

Facility: Oyster CreekTask No: 2000101404Task Title: Perform a Manual Reactor Heat BalanceJob Performance Measure No: NRC Admin RO1K/A Reference: G2.1.7 (RO 3.7/SRO 4.4), G2.1.20 (RO 4.3/SRO 4.2)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:Simulated Performance _____ Actual Performance XClassroom _____ Simulator X 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:

1. The Reactor is at 100% power with all systems normally aligned.
2. All prerequisites to perform this procedure have been met.
3. The PPC is unavailable.

Task Standard: A manual reactor heat balance has been completed IAW Procedure 1001.6.

Required Materials: Calculator

General References: Procedure 1001.6, Core Heat Balance and Feedwater Flow Calculation – Power Range, Rev. 26

Initiating Cue: Perform a manual reactor heat balance IAW with procedure 1001.6, Core Heat Balance and Feedwater Flow Calculation – Power Range.

Time Critical Task: No

Validation Time: 18 minutes

Simulator Setup: IC-65.

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

_____ Performance Step: 2

Standard: Verifies Prerequisites and reviews Precautions and Limitations.

NOTE: All prerequisites to perform this procedure have been met and is stated in the Initial Conditions.

Comment:

Performance Information

 ✓ Performance Step: 3 (step 5.1.1)

Standard: Calculates feedwater flow per Method 1 by performing the following:

1. Requests the Equipment Operator to report total feedwater Δp in inches of water from venturi transmitter FT-422-1 in the Feedwater Pump Room and records.

FLOOR CUE: As the Equipment Operator, report reading on FT-422-1 as 489 inches of water Δp .

2. Records feedwater temperature from 5F/6F Recorder (ID0101), rounded to nearest whole degree (critical task).
3. OBTAIN the specific volume (v) of the Feedwater at 1100 psia and the temperature above from Attachment 1001.6-3 and records (critical task).
4. Calculates total Feedwater flow (critical task)

Comment:

 ✓ Performance Step: 4 (step 5.2.1)

Standard: Records reactor pressure to the nearest whole pound. (Narrow range recorder Panel 5F/6F)

Comment:

Performance Information

Performance Step: 5 (step 5.2.2)

Standard: Records Feedwater temperature to the nearest whole degree. (Recorder panel 5F/6F)

Comment:

Performance Step: 6 (step 5.2.3)

Standard: Records recirculation flow to the nearest thousand gpm. (Recorder panel 3F)

Comment:

Performance Step: 7 (step 5.2.4)

Standard: Calculates the reactor absolute pressure by adding the value of step 4 (step 5.2.1) + 14.7 pounds pressure and records.

Comment:

Performance Information

Performance Step: 8 (step 5.2.5)

Standard: Records Main Steam enthalpy from Attachment 1001.6-5, at saturated conditions using calculated absolute pressure.

Comment:

Performance Step: 9 (step 5.2.6)

Standard: Records the Feedwater enthalpy from Attachment 1001.6-6 for compressed water at 1100 psia using Feedwater temperature.

Comment:

Performance Step: 10 (step 5.2.7)

Standard: Calculates the difference of the Main Steam and Feedwater enthalpies and records.

Comment:

Performance Information

_____ Performance Step: 11 (step 5.2.8)

Standard: Records Total Flow Venturi method FLO (tot) from line (D) of the Feedwater flow calculation worksheet (Attachment 1001.6-1).

Comment:

Performance Step: 12 (step 5.2.9)

Standard: Calculates the product of the Feedwater flow and the enthalpy difference to obtain MBTU/hr and record.

Comment:

Performance Step: 13 (step 5.2.10)

Standard: Converts MBTU/hr to Megawatts. (MBTU/hr x 0.293) and record.

Comment:

Performance Information

 ✓ Performance Step: 14 (step 5.2.11)

Standard: Records RWCU flow to the nearest gpm (recorder panel 3F) on line (K) of Attachment 1001.6-2.

Comment:

 ✓ Performance Step: 15 (step 5.2.12)

Standard: Calculates the CRD, recirc. pump power, RWCU and ambient losses adjustment (Fixed Losses), per the following equation.

Enter the appropriate value for Fixed Losses on line (L) of Attachment 1001.6-2.

- Fixed Losses = [(K) x 0.0136] + 9.0

Comment:

 ✓ Performance Step: 17 (step 5.13)

Standard: Add the Fixed Losses from line (L) to the Megawatts from Line (J) and record the Calculated Core Thermal Power (CTP) on line (N). Acceptable values are 1900 – 1960 MWth (1930 MWth ± 1.5%).

Comment:

Performance Information

_____ Performance Step: 18 (steps 5.2.14/5.2.15)

Standard: Marks these steps as N/A since the PPC is not available.

