Appendix C	Job Performanc Worksh	· · · · · · · · · · · · · · · · · · ·	Form ES-C-1
Facility:	Indian Point Unit 3	Task No.:	
Task Title:	Perform a QPTR Calculation	JPM No.: A.1	
K/A Reference:	2.1.7 Ability to evaluate plant performance and make operationa judgments based on operating characteristics, reactor behavior, and instrument interpretation.	Importance (3.7/4.4) al	
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Perform	ance:	Actual Performance:	<u> </u>
Classre	oom SimulatorX	Plant	

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions:	Plant is at 100% power BOL. The Control Room personal computer is unavailable.
Task Standard:	
Required Materials:	Calculator, GRAPH NI-2, Blank Quadrant Power Tilt Rate Calculation Form
General References:	SOP-RPC-005A, GRAPH NI-2
Initiating Cue:	You are requested to perform a Manual Quadrant Power Tilt Rate Calculation using Attachment 1 of SOP-RPC-005A
Time Critical Task:	
Validation Time:	45 Minutes

Ap	pend	lix	С

Page 2 of 7 PERFORMANCE INFORMATION

Form ES-C-1

(D	enote Critical Steps with a	n asterisk)
	Performance Step: 1	Step 1.0 ENSURE appropriate meter range for detectors A and B, for each operable NIS Power Range Channel
	Standard:	Ensures range meter indication between 1/3 and 2/3 of full scale
	Comment:	None
	Performance Step: 2	Step 2.0 RECORD the date, time, and % power
	Standard:	Date, time, and % power recorded correctly on QPTR Form
	Comment:	
*	Performance Step: 3	Step 3.0 RECORD UPPER and LOWER detector currents on operable NIS Power Range drawers
	Standard:	Candidate demonstrates the ability to obtain readings from the correct meters and records them appropriately in the attachment
	Comment:	Cue: Question the Candidate on how to obtain the detector currents.
		Provide the Candidate with detector currents for use in the remainder of the JPM
	Performance Step: 4 Standard:	Step 3.1 N/A
	_	

Comment:

Appendix	С
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Page 3 of 7 PERFORMANCE INFORMATION Form ES-C-1

	Performance Step: 5 Standard:	Step 4.0 N/A
	Comment:	
*	Performance Step: 6	Step 5.0 CALCULATE (normalized) detector currents
	Standard:	Divide actual Detector Current recorded in Attachment 1, Step 3.0 by full power axial offset detector current obtained from last incore/excore calibration (Graph NI-2)
		41 Upper 617/610=1.011 41 Lower 635/641=0.991
		42 Upper 650/656=0.991 42 Lower 640/633=1.001
		43 Upper 630/641=0.983 43 Lower 610/611=0.998
		44 Upper 670/668=1.003 44 Lower 700/711=0.985

Comment: Candidate must find graph NI-2 without prompting. If the candidate takes the numbers to the 4th decimal place, then the solutions will vary slightly. This effect will be noted later in the JPM.

- * **Performance Step: 7** Step 6.0 DETERMINE both upper and lower Average Normalized Ratios
 - Standard: Step 6.1 CALCULATE average normalized ratios for Upper detectors:

 $= \frac{41U + 42U + 43U + 44U}{4} = \frac{1.011 + 0.991 + 0.983 + 1.003}{4}$ $= \frac{0.995}{4}$

Step 6.2 CALCULATE average normalized ratios for Lower detectors:

= <u>41L + 42L + 43L + 44L</u> =	0.991+1.001+0.998+0.985
4	4
= 0.994	

Comment:

CUE:

