

Facility: Callaway		Date of Examination: 8/22/2005
Examination Level (circle one): RO		Operating Test Number: NRC
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N,R,S	JPM: Perform a Shutdown Margin Calculation. K/A: 2.1.32 (3.4) Ability to explain and apply all system limits and precautions
Conduct of Operations	N,R	JPM: Calculate blended makeup volume and flow to the RWST. K/A: 2.1.25 (2.8) Ability to obtain and interpret station reference materials such as graphs, nomographs, and tables which contain performance data.
Equipment Control	N, R	JPM: Determine Tagging Boundaries for Containment Spray Pump. K/A: 2.2.13 (3.6) Knowledge of tagging and clearance procedures
Radiation Control	M, R	JPM: Determine Stay Time. K/A: 2.3.2 (2.5) Knowledge of facility ALARA program
Emergency Plan		
NOTE: All items (5 total are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.		
*Type Codes & Criteria: (C)ontrol room (D)irect from bank (≤ 3 for ROs; \leq for SROs & RO retakes) (N)ew or (M)odified from bank (> 1) (P)revious 2 exams (≤ 1 ; randomly selected) (S)imulator Class(R)oom		

TASK SUMMARY**A1a: Conduct of Operations:**

Perform a Shutdown Margin Calculation. The task will require the RO and SRO applicants to perform a Shutdown Margin Calculation for Mode 3 conditions with all rods in. The JPM will be a new JPM

A1b: Conduct of Operations:

Calculate blended makeup volume and flow for a makeup to the RWST. The task will require the applicant to determine volume of boric acid required based upon boric acid storage tank concentration, and makeup flow controller settings based upon desired makeup flow. This is a new JPM.

A2: Equipment Control:

Determine Boundaries for Containment Spray Pump. The RO applicants will be required to determine the isolation boundaries for a Containment Spray Pump that will be removed from service. This is a new JPM.

A3 Radiation Control:

Determine Stay Time. Given several Radiation Work Permits to choose from, survey maps of an area where work is required, and alarming dosimetry, the RO and SRO applicants will be required to determine their allowed stay time prior to reaching the dosimetry alarm setpoint. This task is modified from a task performed on the 2003 NRC examination

Facility: Callaway		Date of Examination: 8/22/2005
Examination Level (circle one): SRO		Operating Test Number: NRC
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N,R,S	JPM: Perform A Shutdown Margin Calculation. K/A: 2.1.32 (3.8) Ability to explain and apply all system limits and precautions
Conduct of Operations	N,R	JPM: Calculate blended makeup volume and flow to the RWST. K/A: 2.1.25 (3.1) Ability to obtain and interpret station reference materials such as graphs, nomographs, and tables which contain performance data.
Equipment Control	N,R	JPM: Review a Tagging Order for approval. K/A: 2.2.13 (3.8) Knowledge of tagging and clearance procedures
Radiation Control	M,R	JPM: Determine Stay Time. K/A: 2.3.2 (2.9) Knowledge of facility ALARA program
Emergency Plan	N,R,S	JPM: Upgrade Emergency Classification and make initial Protective Action Recommendation K/A: 2.4.44 (4.0) Knowledge of emergency plan protective action recommendations
<p>NOTE: All items (5 total are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.</p>		
<p>*Type Codes & Criteria:</p> <p>(C)ontrol room</p> <p>(D)irect from bank (≤ 3 for ROs; \leq for SROs & RO retakes)</p> <p>(N)ew or (M)odified from bank (> 1)</p> <p>(P)revious 2 exams (≤ 1; randomly selected)</p> <p>(S)imulator</p> <p>Class(R)oom</p>		

TASK SUMMARY**A1a: Conduct of Operations:**

Perform a Shutdown Margin Calculation. The task will require the RO and SRO applicants to perform a Shutdown Margin Calculation for Mode 3 conditions with all rods in. The JPM will be a new JPM.

A1b: Conduct of Operations:

Calculate blended makeup volume and flow for a makeup to the RWST. The task will require the applicant to determine volume of boric acid required based upon boric acid storage tank concentration, and makeup flow controller settings based upon desired makeup flow. This is a new JPM.

A2: Equipment Control:

Review a Tagging Order for approval. The SRO applicants will review a tagging order that contains critical errors. The applicants will be required to determine the errors that exist and recommend correction prior to tagging order approval. This is a new JPM.