Comment:

_____ Performance Step: 19 (steps 5.3/5.4)

Standard: 1. Verifies that the RWCU system differential temperature is < 80° F (step 5.3)

FLOOR CUE: a) TE-IJ31A indicates 518° F (these are local indications only)
b) TE-IJ31C indicates 443 (**NOTE:** Delta-T is 75° F)

2. Provides completed calculation to the SRO. (step 5.4)

Comment:

Terminating Cue: A manual reactor heat balance has been completed IAW Procedure 1001.6.

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin RO1

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUT

Initial Conditions:

1. The Reactor is at 100% power with all systems normally aligned.
2. All prerequisites to perform this procedure have been met
3. The PPC is unavailable.

Task Cue:

Perform a manual reactor heat balance IAW with procedure 1001.6, Core Heat Balance and Feedwater Flow Calculation – Power Range.

Facility: Oyster CreekTask No: 2150101005Task Title: Perform Core Daily Checks (APRM Drawer Count)Job Performance Measure No: NRC Admin RO2K/A Reference: G2.1.2 (RO 3.0/SRO 4.0) G2.1.31 (RO4.2/SRO 3.0)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of Testing:Simulated Performance _____ Actual Performance XClassroom _____ Simulator X 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:

1. The plant is at full power.

Task Standard: The APRM Drawer count documentation is complete and the correct discrepancy has been identified.

Required Materials:

1. Copy of Attachment 202.1-1, with the following LPRMs marked as BYPASSED in Section 1: 12-17D and 20-25D (inputs to APRM 7), 28-33C (APRM 1), and 12-17A (APRM 3).
2. Copy of Attachment 403-2, with the following LPRMs marked as BYPASSED: 12-17D and 20-25D (inputs to APRM 7), 28-33C (APRM 1), and 12-17A (APRM 3).

General References

1. Procedure 202.1, Power Operation, Rev. 98
2. Procedure 403, LPRM-APRM System Operations, Rev. 11

Initiating Cue: Verify LPRM inputs to APRM 7 IAW Procedure 202.1, Power Operation, Attachment 202.1-4, Section 2.

Time Critical Task: No

Validation Time: 15 minutes

Simulator Setup:

1. IC-65
2. No APRMs bypassed
3. LPRMs bypassed in APRM 7: 12-17D, 20-25B, and 20-09B (red knob and silver toggle)
4. LPRMs bypassed in APRM 1: 28-33C (silver toggle)
5. LPRMs bypassed in APRM 3: 12-17A (silver toggle)

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

FLOOR CUE: Handout marked-up copy of most recent completed Attachment 202.1-1 to the Candidate. Candidate may also ask for the most recent completed Attachment 403-2 (and provide when asked).

Comment:

_____ Performance Step: 2

Standard: Verifies Prerequisites and reads Precautions and Limitations.

FLOOR CUE: Report that all prerequisites have been met.

Comment:

Performance Information

_____ Performance Step: 3 (step 5.3.3.8.1 of procedure 403)

Standard: Obtains US permission.

FLOOR CUE: Report US permission to continue.

Comment:

_____✓_____ Performance Step: 4 (step 5.3.3.8.2)

Standard: Confirms APRM bypassing is allowed, and then places joystick for APRM 7 on Panel 4F to the CH 7 position. (Panel 4F)

Comment:

_____✓_____ Performance Step: 5 (step 5.3.3.8.3)

Standard: Rotates APRM 7 drawer INPUT switch clockwise to the COUNT position. (Panel 5R)

FLOOR NOTE: The indication will read 60% (6 LPRM inputs).

Comment:

Performance Information

Performance Step: 6 (step 5.3.3.8.3.a)

Standard: Continues to rotate the same INPUT switch to position "8", position "7", etc. (Panel 5R)

Marks LPRM 12-17D and 20-25B as Bypassed on Attachment 202.1-1.

Marks the number of UNBYPASSED LPRMs as "6" on Attachment 202.1-1.

FLOOR NOTE: LPRMs 12-17D and 20-25B will indicate "0" when selected (bypassed).

Comment:

Performance Step: 7 (step 5.3.3.8.3.b)

Standard: Continues to rotate the same INPUT switch to the AVERAGE position.

FLOOR NOTE: The APRM will again show 100% power on the meter.

Comment:

Performance Step: 8 (step 5.3.3.8.3.c)

Standard: Unbypasses APRM 7 by placing the APRM joystick from CH 7 to the neutral position (Panel 4F).

FLOOR NOTES: 1) Procedure step 5.3.3.8.4 says to repeat the above manipulations for other APRMs, as required. No other APRM counts are required to be performed.