IP3 NRC Admin-

Appendix C	Page 4 of 7 Form ES-C- PERFORMANCE INFORMATION
* Performance Step: 8	Step 7.0 DETERMINE both upper and lower Quadrant Power TRatios
Standard:	Step 7.1 CALCULATE Quadrant Power Tilt Ratio for Upper detectors:
	= <u>Highest Ratio of 41U + 42U + 43U + 44U</u> = <u>1.011</u>
	Average Ratio (Step 6.1) 0.995
	= 1.016
	Step 7.2 CALCULATE Quadrant Power Tilt Ratio for Lower detectors:
	= <u>Highest Ratio of 41L + 42L + 43L + 44L</u> = <u>1.001</u>
	Average Ratio (Step 6.2) 0.994
	= 1.007
Comment:	If candidate took the calculations to the 4 th decimal place,
	then 7.2 would be higher. In neither case should 1.02 be exceeded.
* Performance Step: 9	
* Performance Step: 9 Standard:	1.02 be exceeded. Step 8.0 RECORD highest Quadrant Power Tilt Ratio calculate
	1.02 be exceeded. Step 8.0 RECORD highest Quadrant Power Tilt Ratio calculate in Steps 7.1 OR 7.2
Standard:	 1.02 be exceeded. Step 8.0 RECORD highest Quadrant Power Tilt Ratio calculate in Steps 7.1 OR 7.2 Step 7.1 is the highest and should be recorded If candidate took the calculations to the 4th decimal place, then 7.2 would be higher. In neither case should 1.02 be
Standard: Comment:	 1.02 be exceeded. Step 8.0 RECORD highest Quadrant Power Tilt Ratio calculate in Steps 7.1 OR 7.2 Step 7.1 is the highest and should be recorded If candidate took the calculations to the 4th decimal place, then 7.2 would be higher. In neither case should 1.02 be exceeded. Step 9.0 DETERMINE if the Highest Quadrant Power Tilt Ratio
Standard: Comment: Performance Step: 10	 1.02 be exceeded. Step 8.0 RECORD highest Quadrant Power Tilt Ratio calculate in Steps 7.1 OR 7.2 Step 7.1 is the highest and should be recorded If candidate took the calculations to the 4th decimal place, then 7.2 would be higher. In neither case should 1.02 be exceeded. Step 9.0 DETERMINE if the Highest Quadrant Power Tilt Ratio recorded in Step 8.0 exceeds 1.02 Quadrant Power Tilt Ratio does not exceed 1.02 so Candidate
Standard: Comment: Performance Step: 10 Standard:	 1.02 be exceeded. Step 8.0 RECORD highest Quadrant Power Tilt Ratio calculate in Steps 7.1 OR 7.2 Step 7.1 is the highest and should be recorded If candidate took the calculations to the 4th decimal place, then 7.2 would be higher. In neither case should 1.02 be exceeded. Step 9.0 DETERMINE if the Highest Quadrant Power Tilt Ratio recorded in Step 8.0 exceeds 1.02 Quadrant Power Tilt Ratio does not exceed 1.02 so Candidate proceeds to Step 10.0 The QPTR does not exceed 1.02 therefore the candidate

Appendix C

Page 5 of 7 PERFORMANCE INFORMATION

review. Inform the candidate that the JPM is complete.

Appendix	С
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Page 6 of 7 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.:

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result:

UNSAT

Examiner's Signature: _____ Date: _____

SAT

Appendix C	Page 7 of 7 JPM CUE SHEET	Form ES-C-1
INITIAL CONDITIONS:	Plant is at 100% power BOL. The Control Ro unavailable.	om computer is
INITIATING CUE:	You are requested to perform a Manual Quad Calculation using Attachment 1 of SOP-RPC-	

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Upper and Lower Detector Currents For JPM Use

41U = 617 41L = 635 42U = 650 42L = 640 43U = 630 43L = 610 44U = 670 44L = 700

Appendix C	Job Performanc Worksh		Form ES-C-1
Facility:	Indian Point Unit 3	Task No.:	
Task Title:	Perform the CRS Subsequent Action Steps 4.1-4.17 of 3-AOP- SSD-1	JPM No.: A.2	
K/A Reference:	2.1.31 Ability to locate control roo switches, controls, and indications and to determine that they correct reflect the desired plant lineup.	3	
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performa Classro		Actual Performance: Plant	<u>X</u>

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions:	The plant is at 100% power at approximately BOL conditions. All equipment is operable and no maintenance is in progress.
Task Standard:	CRS is to obtain 3-AOP-SSD-1 and perform all Critical Steps within 4.1- 4/17 correctly.
Required Materials:	NONE
General References:	3-AOP-SSD-1
Initiating Cue:	A fire has occurred on the 33' of the Control Building. Many Control Room indicators have failed and/or are operating erratically. The Shift Manager has determined the CCR controls/indications to be unreliable and orders a CCR evacuation. You are to perform the CRS actions of 3- AOP-SSD-1, Steps 4.1 through 4.17.
Time Critical Task:	

