JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.I

Job Position NO	No. NRC EXAM 2004-301-B2.i	Revision 1
JPM Title Defeat of RBCCW/EECW to Drywell	Duration 25 min	Page COVER SHEET

Examinee: _____ SRO / RO

Evaluator: _____

Evaluation Method: Perform / Plant

Start Time _____

Stop Time _____

Total Time _____

PERFORMANCE EVALUATION SUMMARY			
Step #	S	U	Comments
*1			
*2			
3			

_____ SATISFACTORY _____ UNSATISFACTORY

ORAL EVALUATION (Not Required for ILO Exams)			
Question #	S	U	Comments
			TIME:
			TIME:

_____ SATISFACTORY _____ UNSATISFACTORY

OVERALL EVALUATOR COMMENTS:

Evaluator Signature / Date: _____

JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.I

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 1

References: Required (R) / Available (A)

29.ESP.23, "Defeat of RBCCW/EECW to Drywell" (R)

Tools and Equipment Required:

None

Preferred Evaluation Method:

Perform		Walkthrough	X	Discuss	
Plant	X	Simulator		Classroom	

Evaluator Notes:

Evaluator Notes: Ensure SM informed of JPM walkthrough in relay room and cabinet doors opened for walkthrough of this task. Stop the JPM if, at any time, this JPM interferes with plant operation.

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

K/A

SYSTEM: 295018 AA1.01 Ability to operate back-up systems upon partial loss of cooling water 3.3/ 3.4
223002 K.4.08 Manual defeat of selected isolations during emergency conditions 3.3 / 3.7
295024 EA1 Ability to operate and/or monitor the following as they apply to high drywell pressure:
PCIS/NSSSS 3.8/3.9

Task Standard:

RBCCW/EECW Defeats are installed per 29.ESP.23

Initial Conditions:

EOP flowcharts direct Defeat of RBCCW/EECW Logic per 29.ESP.23

Initiating Cue(s):

CRS directs you to defeat RBCCW/EECW Isolations per 29.ESP.23

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 2

Start Time _____

Stop Time _____

Total Time _____

Elements	Standards
NOTE: Student should go to the EOP locker in the Main Control Room to display knowledge of how to retrieve the EOP package	
PREREQUSITES: NONE	
CAUTION: The following steps involve working with energized circuits.	
CUE: Lead is lifted *1. At RR H11-P857, lift lead at Terminal B-171 (Division 1)	*1. Lead lifted from Terminal B-171
CUE: Lead is lifted *2. At RR H11-P870, lift lead at Terminal E-191 (Division 2)	*2. Lead lifted from Terminal B-171
CUE: Acknowledge report as Control Room 3. Report 29.ESP.23 complete to CR	3. Report made

_____ SATISFACTORY _____ UNSATISFACTORY

Terminating Cue(s):

RBCCW to Drywell Defeats are installed per 29.ESP.23.

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 3

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for Followup question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 4

Simulator Setup

IC#:

Malfunctions:

Remote Functions:

Number	Title	Value

Override Functions:

Special Instructions:

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 5

JPM B2.i Cue Sheet

Initial Conditions:

EOP flowcharts direct Defeat of RBCCW/EECW Logic per 29.ESP.23

Initiating Cue(s):

CRS directs you to defeat RBCCW/EECW Isolations per 29.ESP.23

JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.J

Job Position NO	No. NRC EXAM 2004-301-B2.j	Revision 0
JPM Title Startup a UPS Rectifier Charger/Inverter	Duration 20 min	Page COVER SHEET

Examinee: _____ SRO / RO

Evaluator: _____

Evaluation Method: Perform / Plant

Start Time _____

Stop Time _____

Total Time _____

PERFORMANCE EVALUATION SUMMARY			
Step #	S	U	Comments
1			
*2			
*3			
4			
5			
6			
*7			
8			
*9			
10			
11			
12			

_____ SATISFACTORY _____ UNSATISFACTORY

ORAL EVALUATION (Not Required for ILO Exams)			
Question #	S	U	Comments
			TIME:
			TIME:

_____ SATISFACTORY _____ UNSATISFACTORY

OVERALL EVALUATOR COMMENTS:

JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.J

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 1

Evaluator Signature / Date: _____

JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.J

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 2

References: Required (R) / Available (A)

23.308.01 (R)

Tools and Equipment Required:

None

Preferred Evaluation Method:

Perform		Walkthrough	X	Discuss	
Plant	X	Simulator		Classroom	

Evaluator Notes:

Ensure the examinee does not touch any plan equipment.

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

K/A

SYSTEM: 262001 AC Electrical Distribution - A1. Ability to predict and/or monitor changes in parameters associated with operating the AC ELECTRICAL DISTIBUTION controls including:
A1.05 Breaker Lineups (3.2/3.5)

Task Standard:

UPS A(B) Charger/Inverter is running and ready to be transferred to the Normal Power Supply.

Initial Conditions:

UPS A(B) Rectifier Charger/Inverter has been shutdown to perform corrective maintenance.
The maintenance is finished and the PMT was completed satisfactorily.
The electrical lineup verification has been completed.