2) Procedure step 5.3.3.8.5 says to verify ALL APRM INPUT switches in AVERAGE and is not required.

Performance Information

Comment:

Performance Step: 9

Standard: Initials completion on Attachment 202.1-1 and recognizes the following discrepancies: (initial not required for critical task)

- LPRM 20-25D had been shown as BYPASSED and is NOT BYPASSED.
- LPRM 20-25B had NOT been shown as BYPASSED and is BYPASSED.
- LPRM 20-09 had NOT been shown as BYPASSED and is BYPASSED.

Notifies the SRO of the discrepancy (not required for critical task).

FLOOR CUE: As the SRO, acknowledge the report.

Comment:

Terminating Cue: The APRM Drawer count documentation is complete and the correct discrepancy has been identified.

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin RO2

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUT

Initial Conditions:

1. The plant is at full power.

Task Cue:

Verify LPRM inputs to APRM 7 IAW Procedure 202.1, Power Operation, Attachment 202.1-4, Section 2.

Facility: Oyster CreekTask No: 2990301101Task Title: Review a Clearance Request (Tagout)Job Performance Measure No: NRC Admin RO3K/A Reference: G2.2.13 (RO 3.6/SRO 3.8)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of Testing:Simulated Performance _____ Actual Performance XClassroom X Simulator _____ 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:

1. The plant is at hot at 295° F, and is cooling down with Isolation Condensers.
2. Shutdown Cooling Pumps A and B have motor shorts and cannot be used.
3. Shutdown Cooling Pump C was placed into service and found to have high vibrations and was subsequently secured. Engineering has determined that SDC Pump C needs an internal inspection.
4. No Shutdown Cooling System isolations are in effect.

Task Standard: The clearance has been found to be unacceptable for personnel protection for the stated reasons.

Required Materials: Completed Attachment 3, Clearance Requester Checklist, of procedure OP-MA-109-101, Clearance and Tagging

General References:

1. Procedure 305, Shutdown Cooling System Operation, Rev. 90
2. Procedure OP-MA-109-101, Clearance and Tagging, Rev. 4

3. Drawing 148F711, Reactor Shutdown Cooling System Flow Diagram, Rev. 43
4. Drawing BR 2006, Reactor Building Closed Cooling Water System Flow Diagram, Sheet 2, Rev. 44
5. Drawing 116B8328, Shutdown Cooling System Electrical Elementary Diagram, Sheet 12B, Rev. 17

Initiating Cue: Attached is the clearance request (from Maintenance) for Shutdown Cooling Pump C. Confirm the isolation points meet the requirements for personnel protection under the given conditions. (NOTE: This clearance will NOT be considered an EXCEPTIONAL CLEARANCE.)

Time Critical Task: No

Validation Time: 24 minutes

Simulator Setup: N/A

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

_____ ✓ Performance Step: 2

Standard: Reviews the clearance request against the reference materials. The clearance request isolation points are deficient for personnel protection due to the following:

1. The listed power supply for the breaker for SDC Pump C is incorrect: USS 1A2 is listed; the correct power supply is USS 1B2.
2. OP-MA-109-101, step 5.3.1.5, says that dual valve protection should be provided when isolating from an energy source of > 200° F or pressures > 500 psig.
 - a. SDC motor-operated Isolation valves V-17-19 (on the SDC pump suction side) and V-17-54 (on the SDC pump discharge side) must be CLOSED and have their breakers DE-ENERGIZED (Note: a motor-operated valve on the SDC pump discharge side, V-17-207, could be CLOSED and de-energized in place of V-17-54; there is no alternate isolation valve on the SDC suction side).

NOTE: The following items are not required: type of tag, clearance sequence, identification of vent/drain valves, or how a component is de-energized (a breaker is opened/locked open/racked-out).

Comment:

Terminating Cue: The clearance has been found to be unacceptable for personnel protection (see reasons above).

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin RO3

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUTInitial Conditions:

1. The plant is hot at 295° F, and is cooling down with Isolation Condensers.
2. Shutdown Cooling Pumps A and B have motor shorts and cannot be used.
3. Shutdown Cooling Pump C was placed into service and found to have high vibrations and was subsequently secured. Engineering has determined that Shutdown Cooling Pump C needs an internal inspection.
4. No Shutdown Cooling System isolations are in effect.

Task Cue:

Attached is the clearance request (from Maintenance) for Shutdown Cooling Pump C. Confirm the isolation points meet the requirements for personnel protection under the given conditions. (NOTE: This clearance will NOT be considered an EXCEPTIONAL CLEARANCE.)