Time Critical Task:

Validation Time: 30 Minutes

Appendix C

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Page 2 of 8 PERFORMANCE INFORMATION

Form ES-C-1

(Denote Critical Steps with an asterisk)

Performance Step: 1 Standard:	Obtain a current revision of 3-AOP-SSD-1 Candidate demonstrates the ability to obtain a current revision of 3-AOP-SSD-1
Comment:	When Candidate has demonstrated the ability to obtain and verify a current revision of 3-AOP-SSD-1, provide the Candidate a copy of the procedure for use during this JPM.
Performance Step: 2	Review all three notes prior to step 4.1
Standard:	Candidate reviews all three notes prior to step 4.1
Comment:	EOPs are not applicable
	Plant conditions will dictate that all steps are applicable so the CRS should proceed with steps 4.1-4.17.
	If asked, examiner should prompt Candidate that all steps are to be performed.
Performance Step: 3	Trip the Reactor
Standard:	Candidate trips the reactor using the pushbutton the panel FCF
Commont	
Comment:	None
Performance Step: 4	None Trip the Turbine
Performance Step: 4	Trip the Turbine
Performance Step: 4 Standard:	Trip the Turbine Candidate trips the Turbine using the pushbutton the panel FAF
Performance Step: 4 Standard: Comment:	Trip the Turbine Candidate trips the Turbine using the pushbutton the panel FAF None

Aŗ	opendix C	Page 3 of 8 Form ES-C-1 PERFORMANCE INFORMATION
*	Performance Step: 6 Standard:	Trip ALL RCPs Candidate trips ALL RCPs on panel SAF
	Comment:	None
*	Performance Step: 7	 Announce reactor trip and Control Room evacuation over PA and direct watch personnel as follows: Condensate Polisher NPO report to the SG Level Local Control Panel on the 15' el of Auxiliary Boiler Feed Pump Building Remaining watch personnel not involved with Fire
	• / • •	Brigade report to the Appendix R locker
	Standard:	Announcement made IAW the procedure
	Comment:	None
*	Performance Step: 8	Direct SM to report to Appendix R locker and initiate 3-AOP- SSD-1 at Step 4.18
	Standard:	Candidate directs SM to Appendix R locker to initiate 3-AOP- SSD-1
	Comment:	None
*	Performance Step: 9	Direct RO to obtain RO set of Security Keys from lock box and initiate Attachment 2 of 3-AOP-SSD-1
	Standard:	Candidate directs RO to initiate Attachment 2 of 3-AOP-SSD-1
	Comment:	Obtaining keys is not Critical since this can be accomplished by Security Outside the CCR

Appendix C	Page 4 of 8 Form ES-C-1 PERFORMANCE INFORMATION
* Performance Step: 10	Direct STA to perform the following:
	Contact Security to initiate the EPlan
	Obtain STA set of Security Keys
	 Initiate Attachment 3 of 3-AOP-SSD-1
Standard:	Candidate directs STA to initiate Attachment 3 of 3-AOP-SSD-1
Comment:	Obtaining keys is not Critical since this can be accomplished by Security Outside the CCR
* Performance Step: 11	Open the following circuits to fail letdown valves and PORVs:
	• 32 DCDP Ckt 15
	• 31 DCDP Ckt 5
Standard:	31 and 32 DCDPs located and correct breakers opened
Comment:	None
Performance Step: 12	Close HCV-142 (Charging Line PR. Control)
Standard:	HCV-142 located and closed on panel SGF
Comment:	None
Performance Step: 13	Place the following valves in OPEN:
	 PCV-1310A (32 ABFP Steam Supply First Isolation)
	 PCV-1310B (32 ABFP Steam Supply Second Isolation)
Standard:	PCV-1310A&B control switches on SBF-2 in the open position
Comment:	None
Performance Step: 14	Close ALL MSIVs
Standard:	All (4) MSIV lockout relays are tripped
Comment:	None

