:	NRC

Administrative Topic (see Note)	Type Code*	Describe Activity to be Performed
Conduct of Operations	N, R	2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation (4.3). JPM: Perform a Borated Water Source Operability Verification (New).
Conduct of Operations	M, R	2.1.25 Ability to interpret reference materials such as graphs, curves, tables, etc. (3.9). JPM: Calculate Time Until Shutdown Cooling is Required (J053A).
Equipment Control	D, R	2.2.6 Knowledge of the process for making changes to procedures (3.0). JPM: Prepare a procedure change request using a Procedure Modification Permit (J210A).
Radiation Control	-	
Emergency Plan	C, D, S	2.4.39 Knowledge of RO responsibilities in emergency plan implementation (3.9). JPM: Perform the Siren and PA Coordination (J157A).

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 (≤ 3 for ROs; ≤ for 4 for SROs & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)

A.1.a The candidate will perform a Borated Water Source Operability Verification per SO23-3-3.27, Once A Week Surveillances (MODES 1-4), Attachment 1, Step 2.1. Critical tasks include determining useable tank volume and Boric Acid Makeup Tank operability. This is a new JPM.

A.1.b The candidate will use SO23-12-11, EOI Supporting Attachments, Attachment 16, Determine Time Until Shutdown Cooling Required. The critical tasks include determining amount of water required and net feedwater available for the cooldown. This is a modified bank JPM.

A.2 The candidate will be provided with a set of conditions requiring a change to an existing procedure. The task will be to initiate a procedure change using a Procedure Modification Permit (PMP) per SO123-0-A3, Procedure Use. The critical tasks include identifying the extent of the procedure change as well as any potential impact to plant operation. This is a bank JPM.

A.3 N/A

A.4 The candidate will perform the Siren and Public Address Coordination during the Emergency Plan per SO23-VIII-30, Units 2/3 Operations Leader Duties, Attachment 1. The critical tasks include proper form preparation as well as operating the siren and public address system consoles. This is a bank JPM.

Facility:	SONGS 2 & 3	Date of Examination:	09/22/2008
Examination Level	SRO ☐	Operating Test Number:	NRC

Administrative Topic (see Note)	Type Code*	Describe Activity to be Performed
Conduct of Operations	N, R	2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation (4.4). JPM: Perform a Borated Water Source Operability Verification (New).
Conduct of Operations	M, R	2.1.25 Ability to interpret reference materials such as graphs, curves, tables, etc (4.2). JPM: Calculate Time Until Shutdown Cooling is Required (J053A).
Equipment Control	N, R	2.2.23 Ability to track Technical Specification limiting conditions for operations (4.6). JPM: Determine if Technical Specification LCO is being met (New).
Radiation Control	M, R	2.3.4 Knowledge of radiation exposure limits under normal or emergency conditions (3.7). JPM: Choose a volunteer for emergency radiation exposure (J208A).
Emergency Plan	N, R	2.4.29 Knowledge of the emergency plan (4.4). JPM: Prepare an Event Notification Form (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 (≤ 3 for ROs; ≤ for 4 for SROs & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)

A.1.a The candidate will perform a Borated Water Source Operability Verification per SO23-3-3.27, Once A Week Surveillances (MODES 1-4), Attachment 1, Step 2.1. Critical tasks include determining useable tank volume and Boric Acid Makeup Tank operability. Additionally, the SRO will evaluate Technical Specifications to determine if adequate boration flowpaths exist. This is a new JPM.

A.1.b The candidate will use SO23-12-11, EOI Supporting Attachments, Attachment 16, Determine Time Until Shutdown Cooling Required. The critical tasks include determining amount of water required and net feedwater available for the cooldown. This is a modified bank JPM.

A.2 The candidate will be provided with a set of maintenance conditions requiring Technical Specification Limiting Condition for Operation evaluation per Unit 3 Technical Specifications. The critical tasks include determining if the correct Technical Specification ACTIONS are being performed. This is a new JPM.

A.3 The candidate will be required to choose a volunteer for an emergency exposure in accordance with SO23-VIII-30, Operations Leader. The critical task requires the candidate to choose the appropriate volunteer. This is a modified bank JPM.

A.4 The candidate will prepare an Event Notification Form per SO123-VIII-30.7, Emergency Notifications. The critical task is to determine if the proper notifications and classification are being transmitted. This is a new JPM.