STUDENT HANDOUTClearance Request

Work to be performed: Perform an internal inspection of Shutdown Cooling Pump C

Clearance Isolation Points:

- Electrical Isolation Points for Shutdown Cooling Pump C
 - Place Shutdown Cooling Pump C control switch in PTL
 - DE-ENERGIZE Shutdown Cooling Pump C breaker on 480V USS 1A2
 - DE-ENERGIZE Shutdown Cooling Pump C motor heaters (if there are any)

- Mechanical Isolation Points for Shutdown Cooling Pump C
 - Place Shutdown Cooling Pump C suction valve V-17-3 switch in CLOSE
 - Place Shutdown Cooling Pump C discharge valve V-17-57 switch in CLOSE
 - DE-ENERGIZE Shutdown Cooling Pump C suction valve V-17-3 breaker on MCC-DC1
 - DE-ENERGIZE Shutdown Cooling Pump C discharge valve V-17-57 breaker on MCC-DC1
 - Isolate RBCCW to Shutdown Cooling Pump C
 - CLOSE V-5-207 and V-5-208

Facility: Oyster CreekTask No: 0170101004Task Title: Determine Radiological Area Access RequirementsJob Performance Measure No: NRC Admin RO4K/A Reference: G2.3.1 (RO 2.6/SRO 3.0)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of Testing:Simulated Performance _____ Actual Performance XClassroom X Simulator _____ 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: The reactor is cooling down during a shutdown.

Task Standard: Determines that an increase in the administrative dose limit is required to complete the entire Action Plan for Shutdown Cooling Pump C.

Required Materials: Calculator

General References:

1. RP-AA-203, Exposure Control and Authorization, Rev. 2

Initiating Cue: While responding to an alarm in the Shutdown Cooling Pump Room, you noticed a large quantity of oil on the floor surrounding SDC Pump C. You promptly leave the RCA and report to the Control Room. You have determined that the oil was from SDC Pump C.

The SRO has devised the following Action Plan for you to follow:

1. Re-enter the SDC Pump Room and cleanup the oil (estimated time in the SDC Pump Room is 15 minutes) and leave.

2. Return with new clean oil and fill where necessary for SDC Pump C (estimated time in the SDC Pump Room is 15 minutes) and leave.
3. Return a short time later and perform a SDC Pump C re-inspection (estimated time in the SDC Pump Room is 10 minutes) and leave.
4. Return a short time later and perform a re-inspection with the SDC Pump C running (estimated time in the SDC Pump Room is 10 minutes) and leave.
5. Radiation Protection has prepared a specific RWP with the following limits: accumulated dose alarm: 200 mrem; dose rate alarm: 150 mr/hr.

Your annual dose prior to entering the RCA to respond to the initial SDC alarm was 1972 mrem. Your digital dosimeter reading was 3 mrem after exiting the RCA the first time after finding the oil on the floor.

Calculate your total dose you would have, if you complete the Action Plan as written (consider only the dose received in the SDC Room). Determine if you can actually complete the Action Plan. If you cannot complete the Action Plan, state what administrative requirements must be completed first.

Time Critical Task: No

Validation Time: 22 minutes

Simulator Setup: N/A

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

Performance Step: 2

Standard: Determines that his total dose prior to implementation of the Action Plan is 1975 mrem (1972 + 3). (not required for critical step)

Determines the difference between the Administrative Dose Limit and actual is 25 mrem (2000 – 1975). (not required for critical step)

Determines that the total dose for the Action Plan is $(15/60 * 75) + (15/60 * 75) + (10/60 * 75) + (10/60 * 75) = 18.75 + 18.75 + 12.5 + 12.5 = 62.5$ mrem (not required for critical step). (60 to 64 allowed)

Total dose after performing the Action Plan:
 $1972 + 3 + 62.5 = 2037.5$ mrem, which is greater than the administrative dose limit of 2000 mrem. (required for critical step) (2035 mrem to 2039 mrem)

To perform on the Action Plan, he would have to first document the authorization to raise his Administrative Dose Limit. (required for critical step)

Comment:

Terminating Cue: Determines that an increase in the administrative dose limit is required to complete the entire Action Plan for Shutdown Cooling Pump C.

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin RO4

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUTInitial Conditions:

The reactor is at cooling down during a shutdown.

Task Cue:

While responding to an alarm in the Shutdown Cooling Pump Room, you noticed a large quantity of oil on the floor surrounding SDC Pump C. You promptly leave the RCA and report to the Control Room. You have determined that the oil was from SDC Pump C.