Appendix C	Page 5 of 8 Form ES-C-1 PERFORMANCE INFORMATION
Performance Step: 15	Place atmospheric steam dump controllers in manual and closed
Standard:	ALL (4) atmospheric steam dump controller T-bars are in manua and the controller output is at 0%
Comment:	None
* Performance Step: 16	Dispatch Nuclear NPO to perform the following:
	 OPEN CH-288 (RWST to Charging Pump Suction Isolation)
	 De-energize and CLOSE CH-LCV-112C (VCT Outlet Valve)
	CLOSE CH-228 (HCV-142 Inlet Isolation)
	 Report to PZR Pressure and Level Control Panel in the PAB 55' el
Standard:	Nuclear NPO dispatched to OPEN CH-288, CLOSE CH-228, De energize and CLOSE CH-LCV-112C, and report to the PZR Pressure and Level Control Panel in the PAB 55' el
Comment:	None
Performance Step: 17	Check the following 480V busses energized:
	• 2A/3A
	• 5A
	• 6A
Standard:	Candidate checks ALL 480V busses energized using any of the following:
	 480V voltmeters (analog or digital)
	 480V bus energized white lites on SHF
Comment:	None

Appendix C	Page 6 of 8 Form ES-C-1 PERFORMANCE INFORMATION
Performance Step: 18	Check if Lens Caps for TV Cameras are removed
Standard:	Candidate determines that the Lens Caps are off.
Comment:	Appropriate tools and safety precautions are required for this task
Performance Step: 19	Obtain the CRS set of Security Keys from the lock box and evacuate to the Appendix R locker
Standard:	CRS Keys obtained from lock box and Candidate exits the CCR (Simulated CCR).
Comment:	None
Terminating Cue:	When Candidate exits the Simulator, inform him/her that the JPM is complete. Note: If Candidate indicates he/she would exit the CCR and proceed to the App R Locker inform the JPM is complete as well.

Appe	ndix	С
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Page 7 of 8 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Mea	sure No.:
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Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result: SAT UNSAT

Examiner's Signature: Date:

Appendix C	Page 8 of 8 JPM CUE SHEET	Form ES-C-1
INITIAL CONDITIONS:	The plant is at 100% power at approximately B equipment is operable and no maintenance is in	
INITIATING CUE:	A fire has occurred on the 33' of the Control Bu Control Room indicators have failed and/or are erratically. The Shift Manager has determined controls/indications to be unreliable and orders You are to perform the CRS actions of 3-AOP- through 4.17.	operating the CCR a CCR evacuation.

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Appendix C	Job Performanc Worksh		Form ES-C-1
Facility:	Indian Point Unit 3	Task No.:	
Task Title:	Independent Valve Lineup Verification for Safety Injection System in the Vacco filter Room	JPM No.: A.3	
K/A Reference:	2.2.14 Knowledge of process for making configuration control changes	Importance (2.1/3.0)	
Examinee:		NRC Examiner:	
		NRG Examiner.	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performa	ance:	Actual Performance:	Х
Classro	oom Simulator	Plant X	

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions:	The Plant is in CSD at 195F following a Refueling Outage. Preparations are underway to heatup to Mode 4.
Task Standard:	COL-SI-1 Section 2.2 Vacco Filter Room valve lineup verification performed correctly
Required Materials:	Blank COL, Flashlight, Safety Equipment/PPE
General References:	COL-SI-1, Safety Injection System
Initiating Cue:	You are directed to perform the initial COL-SI-1, Section 2.2 Valve Lineup Verification for the Vacco Filter Room
Time Critical Task:	No
Validation Time:	45 Minutes

*

Page 2 of 6 PERFORMANCE INFORMATION

(Denote Critical Steps with an asterisk)

	Performance Step: 1	Obtain a blank copy of COL-SI-1
	Standard:	Candidate obtains a copy of COL-SI-1 and verifies it is the current revision
	Comment:	When Candidate demonstrates the ability to obtain the correct COL, you may provide a copy for the examination. Examiner may question Candidate on how to verify the correct revision in lieu of actual performance at the examiners discretion
r	Performance Step: 2	Verify SHUT SI-734, RWST Recirculation Pump Suction Isolation
	Standard:	Candidate locates the valve, verifies correct valve using the valve label, and describes to the examiner how to check the valve shut. This can be done by either of the following:
		 Observing the position indicator is aligned perpendicular to the pipe (i.e. flow path)
		Rotating the handle in the closed direction (clockwise) and checking that the valve hand wheel does not move.
	Comment:	Examiner should direct Candidate to explain how to check the valve Shut
	Comment: Performance Step: 3	
		the valve Shut Verify SHUT SI-16, RWST Recirculation Pump Suction Strainer
	Performance Step: 3	the valve Shut Verify SHUT SI-16, RWST Recirculation Pump Suction Strainer Drain Candidate locates the valve, verifies using the valve label, and describes to the examiner how to check the valve shut by rotating the valve in the closed direction and checking that the
	Performance Step: 3 Standard:	the valve Shut Verify SHUT SI-16, RWST Recirculation Pump Suction Strainer Drain Candidate locates the valve, verifies using the valve label, and describes to the examiner how to check the valve shut by rotating the valve in the closed direction and checking that the valve hand wheel does not move. Examiner should direct Candidate to explain how to check