A3 Radiation Control:

Determine Stay Time. Given several Radiation Work Permits to choose from, survey maps of an area where work is required, and alarming dosimetry, the RO and SRO applicants will be required to determine their allowed stay time prior to reaching the dosimetry alarm setpoint. This task is modified from a task performed on the 2003 NRC examination

A4: Emergency Plan:

Upgrade Emergency Classification and make initial PAR. The SRO applicants will be given plant conditions requiring escalation of an emergency classification to a General Area Emergency. The applicants will then make an initial Protective Action Recommendation based upon the existing conditions. This is a new JPM.

Facility:	Callaway	Date of Examination:	8/22/2005
Exam Level (circle one):	RO / SRO(I)	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
S1.	001 Rod Control Raise reactor power and block source range high flux trips	N,S,A	1
S2.	006 ECCS Isolate SI Accumulators during Post-LOCA cooldown	N,S,A	2
S3.	010 PPCS Respond to a Spray Valve failure	N,S,A	3
S4.	003 RCP Start an RCP	M,S,A,L	4P
S5.	041 Steam Dump Place Main Steam Dumps in Steam Pressure Mode	D,S,A,P	4S
S6.	103 Containment Place Containment H2 Analyzer in service	D,S,P	5
S7.	064 EDG Parallel a DG to an energized bus	D,S	6
S8.	029 Containment Purge Reinitiate Containment Purge (Performed by ROs Only)	D,S	8
In-Plant Systems® (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
P1.	004 CVCS Borate RCS during cooldown outside the control room	D,E	1
P2.	103 Containment Locally close valves for CIS-B	D,R,E,P	5
P3.	086 Fire Protection Perform Fire Water System makeup to CST	D,E	8

@ 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	$\geq 1 / \geq 1 / \geq 1$
(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	

- A. Task is to raise reactor power during a reactor startup, and block the Source Range High Flux trips when P-6 is energized. After Source Range High Flux trips are blocked, the alternate path of this task requires the applicant to trip the reactor due to a rod control failure (Continuous Rod Withdrawal). This is a new JPM.
KA 001 A2.11 (4.4/4.7)
- B. During a Post-LOCA cooldown in ES-1.2, the applicants will be required to isolate the SI Accumulators. The alternate path of this task is that one accumulator isolation valve will not close, requiring the applicant to vent the component. This is a new JPM.
KA A4.02 (4.0/3.8)
- C. The applicant will be performing action in ES-0.1 to stabilize plant parameters. The alternate path of this task is to determine that RCS pressure is not responding as required, correctly identify a partially failed open Main Spray valve, trip associated RCPs, and energize pressurizer heaters. This is a new JPM.
KA 010 A2.02 (3.9/3.9)
- D. The applicant will be required to start an RCP. The alternate path of this task is that an RCP will parameter will trend outside of operating limits and require the RCP to be tripped. This is a modified bank JPM.
KA 003 A2.02 (3.7/3.9)
- E. The task is to place Steam Dumps in the Steam Pressure Mode. The alternate path of this task will be that an input failure results in the steam dumps failing open and causing an RCS cooldown, requiring the applicant to close the valves. This is a bank JPM that was performed on the 2004 NRC exam.
KA 041 A4.08 (3.0/3.1)
- F. The task is to place the Containment H2 Analyzer in service from the control room. This is a bank JPM that was performed on the 2004 NRC exam.
KA 028 A4.03 (3.1/3.3)
- G. The applicant will start and parallel a diesel generator to an energized emergency bus. This is a bank JPM.
KA 064 A4.01 (4.0/4.3)
- H. The applicant will reinitiate a containment mini-purge that was stopped earlier. This task is ONLY performed by RO applicants. This is a bank JPM.
KA 029 A2.03 (2.7/3.1)
- I. The applicants will initiate RCS boration during a cooldown outside the control room. This is a bank JPM.
KA 004 G2.1.30 (3.9/3.4)
- J. The applicants will locally close valves that should close on Containment Isolation phase B. This is a bank JPM that was performed on the 2004 NRC exam.
KA 103 A2.03 (3.5/3.8)
- K. The applicants will align the Fire Water system to supply the CST. This is a bank JPM.
KA 086 G2.1.30 (3.9/3.4)