The SRO has devised the following Action Plan for you to follow:

1. Re-enter the SDC Pump Room and cleanup the oil (estimated time in the SDC Pump Room is 15 minutes) and leave.
2. Return with new clean oil and fill where necessary for SDC Pump C (estimated time in the SDC Pump Room is 15 minutes) and leave.
3. Return a short time later and perform a SDC Pump C re-inspection (estimated time in the SDC Pump Room is 10 minutes) and leave.
4. Return a short time later and perform a re-inspection with the SDC Pump C running (estimated time in the SDC Pump Room is 10 minutes) and leave.
5. Radiation Protection has prepared a specific RWP with the following limits:
accumulated dose alarm: 200 mrem; dose rate alarm: 150 mr/hr.

Your annual dose prior to entering the RCA to respond to the initial SDC alarm was 1972 mrem. Your digital dosimeter reading was 3 mrem after exiting the RCA the first time after finding the oil on the floor.

Calculate your total dose you would have, if you complete the Action Plan as written (consider only the dose received in the SDC Room). Determine if you can actually complete the Action Plan. If you cannot complete the Action Plan, state what administrative requirements must be completed first.

Student Handout

EXELON RADIATION CONTAMINATION DIAGRAM SHEET					
LOCATION: RB 51' Shutdown Cooling Pump Room				PAGE <u>1</u> OF <u>1</u>	
DATE: 9/15/06	TIME: 0800	INSTRUMENT		SURVEY No.: 69	
RX POWER: 0%	MAP # / ROOM #	TYPE	SERIAL #	CAL. DUE	RWP No.:
SURVEYED BY: RP Tech		INITIALS:		REASON FOR SURVEY: Normal/Periodic	
REVIEWED BY: RP Sup		DATE: 9/15/06		WORK ORDER #	

RADIATION GA Range
25 to 75 mrem/hr
All dose rates in mrem/hr unless otherwise noted

AIRBORNE N/A
Unidentified DAC Fraction

Contamination

Smear	LOCATION	DPM/100CM ²
1	1	<1000
2	2	<1000
3	3	<1000
4		
5		
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REMARKS: _____

REVISION DATE: _____

Legend

X-X-X = RAD BOUNDARY
 SOP = STEP OFF PAD
 L = LARGE AREA WIPE
 Δ = A/S LOCATION
 NDB = No Detectable Beta
 DF = Direct Frisk
 #/# = γ Contact/ γ 30 cm
 Hd = Head Ch = Chest Kn = Knee
 CCPM = CORRECTED COUNTS PER MINUTE

= 7 G.A.
 #B/# = β/γ
 # N = NEUTRON
 ⊙ = SMEAR
 K = # Times 1000

Facility: Oyster CreekTask No: 2000502401Task Title: Emergency Classification with PARJob Performance Measure No: NRC Admin SRO1K/A Reference: 2.4.38 (SRO 4.0), 2.4.40 (SRO 4.0), 2.4.41 (SRO 4.1), 2.4.44 (SRO 4.0)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:Simulated Performance _____ Actual Performance XClassroom X Simulator _____ 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:

1. The plant was at rated power when an automatic scram occurred 30 minutes ago
2. Off-site power was lost when the scram occurred and both EDGs have failed to start and are being investigated
3. No combustion turbines have been able to supply power to the plant
4. RPV water level is unknown
5. No radiological release is in progress and no effluent radiation monitors are in alarm
6. Winds are from the East at 10 mph
7. Drywell pressure is 2.9 psig
8. Containment High Range Radiation Monitors indicate 1000 R/hr
9. The Shift Manager is not in the Control Room
10. No Emergency Plan Emergency Classifications have been made

Task Standard: The emergency is correctly classified and the State/Local Notification Form and the PAR Notification/Update Form are correctly completed within the required time.

Required Materials: None

General References:

1. EP-OC-1010, Radiological Emergency Plan for Oyster Creek Generating Station, Rev. 7
2. EP-OC-111, Emergency Classification and Protective Action Recommendations, Rev. 5
3. EP-OC-114-100, State/Local Notifications, Rev. 2

Initiating Cue: Assuming the duties of the Shift Emergency Director, classify the emergency and complete the required notification forms IAW procedure EP-OC-114-100, State/Local Notifications.

Time Critical Task: Yes (2 time critical tasks)

Validation Time: 11 minutes for the first section; 10 for the second section

Simulator Setup: N/A

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

_____ Performance Step: 2

Standard: Obtain a copy of the reference procedure and review/utilize the correct section (Procedure EP-OC-1010, Table D-1, EAL Matrix; Procedure EP-OC-114-100, State/Local Notifications).

Comment:

Performance Information

 ✓ Performance Step: 3 (Procedure EP-OC-1010) (Timed Critical Step #1)

Standard: Classifies the emergency as a General Emergency

- MG1: Prolonged Loss of ALL Offsite AC Power AND Prolonged Loss of ALL Onsite AC Power
- The emergency classification is made \leq 15 minutes from the start time.