Appendix C	Page 3 of 6 PERFORMANCE INFORMATION	Form ES-C-1	
Comment:	Examiner should direct Candidate to expla the valve Shut	ain how to check	
Performance Step: 5	Verify SHUT SI-845, PI-10 & RWST Recirculation Pump Discharge Vent Isolation		
Standard:	Candidate locates the valve, verifies using the describes to the examiner how to check the v rotating the valve in the closed direction and valve hand wheel does not move.	alve shut by	
Comment:	Examiner should direct Candidate to expla the valve Shut	ain how to check	
Performance Step: 6	Verify SHUT RWST Recirculation Pump Disc	harge Vent	
Standard:	Candidate locates the valve, verifies using the describes to the examiner how to check the v rotating the valve in the closed direction and valve hand wheel does not move.	alve shut by	
Comment:	Examiner should direct Candidate to expla the valve Shut	in how to check	
Performance Step: 7	Verify SHUT WD-474, RWST Recirculation P Vacco Filter System Isolation	ump Discharge to	
Standard:	Candidate locates the valve, verifies correct v valve label, and describes to the examiner ho valve shut. This can be done by either of the	w to check the	
	 Observing the position indicator is alig to the pipe (i.e. flow path) 	ned perpendicular	
	2. Rotating the handle in the closed direct and checking that the valve hand whe	• • •	
Comment:	Examiner should direct Candidate to expla the valve Shut	in how to check	

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Appendix C	Page 4 of 6 Form ES-C-1 PERFORMANCE INFORMATION		
* Performance Step: 8	Verify SHUT SI-861, RWST Recirculation Pump Discharge to RWST Isolation		
Standard:	Candidate locates the valve, verifies correct valve using the valve label, and describes to the examiner how to check the valve shut. This can be done by either of the following:		
	 Observing the position indicator is aligned perpendicular to the pipe (i.e. flow path) 		
	Rotating the handle in the closed direction (clockwise) and checking that the valve hand wheel does not move.		
Comment:	Examiner should direct Candidate to explain how to check the valve Shut	CUE	
Terminating Cue:	When Candidate has located and verified all specified valves are in their required position, inform candidate the JPM is complete.	i	

Appendix C	,
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Page 5 of 6 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.:

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result:

SAT UNSAT

Examiner's Signature: Date:

Appendix C	Page 6 of 6 JPM CUE SHEET	Form ES-C-1
INITIAL CONDITIONS:	The Plant is in CSD at 195F following a Refu Preparations are underway to heatup to Mod	
INITIATING CUE:	You are directed to perform the initial COL-S Lineup Verification for the Vacco Filter Roon	

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Appendix C	Job Performance Measure Worksheet			Form ES-C-1	
Facility:	Indian Point Unit	3	Task No.:		
Task Title:			JPM No.: A.4		
K/A Reference:					
Examinee:			NRC Examiner:		
Facility Evaluator:			Date:		
Method of testing:					
Simulated Performa	ance:		Actual Performance:	x	
Classro	oom X Sim	nulator	Plant		

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions:	 32 Monitor Tank has been on recirculation for 4hrs and the chemistry results have been obtained. 32 Monitor Tank is at 88% Monitor Tank Boron weight is 17 pounds All Circulators are in service at 310 rpm Radiation monitor R-18 has been out-of-service (OOS) for 7 days Chemistry analysis sample number is 40,000 32 Monitor Tank Boron concentration 197 ppm Allowable diluted concentration per AP-11 is 1.04 E-7 uci/ml Total gamma activity (C) is 3.26 E-7 uci/ml Next sequential release permit number is 5000 	
Task Standard:	Candidate determines the most restrictive discharge rate is 150 gpm based on pump limitations. Note: Candidate may elect to use the most restrictive of activity and boron of 3.503 E+3 gpm for activity since this is the method used in the Attachment 2 Example. This is acceptable as well.	
Required Materials:	Calculator Release form Attachment 1 Graphs book	
General References:	SOP-WDS-014	