Initiating Cue(s):

The Control Room orders you to Startup UPS Rectifier Charger/Inverter A(B).

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 3

Start Time _____

Stop Time _____

Total Time _____

Elements	Standards
PREREQUSITES: NONE	
NOTE: Unless otherwise noted, steps are performed at Panel R3100-S004 (S012). Details for Mimic Bus are provided in Enclosure B, UPS Mimic Bus Diagram.	
CUE: Timer Reset Toggle Swith is in TIMER RESET (float) 1. Verify or place Timer Reset toggle switch in TIMER RESET (float).	1. Timer Reset Toggle Swith is in TIMER RESET (float).
CUE: Rectifier DC Output breaker is ON ***2.** Place Rectifier DC Output circuit breaker in ON	*2. Rectifier DC Output breaker is ON.
CUE: Rectifier AC Input breaker is ON *3. Place Rectifier AC Input circuit breaker in ON.	*3. Rectifier AC Input breaker is ON.
CUE: AC Normal Source light is ON 4. Verify amber AC Normal Source light is ON (mimic bus).	4. AC Normal Source light is ON.
CUE: Rectifier DC Output voltmeter is 212 VDC 5. Verify Rectifier DC Output voltmeter is greater than 210 VDC	5. Rectifier DC Output voltmeter is >210 VDC.
CAUTION: If Battery DC Input voltmeter (located on UPS Bus A only) is less than 210 VDC, do not start UPS Bus A (B) Inverter.	
CUE: Battery DC Input voltmeter is 212 VDC 6. Verify Battery DC Input voltage is greater than 210 VDC	6. Battery DC Input voltmeter is >210 VDC.
CUE: DC Filter Charge toggle switch in ON *7. On Panel R3100-S011(S007), place DC Filter Charge toggle switch in ON	*7. DC Filter Charge toggle switch in ON.
CUE: Red DC Filter Charged light is ON, after 3 seconds 8. On Panel R3100-S011(S007), after 3 seconds, verify red DC Filter Charged light is ON	8. Red DC Filter Charged light is ON
CAUTION: Do not close the DC Input circuit breaker unless the red DC Filter Charge light is ON.	

<u>EVALUATORE NOTE:</u> The evaluator may use time compression on the next step instead of waiting for the 15 minute warm up time.	
CUE: Inverter DC Input circuit breaker is shut *9. When logic circuitry has warmed up for at least 15 minutes and red DC Filter Charged light is ON at Panel R3100-S011(S007), close Inverter DC Input circuit breaker	*9. Inverter DC Input circuit breaker is shut
NOTE: After Inverter DC Input circuit breaker is closed, UPS A(B) Inverter will slowly build up AC output voltage.	
CUE: Source Select switch is in OUTPUT 10. Verify Source Select switch in OUTPUT	10. Source Select switch is in OUTPUT
CUE: AC Output voltage is 120 VAC 11. Verify AC output voltage is 117.5 to 122.5 VAC as indicated on AC Voltage meter	11. AC output voltage is 117.5 to 122.5 VAC
CUE: Amber Inverter AC Output light is ON 12. Verify amber Inverter AC Output light is ON (Mimic Bus)	12. Amber Inverter AC Output light is ON
CUE: Amber Inverter AC Output light is ON	
Inform Candidate that this concludes this JPM	

_____ SATISFACTORY _____ UNSATISFACTORY

Terminating Cue(s):

UPS A(B) has been started and is ready to transfer to the Normal Power Supply.

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 5

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for Followup question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 6

Simulator Setup

IC#:

Malfunctions:

Remote Functions:

Number	Title	Value

Override Functions:

Special Instructions:

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 7

JPM B2.j Cue Sheet

Initial Conditions:

UPS A(B) Rectifier Charger/Inverter has been shutdown to perform corrective maintenance. The maintenance is finished and the PMT was completed satisfactorily.

The electrical lineup verification has been completed.

Initiating Cue(s):

The Control Room orders you to Startup UPS Rectifier Charger/Inverter A(B).

JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.K

Job Position RO	No. NRC EXAM 2004-301-B2.k	Revision 1
JPM Title Take Corrective Action for Main Steam Line Channel A/B/C/D Radiation Monitor Upscale	Duration 10 min	Page COVER SHEET

Examinee: _____ SRO / RO

Evaluator: _____

Evaluation Method: Perform / Plant

Start Time _____

Stop Time _____

Total Time _____

PERFORMANCE EVALUATION SUMMARY			
Step #	S	U	Comments

_____ SATISFACTORY _____ UNSATISFACTORY

ORAL EVALUATION (Not Required for ILO Exams)			
Question #	S	U	Comments
			TIME:
			TIME:

_____ SATISFACTORY _____ UNSATISFACTORY

OVERALL EVALUATOR COMMENTS:

JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.K

Take Corrective Action for Main Steam Line Channel A/B/C/D Radiation Monitor Upscale	No.: NRC EXAM 2004-301-B2.k Revision: 1 Page 1

Evaluator Signature / Date: _____

JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.K

Take Corrective Action for Main Steam Line Channel A/B/C/D Radiation Monitor Upscale	No.: NRC EXAM 2004-301-B2.k Revision: 1 Page 2

References: Required (R) / Available (A)

ARP 3D83 (R)

Tools and Equipment Required:

None

Preferred Evaluation Method:

Perform		Walkthrough	X	Discuss	
Plant	X	Simulator		Classroom	

Evaluator Notes:

ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.