Comment:

Critical Task #1 Stop Time: _____

Critical Task #2 Start Time: _____

 ✓ Performance Step: 4 (Attachment 1 of EP-OC-114-100)
(Timed Critical Step #2)

Standard: Completes the State/Local Notification Form (Page 1 ONLY is required). The critical steps are identified below:

- Block 3: Classification: General Emergency; Declared at: actual time/date
- Block 4: EAL Number: MG1; Brief Non-Technical Description: Prolonged Loss of ALL Offsite AC Power AND Prolonged Loss of ALL Onsite AC Power (or similar)
- Block 5: Non-Routine Rad Release: None in progress
- Block 6: Meteorology: Wind direction from 90°; Wind Speed 10 mph

Comment:

Performance Information

_____✓_____ Performance Step: 5 (Attachment 2 of EP-OC-114-100)

Standard: Completes the PAR Notification/Update Form (Page 1 ONLY is required). The critical steps are identified below:

- PAR Based On: Plant based GE
- Met Date: Wind Speed: 10 mph; Wind Direction (from): 90°
- Utility Recommended Actions:
 - Evacuate 360 degrees from 0 miles (Site Boundary) to 2 miles
 - Evacuate the following Sectors from 0 miles to 5 miles downwind: WSW, W, and WNW Sectors
 - Shelter all areas not evacuated
- KI: No
- The Forms are completed \leq 15 minutes from classifying the event.
- Note: Filling in the map is not required.

Comment:

Critical Task #2 Stop Time: _____

CUE: If the Candidate goes on to complete Attachment 5 (of EP-OC-114-100), state that the form is not required.

Terminating Cue: The emergency is correctly classified and the State/Local Notification Form and the PAR Notification/Update Form are correctly completed within the required time.

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin SRO1

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUTInitial Conditions:

1. The plant was at rated power when an automatic scram occurred 30 minutes ago
2. Off-site power was lost when the scram occurred and both EDGs have failed to start and are being investigated
3. No combustion turbines have been able to supply power to the plant
4. RPV water level is unknown
5. No radiological release is in progress and no effluent radiation monitors are in alarm
6. Winds are from the East at 10 mph
7. Drywell pressure is 2.9 psig
8. Containment High Range Radiation Monitors indicate 1000 R/hr
9. The Shift Manager is not in the Control Room
10. No Emergency Plan Emergency Classifications have been made

Task Cue:

Assuming the duties of the Shift Emergency Director, classify the emergency and complete the required notification forms IAW procedure EP-OC-114-100, State/Local Notifications.

Facility: Oyster Creek

Task No: _____

Task Title: Review Plant Startup CheckoffJob Performance Measure No: NRC Admin SRO2

K/A Reference: _____

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of Testing:Simulated Performance _____ Actual Performance XClassroom X Simulator _____ 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:

1. The plant is shutdown with all control rods fully inserted
2. RPV coolant temperature is 120° F
3. The Reactor Mode switch is in REFUEL
4. Reactor start-up preparations are being performed IAW procedure 201, Plant Startup
5. Attachment 201-4, Primary Containment Integrity and Drywell Closure Checkoff, has been completed by the off-going Crew

Task Standard: The Checkoff has been reviewed and the discrepancies have been noted.

Required Materials: A completed Attachment 201-4

General References: Procedure 201, Plant Startup, Rev. 39

Initiating Cue: Review the completed Attachment 201-4, and make any comments to the Shift Manager.

Time Critical Task: No

Validation Time:

Simulator Setup: N/A

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

_____✓_____ Performance Step: 2 (page 2)

Standard: While reviewing the Checkoff, reports the following deficiency:

- Reactor Water Sample Valve V-24-30 is Not Operable and open. IAW the procedure, the valve should be secured in the closed position and their position indicators illuminated. (V-24-30 is an automatic containment isolation valve)

Comment:

Performance Information

Performance Step: 3 (step 6.0, page 3)

Standard: While reviewing the Checkoff, reports the following deficiency:

- There is an unauthorized Temporary Procedure Change. (Therefore, this step is not considered complete.)

Comment:

Terminating Cue: The Checkoff has been reviewed and the discrepancies have been noted.

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin SRO2

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUT

Initial Conditions:

1. The plant is shutdown with all control rods fully inserted
2. RPV coolant temperature is 120° F
3. The Reactor Mode switch is in REFUEL
4. Reactor start-up preparations are being performed IAW procedure 201, Plant Startup
5. Attachment 201-4, Primary Containment Integrity and Drywell Closure Checkoff, has been completed by the off-going Crew.