Appendix C	Job Performance Measure Worksheet	Form ES-C-1
Initiating Cue:	Computer is OOS and you are directed to perform release rate calculation IAW 3-SOP-WDS-014, See through 4.1.13	
Time Critical Task:		
Validation Time:	60 Minutes	

Appendix C

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Page 3 of 8 PERFORMANCE INFORMATION

Form ES-C-1

(Denote	Critical	Steps	with	an	asterisk)
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Performance Step: 1 Standard:	Ensure tank is on recirc per SOP-WDS-006 Tank is verified on recirc per given information	
Comment:	Given information	
Performance Step: 2 Standard:	Determine that computer generated calculation is not available Candidate refers to step 4.1.3 to perform a manual calculation	
Comment:	Computer unavailable per given information	
Performance Step: 3 Standard:	 Record pertinent data per procedure step 4.1.3.1 and 2 Candidate records the following pertinent information: Release ID as 32 Monitor Tank Liquid volume in tank 10,500 gallons Recirc start date and time current values minus 4 hrs Minimum recirc time 4 hrs Earliest sample date and time is current date and time 	
Comment:		
Performance Step: 4 Standard:	Record release permit number Candidate records 5000	
Comment:		
Performance Step: 5 Standard:	Record R-18 in the rad monitor block on permit Candidate records R-18	
Comment:		

Appendix C	Page 4 of 8 Form ES-C-1 PERFORMANCE INFORMATION
Performance Step: 6 Standard:	Determine if R-18 is in service and circle yes/no Candidate circles NO
Comment:	
* Performance Step: 7 Standard:	Determine available dilution flow per attachment 7 Candidate determines flow is 6.9 E+5 gpm
Comment:	Cue: No Circs are borrowed from Unit 2
Performance Step: 8	When Monitor Tank has recirculated for 4 hrs, then request chemistry to sample the tanks
Standard:	Determines that the tank has been recirculated and sampled.
Comment:	Given information
* Performance Step: 9	 When sample results are obtained, then record information in attachment 1 as follows: Radio analysis sample number Sample Date Sample Time Total Gamma Activity (C) Allowable diluted concentration per AP-11 Boron concentration Boron weight
Standard:	
Comment:	CUE: Inform candidate that the sample has just been taken
Performance Step: 10	Request sample gamma activity excluding noble gases from chemistry and verify value is less than 5.0 E-5 ML/ml
Standard:	Candidate recognizes the sample activity of 3.26 E-7 is less thar 5.0 E-5
Comment:	If candidate asks about Noble Gases, inform him/her there
P3 NRC Admin-	are none. NUREG 1021, Revision 9

۰۲ 	pendix C	Page 5 of 8 Form ES-C-1 PERFORMANCE INFORMATION
t	Performance Step: 11	Determine the most restrictive discharge rate (D) using attachment 8
	Standard:	Step 1.0 Candidate calculates Dr=2.201 E+5 gpm
		Step 2.0 Determine pounds of boron in tank are 17 pounds which is given information
		Step 3.0 Candidate calculates Dc=3.503 E+3 gpm
		Step 4.1 Candidate determines and records Dc as most restrictive value at 3.503 E+3
		Step 5.0 Candidate determines the most restrictive discharge rate (D) is 150 gpm per pump limitations
	Comment:	Note: Boron weight is given so no boron calc is required and this portion is not critical.
		The candidate SHOULD determine that D=150 gpm which is the limitation on the pump. However, the candidate may select Dc, since this is the most restrictive of the boron and activity limitations. This is also the way the computer calculates the limit, AND is used in the given example (attachment 2). Should this discrepancy occur, it could be critiqued, but would not constitute failure of this critical step.
	Performance Step: 12	Record data from attachment 8 onto attachment 1
	Standard:	Candidate records the following on attachment 1:
		Dr-Permissible Radioactive discharge rate
		Boron Concentration
		Pounds of Boron
		Dc-Maximum Boron (chemistry) discharge rate
		D-Most Restrictive discharge rate
	Comment:	

oppendix C	Page 6 of 8 Form ES-C-7 PERFORMANCE INFORMATION
Standard:	 Candidate recognizes monitor R-18 OOS < 30 days
	 Candidate recognizes second chemistry sample be drawn approximately 15 minutes after the 1st sample
	3. Candidate recognizes independent verification of the release calculation is required
Comment:	 When Candidate indicates monitor OOS for 7 days, CUE the Candidate to record current date and time minus 7 days
	2. When Candidate recognizes the need for a second sample within 15 minutes, cue Candidate the sample results are the same as given.

