ES-301

Facility: PVNGS			Date of Examination:	09/26/18	
Examination Level	SRO		Operating Test Number:	2018 NRC Re-Exam	
Administrative Topic (see Note)	Type Code*		Describe Activity to be	e Performed	
	DR	JPM:	Evaluate crew staffing in e if the unit is in compli Operations and Technical	each unit and determine ance with Conduct of Specifications	
A1	D, K	KA:	G 2.1.5		
		IR:	3.9		
A2	M, R	JPM:	Manually calculate RCS leakage and evaluate Technical Specifications		
		KA:	G 2.1.20		
		IR:	4.6		
A3	D, R	JPM:	Determine impacts of fai to refueling operation Specifications	led Startup Channel NI ons and Technical	
		KA:	G 2.2.40		
		IR:	4.7		
	NR	JPM:	Evaluate the Release flowchart following a SGT Alert classification	Flowchart and PAR R/LOOP resulting in an	
A4	<b>N</b> , IX	KA:	G 2.3.14		
		IR:	3.8		
		JPM:	Classify a loss of power e EDG with a loss of support	event concurrent with an rt system	
A5	N, R	KA:	G 2.4.40		
		IR:	4.5		

## Administrative Topics Outline Task Summary

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:	<ul> <li>(C)ontrol room, (S)imulator, or Class(R)oom</li> <li>(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs &amp; RO retakes) (2)</li> <li>(N)ew or (M)odified from bank (≥ 1) (3)</li> <li>(P)revious 2 exams (≤ 1; randomly selected) (0)</li> </ul>	

- A1 The applicant will determine whether or not each of the 3 site units shift manning meets with the requirements of Technical Specifications, and 40DP-9OP02, Conduct of Operations. This is a bank JPM.
- A2 The applicant will perform a manual RCS leakrate calculation and evaluate Technical Specifications. LCO 3.4.14 for RCS Operational Leakage, will be impacted and the applicant will have to determine the classification of leakage and required actions. This is a modified bank JPM.
- A3 The applicant will determine the Technical Specification impact of a failed Startup Channel NI and the subsequent potential impact on an upcoming refueling evolution. Following the Technical Specification evaluation, the applicant will refer to an outage evolution table and determine whether or not the evolution can proceed with one failed Startup Channel NI. This is a bank JPM.
- A4 The applicant will determine the status of a radiological release and Protective Action Recommendation during a SGTR event concurrent with a loss of offsite power. This is a new JPM.
- A5 The applicant will classify an emergency event using EP-0901, Classifications, and the EAL classification charts. The event will be a loss of offsite power concurrent with a loss of support equipment (on one EDG) required in order to use the EDG for power restoration. This is a new JPM.

## Control Room / In-Plant Systems Outline

Form ES-301-2

Facility:	Р	PVNGS	Date of Examination	n:	09/26/18	
Exam Leve	el: S	SRO-U	Operating Test No.:	_	2018 NRC	
System / JPM Title				Type Code*	Safety Function	
Control Room Systems (2 or 3 for SRO-U, including 1 ESF)						
S1 001 A2.11	001 - F followir	Restore CEA overlap following a RPCB ang two dropped CEAs	and trip the reactor	A, M, S	1	
S2 103 A3.01	103 - Verify CIAS actuation		A, E, EN, M, S	5		
S3 015 A4.02	015 – Place Boron Dilution Alarm System (BDAS) in service		D, E, L, S	7		
In-Plant Systems (3 or 2 for SRO-U)						
P1 061 A2.04	061 - Local Operation of Turbine Driven AFW Pump AFA-P01		A, D, E, L	4S		
P2 033 A2.02	033 - Align Train B EW to SFP Cooling			D, E, L, R	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 SRO-U			
(A)Iternate path	2-3 <b>(3)</b>			
(C)ontrol room				
(D)irect from bank	≤ <b>4 (3)</b>			
(E)mergency or abnormal in-plant	≥ 1 <b>(2)</b>			
(EN)gineered safety feature	$\geq$ 1 (1) (control room system)			
(L)ow Power / Shutdown	≥ 1 <mark>(3)</mark>			
(N)ew or (M)odified from bank including 1(A)	≥ 1 <mark>(2 – 2A)</mark>			
(P)revious 2 exams	$\leq$ 2 (0) (randomly selected)			
(R)CA	≥ 1 <b>(1)</b>			
(S)imulator				

## NRC JPM Examination Summary Description

- S1 The applicant will commence re-establishing proper CEA overlap following a Reactor Power Cutback (RPCB) following a trip of a Main Feedwater Pump per 40AO-9ZZ09, Reactor Power Cutback (Loss of Feedpump). During the CEA restoration, two CEAs will slip into the core resulting in a RPS trip signal (LO DNBR and HI LPD). The reactor will fail to auto trip, requiring the applicant to recognize the need to trip and de-energize the CEDM MG Sets by opening feeder breakers L03 and L10. This is a modified bank JPM covered by Safety Function 1.
- S2 The applicant will place Hydrogen Analyzers in service, check containment pressure, and determine that a Containment Isolation Actuation Signal (CIAS) signal should have actuated and manually actuate a CIAS. After actuating CIAS, the applicant will ensure at least one containment isolation valve is closed in each penetration by checking the Safety Equipment System Status (SESS) panel and taking manual action to close at least one valve in penetrations which had valves fail to automatically close on the CIAS signal. This is a modified bank JPM covered by Safety Function 5.
- S3 The applicant will energize Startup Channel Nuclear Instruments and place the Boron Dilution Alarm System (BDAS) in service per Appendix 8, Boron Dilution Alarm Check. This is a bank JPM covered by Safety Function 7.
- P1 The applicant will be directed to perform Appendix 40, Local Operation of AFA-P01 Using Main Steam, and determine that the trip and throttle valve is not in the reset position, requiring local action to reset the overspeed trip mechanism. This is a bank JPM covered by Safety Function 4S.

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P2 The applicant will simulate aligning Train B Essential Cooling Water to provide Spent Fuel Pool cooling per Appendix 64, Align Train B EW to SFP Cooling. This is a bank JPM covered by Safety Function 8.