Task Cue:

Review the completed Attachment 201-4, and make any comments to the Shift Manager.

Facility: Oyster CreekTask No: 2260201402Task Title: Evaluate Acceptance Criteria Following Surveillance PerformanceJob Performance Measure No: NRC Admin SRO3K/A Reference: G2.2.12 (SRO 3.4)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of Testing:Simulated Performance _____ Actual Performance XClassroom X Simulator _____ 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:

1. The plant is at 100% power
2. Procedure 607.4.014, Containment Spray and ESW System 1 Pump Operability, IST, and Containment Spray Pumps Trip, has just been field completed (normal surveillance) and needs SRO review.

Task Standard: Containment Spray Pump 51A is declared inoperable (step 6.4.15) and valve V-21-18 (step 6.4.10) should either be declared inoperable or retested immediately.

Required Materials: Completed procedure 607.4.014

General References:

1. 607.4.014, Containment Spray and ESW System 1 Pump Operability, IST, and Containment Spray Pumps Trip

Initiating Cue: Review the completed procedure and determine if the Acceptance Criteria are met, and make any comments.

Time Critical Task: No

Validation Time: 30 minutes

Simulator Setup: N/A

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

_____ Performance Step: 2

Standard: Obtain a copy of the reference procedure and review/utilize the correct section (607.4.014, Section 7.0).

Comment:

_____ ✓ _____ Performance Step: 3 (step 7.1.1)

Standard: Verifies that Containment Spray Pump 51A was below the acceptable valve for discharge pressure (minimum was > 60 psig; recorded in step 6.14.5 was 59 psig). Declares Containment Spray Pump 51A inoperable and applies TS 3.4.C (not required to discuss the actual LCO).

Comment:

Performance Information

 ✓ Performance Step: 4 (step 7.1.6)

Standard: Verifies that valve V-21-18 recorded closing time (45.2 seconds) was longer than allowed by the acceptable range (32.2 – 43.5 seconds) but less than the Limiting Value (47.3 seconds) [see step 6.4.10]. As required by 7.1.9.2, the valve may either be declared inoperable or retested immediately. If declared inoperable, then applies TS 3.4.C (not required to discuss the actual LCO).

Comment:

 Performance Step: 6

Standard: All other components verified to meet the acceptance criteria.

Comment:

Terminating Cue:

JPM Stop Time:

Validation of Completion

Job Performance Measure No. NRC Admin SRO3

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUT

Initial Conditions:

1. The plant is at 100% power
2. Procedure 607.4.014, Containment Spray and ESW System 1 Pump Operability, IST, and Containment Spray Pumps Trip, has just been field completed (normal surveillance) and needs SRO review.

Task Cue:

Review the completed procedure and determine if the Acceptance Criteria are met, and make any comments.

Facility: Oyster CreekTask No: 3430302001Task Title: Determine Radiological Access RequirementsJob Performance Measure No: NRC Admin SRO4K/A Reference: G2.3.1 (SRO 3.0)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:Simulated Performance _____ Actual Performance XClassroom X Simulator _____ 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:

1. The plant is at 90% power. The plant is to shutdown next week to enter a refuel outage.
2. Operations needs three more individuals to assign to the Leak Rate Team for the entire outage (scheduled to last three weeks).
3. Radiation Protection has provided historical dose accumulations for Leak rate Team members:
 - Week 1: 175 mrem
 - Week 2: 110 mrem
 - Week 3: 75 mrem
4. There are three extra Operators who will be assigned to you during the outage, as listed below:
 - Dave Carey (SSN 111-11-1111): year-to-date exposure: 1825 mrem
 - Peter Simpson (SSN 222-22-2222): year-to date exposure: 1410 mrem

- Julie Davis (SSN 333-33-3333) (declared pregnant worker): year-to-date exposure: 380 mrem (340 mrem has been received since she declared her pregnancy IAW RP-AA-203, Exposure Control and Authorization)

Task Standard: The Candidate correctly states why/why not each RO can/cannot participate as a Leak Rate Team member for the entire outage. Initiates the Dose Control Level Extension Form of procedure RP-AA-203.

Required Materials: None

General References:

1. RP-AA-203, Exposure Control and Authorization, Rev. 2

Initiating Cue: Determine if each listed individual can be assigned to the Leak Rate Team for the entire 3-week outage. For all individuals who cannot be assigned, initiate any documentation/authorization required, to allow them to be assigned to the Team for the entire 3-week outage.