Appe	ndix	С
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Page 7 of 8 VERIFICATION OF COMPLETION

Form ES-C-1

Job Performance Measure No.:

Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Question Documentation:

Question:

Response:

Result:

SAT UNSAT

Examiner's Signature: Date:

Appendix C	Page 8 of 8 Form ES-C-1 JPM CUE SHEET
INITIAL CONDITIONS:	 32 Monitor Tank has been on recirculation for 4hrs and the chemistry results have been obtained. 32 Monitor Tank is at 88% Monitor Tank Boron weight is 17 pounds All Circulators are in service at 310 rpm Radiation monitor R-18 has been out-of-service (OOS) for 7 days Chemistry analysis sample number is 40,000 32 Monitor Tank Boron concentration 197 ppm Allowable diluted concentration per AP-11 is 1.04 E-7 uci/ml Total gamma activity (C) is 3.26 E-7 uci/ml Next sequential release permit number is 5000
INITIATING CUE:	Computer is OOS and you are directed to perform a manual liquid release rate calculation IAW 3-SOP-WDS-014, Section 4.1, Steps 4.1.1 through 4.1.13

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Appendix C	Page 1 o PERFORMANCE II		Form ES-C-1
Facility:	Indian Point Unit 3	15	0*002*05*03 0*002*05*06 0*009*05*03
Task Title:	Determine EPLAN Classification Fill out Part 1 Form Implement EPLAN Classification Flow Chart	JPM No.: A.S	5
K/A Reference:	2.4.41-Knowledge of EALS thresholds and classifications.	Importance (2.3	3/4.1)
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Perform Classr		Actual Performance Plant	»: <u>X</u>

READ TO THE EXAMINEE

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this Job Performance Measure will be satisfied.

Initial Conditions:	 The following plant conditions exist following a SGTR: Initial estimated SGTR leakage was 450 gpm in 32 SG. The Operators tripped the Rx and Manually Initiated Safety Injection. Following the Rx Trip/SI, the affected SG (32) Safety Valve opened and failed to reseat. RCS Activity is >330 uci/cc dose equivalent iodine Wind Speed is 7 mph Wind Direction is from 270 degrees Stability Class C
Task Standard:	Classify the event within 15 minutes and make the proper notifications in accordance with IP-EP-213 and complete all identified critical elements correctly on the part 1 Form within 15 minutes of classifying the event.
Required Materials:	Part 1 Forms EAL Tables
General References:	E Plan Volumes 1-3 EAL Tables EAL Technical bases Document E-3 and ECA-3.1 if needed

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nitiating Cue:	You are directed to evaluate the following plant conditions, classify the event, fill out the Part 1 form, and make the required initial plant notifications.
Fime Critical Task:	Yes, the Candidate has 15 minutes to classify the event and 15 minutes to complete the Part 1 form and make initial notifications
/alidation Time:	30 minutes
Performance Ste	b: 1 Obtains copy of IP-EP-213 and EAL Tables
Standard:	Obtain most recent copy of IP-EP-213 and EAL Tables.
Comment:	Cue-Hand the candidate a copy of IP-EP-213 and indicate that the EAL Tables are available for use.
Performance Ste	2 Reviews plant conditions and classifies the event within 15 minutes in accordance with IP-EP-120 "Emergency Classification" or EAL Table.
Standard:	Classifies the event as General Emergency. A SGTR is in progress in conjunction with a loss of Containment due to a significant secondary line break (Safety Valve stuck open on the affected SG), and actual or potential loss of fuel clad integrity
	Record start time
	Time required to classify the event15 Minutes
	The actual time the Candidate classified the event
	The Candidate must correctly classify the event within 15 minutes of the initiating cue.
Comment:	The EAL Bases document and E-3/ECA3.1 are available if the candidate requests them.
Performance Step	b: 3 If the initial emergency classification is due to a security event, then consider mobilization of the ERO to either primary or backup locations, or suspending initial mobilization.
Standard:	Determine that the initiating event is not due to a security event.
Comment:	. · ·
Performance Step	5: 4 Confer with Unit 2 SM. If agreed that both units are affected ther the Unit 2 SM shall classify the event and assume the role of the Emergency Director.