This JPM was developed from an NRC JPM, NRC-RM-MSLRM-1. The upscale trend was caused by a chemical intrusion from placing a RWCU Filter/Demineralization in service.

Start this JPM from the Control Room.

Do not allow the examinee to operate any plant equipment.

After giving the initiating cue, give the examinee a copy of the ARP 3D83.

The radiation monitor readings will change depending on the status of Hydrogen Water Injection.

Main Steam Line Radiation Monitor Recorder will indicate a trend only for the channels that are selected prior to the transient (A or C and B or D).

K/A

SYSTEM: 272000 Radiation Monitoring System A.2 Ability to (d) predict the impacts of the following on the Radiation Monitoring System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations:
A2.16 Instrument Malfunctions 2.7/2.9

Task Standard:

Corrective action for Main Steam Line Upscale is taken per ARP 3D83.

Initial Conditions:

You are the Patrol NSO.

RWCU Filter Demineralizer A(B) has just been place in service.

Annunciator 3D83, MN STM LINE CH A/B/C/D RADN MONITOR UPSCALE, has alarmed.

Initiating Cue:

The CRS directs you to take actions in accordance with the ARP.

Take Corrective Action for Main Steam Line Channel A/B/C/D Radiation Monitor Upscale	No.: NRC EXAM 2004-301-B2.k Revision: 1 Page 3

Start Time _____

Stop Time _____

Total Time _____

Elements	Standards
CUE: Trends will be shown only for the selected Channel on the recorder. MSL Readings are as follows: • **Channel A/B/C show a fast increase to 15,800 mr/hr and a slow decreasing trend.** • **Channel D shows a fast increase to 15,500 mr/hr and a slow decreasing trend.**	
* 1. Verify which Rad Monitor is greater than 16,800 mr/hr (14,400 mr/hr for Monitor D) by selecting Monitor A/C or B/D on Main Steam Line PRMS D11-RRE-R603.	* 1 Rad Monitors are read for trends and values.
CUE: Off Gas Monitor reading is stable and at normal full power level of about 5 mRAD/hr.	
2. Determine if fuel clad failure exists by checking Off Gas Log PRMS D11-RRE-R601 for increased/increasing trend.	2. Off Gas Log PRMS Recorder is monitored for value and trend.
CUE: Acknowledge report.	
3. Control Room staff is notified of MSL Radiation Monitor readings/trend, and Off Gas PRMS reading/trend.	3. Notification is made.
CUE: Monitor display is activated after a soft key is depressed. • **Channels A/B/C read 14,100 mr/hr.** • **Channel D reads 13,700 mr/hr.** • **Acknowledge report to the Control Room and inform examinee that the Control Room alarm is clear.**	

* 4.	At Main Steam Line Radiation Monitors D11-RME-K603A/B/C/D at RR H11-P606, perform the following: a. Depress any soft key to activate monitor display. b. Determine actual reading for each MSL Radiation Monitor. c. Report condition found to the Control Room.	* 4. Main Steam Line Radiation Monitor readings are obtained and reported to the control room.
	CUE: Alarm is reset after ALARM RESET soft key is depressed.	
* 5.	Attempt to clear MSL Radiation Monitor alarm by depressing soft key ALARM RESET.	* 5. Alarms are reset.
	CUE: Acknowledge report to the Control room.	
6.	Report to Control Room that the MSL Radiation Monitor alarm has reset.	6. Control Room notification is made.

_____ SATISFACTORY _____ UNSATISFACTORY

Terminating Cue(s):

MSL Radiation alarms are reset in accordance with ARP 3D83.

FOLLOW-UP DOCUMENTATION QUESTIONS

Reason for Followup question(s):

Question:

Reference:

Response:

Question:

Reference

Response:

Take Corrective Action for Main Steam Line Channel A/B/C/D Radiation Monitor Upscale	No.: NRC EXAM 2004-301-B2.k Revision: 1 Page 7

Simulator Setup

IC#:

Malfunctions:

Remote Functions:

Number	Title	Value

Override Functions:

Special Instructions:

JPM B2.k Cue Sheet

Initial Conditions:

You are the Patrol NSO.

RWCU Filter Demineralizer A(B) has just been place in service.

Annunciator 3D83, MN STM LINE CH A/B/C/D RADN MONITOR UPSCALE, has alarmed.

Initiating Cue(s):

You are an extra operator assigned to the tagging center.

CRS directs you to Defeat RPS Automatic Logic Trips per 29.ESP.09.