Time Critical Task: No

Validation Time: 18 minutes

Simulator Setup: N/A

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

Performance Step: 2

Standard: Makes the following determinations:

1. The total dose expected for the 3-week period is $(175+110+75)$ 360 mrem (not required for critical task).
2. If Dave Carvey received this dose, his annual dose would be 2185 mrem. This is above the administrative dose limit of 2000 mrem. This administrative limit can be raised to let Dave Carvey perform the task, but this documentation must be performed prior to Dave Carvey exceeding 2000 mrem (critical task)
3. Peter Simpson can, without any documentation, work on the Leak Rate Team for the entire period (critical task) since his total dose would remain below the same administrative dose limit $(1410+360=1770 < 2000)$.
4. Julie Davis cannot join the Leak Rate Team for the entire time under any circumstance (critical task) since her total dose would be $(340+360)$ 700 mrem. Her NRC exposure limit is only 500 mrem. This NRC limit cannot be exceeded.

Comment:

Performance Information

_____ Performance Step: 3

Standard: Completes Section 1 of Attachment 1 of procedure RP-AA-203, which includes the following:

- Name: Dave Carey
- SSN: 111-11-1111
- Individual's Signature: The Candidate should state that the worker needs to sign the form
- Other qualified workers with lower TEDE: No or NA
- Reason for extension: To perform on the Leak Rate team
- New TEDE: ≥ 2185 mrem (= 1825 + 360)
- Requester/Date; Candidates name and date

Comment:

Terminating Cue:

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin SRO4

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUTInitial Conditions:

1. The plant is at 90% power. The plant is to shutdown next week to enter a refuel outage.
2. Operations needs three more individuals to assign to the Leak Rate Team for the entire outage (scheduled to last three weeks).
3. Radiation Protection has provided historical dose accumulations for Leak Rate Team members:
 - Week 1: 175 mrem
 - Week 2: 110 mrem
 - Week 3: 75 mrem
4. There are three extra Operators who will be assigned to you during the outage, as listed below:
 - Dave Carey: year-to-date exposure: 1825 mrem
 - Peter Simpson: year-to date exposure: 1410 mrem
 - Julie Davis (declared pregnant worker): year-to-date exposure: 380 mrem (340 mrem has been received since she declared her pregnancy IAW RP-AA-203, Exposure Control and Authorization)

Task Cue:

Determine if each listed individual can be assigned to the Leak Rate Team for the entire 3-week outage. For all individuals who cannot be assigned, initiate any documentation/authorization required, to allow them to be assigned to the Team for the entire 3-week outage.

Facility: Oyster CreekTask No: 3410102411Task Title: Review/Approve Manual Reactor Heat BalanceJob Performance Measure No: NRC Admin SRO5K/A Reference: G2.1.7 (SRO 4.4)

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:Simulated Performance _____ Actual Performance XClassroom X Simulator _____ 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:

1. The Reactor is at 100% power with all systems normally aligned, except that the PPC is not available.
2. The Reactor Operator has just completed performing a manual reactor heat balance IAW procedure 1001.6, Core heat Balance and Feedwater Flow Calculation – Power Range. Feedwater flow was determined using Method 1.

Task Standard: Procedure 1001.6 has been reviewed and found not to be acceptable for approval as written.

Required Materials:

1. A completed procedure 1001.6, Core heat Balance and Feedwater Flow Calculation – Power Range
2. Calculator

General References: Procedure 1001.6, Core heat Balance and Feedwater Flow Calculation – Power Range, Rev. 26

Initiating Cue: Perform a review/approval of the completed procedure.

Time Critical Task: No

Validation Time: 10 minutes

Simulator Setup: N/A

Performance Information

Denote critical steps with a check mark

_____ Performance Step: 1

JPM Start Time: _____

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

Performance Step: 3

Standard: Determines that step 5.2.12 (Step L in the table, Attachment 1001.6-2, Fixed Losses) is mis-calculated.

Comment:

Performance Step: 3

Standard: Determines that step 5.2.13 (Step N in the table, Attachment 1001.6-2, Calculated Core Thermal Power) is mis-calculated. The fixed losses (Step L) were subtracted from Step J instead of being added to Step J.

Comment:

Performance Information

Terminating Cue: Procedure 1001.6 has been reviewed and found not to be acceptable for approval as written.

JPM Stop Time: _____

Validation of Completion

Job Performance Measure No. NRC Admin SRO5

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question:

Response:

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

STUDENT HANDOUT

Initial Conditions:

1. The Reactor is at 100% power with all systems normally aligned, except that the PPC is not available.
2. The Reactor Operator has just completed performing a manual reactor heat balance IAW procedure 1001.6, Core heat Balance and Feedwater Flow Calculation – Power Range. Feedwater flow was determined using Method 1.

Task Cue:

Perform a review/approval of the completed procedure.