Appendix C

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	Comment:	Que as Unit 2 SM that the event only affects Unit 3.
*	Performance Step: 5	If a General Emergency is declared then protective action recommendations must be made in accordance with IP-EPO-410, "Protective Action recommendations".
	Standard:	Protective Action Recommendations to Evacuate a 2-Mile radius shelter ERPAs (xx) downwind are communicated to the State and Counties
	Comment:	
	Performance Step: 6	Declare the emergency and announce the classification to Control Room Personnel.
	Standard:	Gives Update to control room personnel. declaring THAT a General Emergency has been declared because A SGTR is in progress in conjunction with a loss of Containment due to a significant secondary line break (Safety Valve stuck open on the affected SG), and actual or potential loss of fuel clad integrity
	Comment:	
	Performance Step: 7	Ensure Unit 2 Control Room is notified of the emergency.
	Standard:	Simulates calling the Unit 2 CCR and reports a General Emergency is being declared due to A SGTR is in progress in conjunction with a loss of Containment due to a significant secondary line break (Safety Valve stuck open on the affected SG), and actual or potential loss of fuel clad integrity

Emergency.

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Performance Step: 8	Ensure Both Unit 2 and Unit 3 Site Assembly alarms are sounded for 30 seconds and the appropriate announcements made.	s are
Standard:	Simulate sounding the Evacuation alarm for 30 seconds and make the following announcement three times: "Attention all personnel, a GENERAL EMERGENCY has been declared. A Personnel report to your assigned facility. All other personne report to the Training Center." Repeats two more times.	
Comment:	CUE: Tell Candidate he/she may simulate these actio	ns
Performance Step: 9	Conduct Notification and Mobilization for a General Emerger using IP-EP-115 Form EP-4)	су
Standard:	Locates and Implements IP-EP-115 Form EP-4, Control Roo Initial Notification Checklist	m
Comment:		
Performance Step: 9	Notify the Security Shift Supervisor and provide them with the affected unit and the date/time of the classification. Request Offsite Communicator Report to the Control Room.	
Standard:	Security contact at 736-8067 and inform that an GENERAL EMERGENCY has been declared on Unit 3 due	
Comment:		
Performance Step:10	Contact Unit 2 and direct notification using Envelope A "IPEC ALL ERO Mobilization" to mobilize all ERO.	;
Standard:	Unit 2 notified to use Envelop A to mobilize ERO.	
Comment:		
Performance Step: 11 Standard:	Notify State and Counties using the RECS line E The Offsite communicator is directed to initiate a roll call usin the RECS line.	g
Comment:	CUE:	

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* Performance Step: 1	2 Complete or have completed and sign a "NYS Radiological Emergency Data Form, Part 1"—IP-EP-115 Form EP-1) within 15 minutes.
Standard:	The part 1 form must be completed and signed within 15 minute of event declaration. The following steps are critical steps.
	Step 6 Either C or D selecte
	Step 7 B. Evacuate and circle the correct ERPAs
	Step 8 EAL Number and Description
	Step 11 Wind Speed
	Step 12 Wind Direction
	Step Stability Class C
Comment:	
* Performance Step: 1 Standard:	3 Inform JPM Evaluator that the JPM is complete.
Comment:	CUE: Acknowledge that the JPM is complete.
Terminating Cue:	Event properly classified, Part 1 form complete, and initial

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Form ES-C-1

JUD FEITUITIANUE MEASULE NU.	Job	Performance	Measure	No.:
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Examinee's Name:

Date Performed:

Facility Evaluator:

Number of Attempts:

Time to Complete:

Questio	n Docun	nentation:

Question:

Response:

Result:

UNSAT

Examiner's Signature: Date:

SAT

Ap	pendix	С
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INITIAL CONDITIONS:

INITIATING CUE: