

Exelon Nuclear

Job Performance Measure

Assemble the Fire Brigade

JPM Number: RO A

Revision Number: 00

Date: 03/11/05

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Approved By: _____
Training Department Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date

SME/Instructor	Date

SME/Instructor	Date

Revision Record (Summary)

1. **Revision 00,** This JPM was developed for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. ANY IC may be used for this JPM, provided that it is verified to be compatible with this and the other JPMs that are scheduled to be run concurrently.
2. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.
3. This completes the setup for this JPM.

INITIAL CONDITIONS

- Unit 1 is at 100% power. Unit 2 is in Mode 5 with maintenance activities in progress and many systems out of service. Unit 1 has the responsibility for the common panels.
- You are the U1 Assist NSO.
- The emergency telephone (2211) just rang.

INITIATING CUE

Respond to the emergency telephone call.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- Denotes critical elements of a critical step.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
	Answers the Emergency Telephone				
CUE: “This is Joe Smith, there is a FIRE in the contractor tool crib at TRACKWAY TWO. I TRIED to put it out with an extinguisher, but I could NOT. There are NO PERSONNEL in the area.”					
	Directs caller to stand by in a safe area and direct the Fire Brigade when they arrive.				
CUE: “I will stand by in a safe area and direct the Fire Brigade.”					
	Obtain QCOA 0010-12, Fire Explosion,				
EVALUATOR: When QCOA 0010-12 is located, provide the candidate with a copy of the procedure.					
D.2*	<ul style="list-style-type: none"> •Dispatches Fire Brigade Leader to the scene to assess the incident and to determine if Offsite Fire Department assistance is needed. • 	Uses telephone or radio to contact Fire Brigade Leader (Field Supervisor)	—	—	—
CUE: As the Field Supervisor (Brigade Leader), tell the candidate that you will go to Trackway II and report back on the initial assessment of the fire, AND whether or not Offsite Fire Department assistance is needed.					
NOTE: The PLANT SIREN in the Simulator does NOT provide audible feedback.					
D.4.a*	<ul style="list-style-type: none"> •Sounds the fire siren for approximately 10 seconds• 	Depresses the START pushbutton below the word FIRE (right side) on the FIRE / ASSEMBLY Alarm Panel.	—	—	—
D.4.a	After approximately 10 seconds, stops fire siren	Depresses the STOP pushbutton below the word FIRE (right side) on the FIRE / ASSEMBLY Alarm Panel.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: The plant PA system can be accessed by using one of the Giatronic® handsets in the Main Control Room, OR by dialing telephone extension 4747.					
D.4.b*	•Announces over the PA system the fire location and directs the Fire Brigade to respond. •	Makes announcement on PA. Wording similar to: <i>“Attention in the plant, a fire has been reported in the Turbine Building at Trackway II in the Contractor’s tool crib. (Repeats) Fire Brigade to respond.”</i>	—	—	—
D.4.c	Re-sounds the fire siren for approximately 30 seconds.	Depresses the START pushbutton below the word FIRE (right side) on the FIRE / ASSEMBLY Alarm Panel.	—	—	—
D.4.c	After approximately 30 seconds, stops fire siren	Depresses the STOP pushbutton below the word FIRE (right side) on the FIRE / ASSEMBLY Alarm Panel.	—	—	—
NOTE: The CentraCom® radio console on the Simulator Center Desk is non-functional. IF the candidate chooses the DGT-9000 radio on the NSO or ANSO desk, INFORM the candidate to NOT ACTUALLY TRANSMIT.					
D.5	Uses the Center Desk radio console to inform the Fire Brigade, Radiation Protection, and Security of the location of the fire.				
CUE: IF asked, point to the Memory Mode yellow LED and indicate that it is LIT.					
D.5.a*	•Depresses MULTI-SEL 1/MEMORY button to enter the Multi-Select mode. •	Prepares radio console for making announcement.	—	—	—
CUE: Point to the GREEN LED and state that it is LIT.					

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
D.5.b*	<ul style="list-style-type: none"> •Selects OPS AND EMERGENCY modules. • De-selects all other modules. 	Prepares radio console for making announcement.	—	—	—
CUE: Point to the SELECT LIGHT on the OPS and SECURITY Modules and state that they are LIT. Point to the select light on ALL OTHER modules and indicate they are EXTINGUISHED.					
D.5.c	Presses the Alert 1 key for approximately 3 seconds	Presses ALERT 1 key for approximately 3 seconds to send attention signal	—	—	—
D.5.d*	<ul style="list-style-type: none"> •Presses APB-1 key and describes the location of the fire. • 	Makes announcement describing the location of the fire. May use wording similar to earlier announcement: <i>“A fire has been reported in the Turbine Building at Trackway II in the Contractor’s tool crib.”</i>	—	—	—
D.5.e	Optional Step to exit Multi-Select mode if desired.	MAY exit Multi-Select mode by depressing the MULTI-SEL 1/MEMORY button (optional)	—	—	—
CUE: IF above optional step is performed, point to the Memory mode LED (yellow) and indicate that it is LIT. Point to the Multi-Select LED (green) and indicate that it is extinguished.					
D.5.f	Depresses APB-1 key and directs the Fire Brigade, Rad Protection and Security to report to the Fire Brigade Leader	Makes announcement. May use wording similar to: <i>“Fire Brigade, Radiation Protection and Security are to report to the Fire Brigade Leader.”</i>	—	—	—
D.5.f. (1)	Depresses APB-1 or Transmit on the Ops module and directs all NLO’s to switch their radios to EMERGENCY Channel 11.	Make announcement. May use wording similar to: <i>“All Non-Licensed Operators switch radios to emergency channel 11.”</i>			

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
D.9	Notifies the Shift Manager	Notify the Shift Manager to consider classifying the event as a possible E-Plan condition and initiate Shift Emergency director Checklist as necessary			
CUE: As the Shift Manager, reply to the candidate that you will review the E-Plan and take the appropriate actions.					
CUE: As the Fire Brigade Leader, report that THE FIRE HAS BEEN EXTINGUISHED and that Offsite assistance is NOT required. As the Unit Supervisor, inform the Candidate that you will assign one of the EXTRA NSOs complete all remaining actions in QCOA 0010-12.					
CUE: Inform the candidate that the JPM is complete.					

JPM Stop Time: _____

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Operator's Name: _____
 Job Title: ☐ RO ☐ SRO

JPM Title: Assemble the Fire Brigade

JPM Number: RO A

Revision Number: 00

Task Number and Title: **SR-9000-P3**. Given an operating reactor plant, operate the CentraCom Console in all modes to transmit and receive messages in accordance with QCOP 9000-04 and HU-AA-101.

K/A Number and Importance:

K/A: 2.1.16

Rating: 2.9 / 2.8

Suggested Testing Environment: Simulator

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☒ Perform
 Alternate Path: ☐ Yes ☒ No
 SRO Only: ☐ Yes ☒ No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 8 minutes

Actual Time Used: _____ minutes

References: QCOA 0010-12, FIRE/EXPLOSION

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

- Unit 1 is at 100% power. Unit 2 is in Mode 5 with maintenance activities in progress and many systems out of service. Unit 1 has the responsibility for the common panels.
- You are the U1 Assist NSO.
- The emergency telephone (2211) just rang.

INITIATING CUE

Respond to the emergency telephone call.

Exelon Nuclear

Job Performance Measure

Electrical Distribution Surveillance

JPM Number: RO B

Revision Number: 00

Date: 02/16/05

Developed By:	_____	_____
	Instructor	Date
Validated By:	_____	_____
	SME or Instructor	Date
Review By:	_____	_____
	Operations Representative	Date
Approved By:	_____	_____
	Training Department	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date
SME/Instructor	Date
SME/Instructor	Date

Revision Record (Summary)

1. **Revision 00,** This JPM was developed for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 21 (rst 21).

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently. The IC used must have the Electric Plant in a NORMAL lineup.

2. Override the green light indication OFF (open light out) for the T12 to Bus 14 GCB OFF

- **ior lohs1650014051 off**

3. Verify a copy of QCOS 0005-08 complete through step D.2.

D.1.a: Reason for test: “Normal Surveillance”

D.1.b: Permission to start test (signed, date / time “current/current”

D.2 Record Operational Mode: “1”

4. Verify Attachment D and E of QCOS 0005-08 with ALL STEPS INITIALED AS MET, to be provided to the Candidate DURING the JPM

When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.

INITIAL CONDITIONS

- Unit 1 and 2 are at rated conditions.
- QCOS 0005-08, ELECTRICAL DISTRIBUTION BREAKER AND VOLTAGE VERIFICATION is scheduled to be performed on your shift.
- You are the Unit 1 Assist NSO.
- The Unit 2 Assist NSO will provide all Unit 2 information as requested.
- An NLO has been dispatched to perform the in-plant sections of the surveillance and provide them to you when they are complete.

INITIATING CUE

Perform the Control Room portion QCOS 0005-08.

Provide the Candidate with a copy of QCOS 0005-08 completed through step D.2

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

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UNSAT requires written comments on respective step.

- * Denotes critical steps.
- Denotes critical elements of a critical step.

Number any comments in the “Comment Number” column on the following pages. Then annotate that comment in the “Comments” section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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The timeclock starts when the candidate acknowledges the initiating cue.

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JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: The procedure allows steps may be performed in any order. If the candidate chooses invoke this option, then the sequence below will not be accurate.					
H.1.a	Determines the number of offsite lines available.	Per attachment A, determines that three offsite line are available.	—	—	—
H.1.a. (1)	Documents at least two lines available.	Initials step complete.	—	—	—
H.1.a. (2)	Verifies switchyard voltage > 352 KV.	Check Yard voltage on 912-1 panel. Initials step complete.	—	—	—
H.1.b	Verifies XFMR 12 to BUS 13 GCB capable of being closed.	Checks light indication for GCB T12 Feed to Bus 13. Initials step.	—	—	—
H.1.c	Verifies XFMR 12 to Bus 13 GCB is closed.	Initials step H.1.c.(2).	—	—	—
NOTE: Candidate may check voltage on multiple phases of Bus 13 by operating the voltmeter switch on the 901-8 panel, but only one phase is required.					
H.1.d	Verifies Bus 13 voltage 3850 to 4400 VAC by verifying voltmeter select switch is selected to Bus 13 and reading the voltage.	Checks Bus 13 voltage > 3850 and < 4400 VAC. Initials step.	—	—	—
H.1.e	Verifies Busses 13 AND 13-1 TIE GCBs closed.	Checks CLOSED indicating lights indication for bus 13 and 13-1 GCBs (two sets of lights) are lit on 901-8 panel. Initials steps H.1.e (1) and (2).	—	—	—
H.1.g*	●Determines that the OPEN light indication for XFMR 12 to bus 14 is NOT LIT.●	Checks indicating lights for XFMR 12 to bus 14 and recognizes that the green light is not lit and is NOT a burnt-out bulb.	—	—	—
NOTE: The candidate may check the light bulb to determine if it is burnt out.					

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE: If the candidate dispatches an Operator to Bus 14 to check the feed breaker from Transformer 12 to Bus 14, report that: <ul style="list-style-type: none"> • There are NO lights lit on the breaker cubicle, • The breaker appears to be physically cocked in the cubicle. • There is a strong acrid odor coming from the cubicle's upper compartment. 					
H.1.g*	<ul style="list-style-type: none"> • Notifies Unit Supervisor that XFMR 12 feed to bus 14 is NOT available and that the surveillance acceptance criteria are NOT met. • 	Reviews acceptance criteria and determines that criteria G.1.a.(2) is NOT met.	—	—	—
CUE: As the Unit Supervisor, inform the candidate that you will determine what Tech Spec actions (if any) are required. Continue performing the surveillance.					
H.1.h	Verifies XFMR 11 to Bus 14 GCB is closed.	Initials step H.1.h.(1).	—	—	—
H.1.i	Verifies Bus 14 voltage 3850 to 4400 VAC by verifying voltmeter select switch is selected to Bus 14 and reading the voltage.	Checks Bus 14 voltage > 3850 and < 4400 VAC. Initials step.	—	—	—
H.1.j	Verifies Busses 14 AND 14-1 TIE GCBs closed.	Checks CLOSED indicating lights indication for bus 14 and 14-1 GCBs (two sets of lights) are lit on 901-8 panel. Initials steps H.1.j (1) and (2).	—	—	—
H.1.k	Verifies Bus 14-1 voltage 3850 to 4400 VAC by verifying voltmeter select switch is selected to Bus 14-1 and reading the voltage.	Initials step.	—	—	—
H.1.l	Verifies (with information provided by U2 Assist NSO below) that at least ONE of the following sets of conditions is met: H.1.l.(1), (2), (3), or (4).	H.1.l.(1) is NOT met H.1.l.(2) IS met H.1.l.(3) is NOT met H.1.l.(4) IS met	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE: As the U2 Assist NSO, provide the following Unit 2 information as requested: H.1.l.(1) Step (a) is NOT met. Steps (b, c, d, e and g) ARE met. Step (f) is on Unit 1 and should be checked by the candidate H.1.l.(2) Steps (a, b, c, d, and f) are met Step (e) is on Unit 1 and should be checked by the candidate. H.1.l.(3) Step (a) is NOT met. Steps (b, c, d, e and g) ARE met. Step (f) is on Unit 1 and should be checked by the candidate H.1.l.(4) Steps (a, b, c, d, and f) are met Step (e) is on Unit 1 and should be checked by the candidate.					
H.1.m	Verifies (with information provided by U2 Assist NSO below) that Bus 29 is energized to meet the opposite unit requirements by verifying at least ONE of the following sets of conditions is met. H.1.m.(1), (2) (3), or (4).	Requests U2 Assist NSO to provide information for step H.1.m.	—	—	—
CUE: As the U2 Assist NSO, provide the following Unit 2 information as requested: H.1.m.(1) ALL sub steps ARE MET. H.1.m.(2) ALL sub steps ARE MET. H.1.m (3) is NOT MET (Transformer 21 NOT on backfeed) H.1.m.(4) is NOT MET (Transformer 21 NOT on backfeed)					

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
H.2	Determines that step H.2 is NOT applicable.	H.2 not applicable because Unit 1 is in Mode 1.	—	—	—
H.3.a. (1)	(a) Checks Bus 13-1 to Bus 18 breaker (on Bus 13-1) CLOSED.	Initials step.	—	—	—
H.3.a. (1)	(b) Checks Bus 13-1 to Bus 18 breaker (on bus 18) CLOSED.	Initials step.	—	—	—
H.3.a. (1)	(c) Verifies Bus 18 voltage 435 to 515 VAC by verifying voltmeter select switch is selected to Bus 18 and reading the voltage.	Initials step.	—	—	—
H.3.a. (2)	(a) Checks Bus 14-1 to Bus 19 breaker (on Bus 14-1) CLOSED.	Initials step.	—	—	—
H.3.a. (2)	(b) Checks Bus 14-1 to Bus 19 breaker (on bus 19) CLOSED.	Initials step.	—	—	—
H.3.a. (2)	(c) Verifies Bus 19 voltage 435 to 515 VAC by verifying voltmeter select switch is selected to Bus 18 and reading the voltage.	Initials step.	—	—	—
H.3.a. (3)	Verifies Opposite unit AC distribution system.		—	—	—
CUE: As the U2 Assist NSO, provide the following Unit 2 information as requested:					
H.3.a.(3) ALL sub steps (a, b, c, d) ARE MET.					
H.3.b	Perform Attachment D.	Verifies that NLO is performing attachment D. Indicates that he will review it when the NLO is complete.	—	—	—
CUE: Provide the candidate with completed Attachment D AND E (with all steps marked as met).					
H.3.b	Reviews Attachment D and verifies all steps MET.		—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
H.4.	Determines that H.4 does NOT apply since surveillance was NOT satisfactory.	Indicates all of step H.4 as N/A.	—	—	—
H.5.	Completes step H.5 because surveillance was UNSATISFACTORY.	<p>(1) Describes deficiency as XFMR 12 feed to Bus 14 is NOT capable of being closed.</p> <p>(2) Signs and dates “performed by” section.</p>	—	—	—
CUE: As the Unit Supervisor, inform the candidate that you will initiate the IR and record the number at step H.5.(a).2 AND complete the review at step H.5.b					
NOTE: Candidate should inform examiner that the task is complete.					

JPM Stop Time: _____

Operator's Name: _____
Job Title: ☐ RO ☐ SRO

JPM Title: Electrical Distribution Surveillance
JPM Number: RO B Revision Number: 00
Task Number and Title:

K/A Number and Importance:
K/A: 2.1.31 **Rating:** 4.2/3.9

Suggested Testing Environment: Simulator

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☒ Perform
Alternate Path: ☒ Yes ☐ No
SRO Only: ☐ Yes ☒ No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 30 minutes **Actual Time Used:** _____ minutes

References: QCOS 0005-08 Rev. 14

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

- Unit 1 and 2 are at rated conditions.
- QCOS 0005-08, ELECTRICAL DISTRIBUTION BREAKER AND VOLTAGE VERIFICATION is scheduled to be performed on your shift.
- You are the Unit 1 Assist NSO.
- The Unit 2 Assist NSO will provide all Unit 2 information as requested.
- An NLO has been dispatched to perform the in-plant sections of the surveillance and provide them to you when they are complete.

INITIATING CUE

Perform the Control Room portion QCOS 0005-08.

Exelon Nuclear

Job Performance Measure

Determine Isolation Points for a Clearance Order

JPM Number: RO C

Revision Number: 00

Date: 03/14/05

Developed By:	_____	_____
	Instructor	Date
Validated By:	_____	_____
	SME or Instructor	Date
Review By:	_____	_____
	Operations Representative	Date
Approved By:	_____	_____
	Training Department	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

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- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
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- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
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 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date
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SME/Instructor	Date
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SME/Instructor	Date
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Revision Record (Summary)

1. **Revision 00,** This JPM was developed for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. None. This JPM may be completed at any location, provided that the appropriate reference material is available.
2. Ensure the following references are available:
 - P&ID's M-33 Sh. 1 & 2 and M-75 Sh. 1 & 2
 - 4E-Prints 1661G, 2661H
 - QOM's 1-6700-T05, 2-6700-T05
3. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.
4. This completes the setup for this JPM.

INITIAL CONDITIONS

- Mechanical Maintenance has an emergent work package to uncouple the ½ RBCCW pump from the motor, for motor replacement. No draining is required.
- Because of computer problems, PASSPORT IS NOT AVAILABLE, but is expected back later on your shift. The Unit Supervisor has directed you to “be ready” to write a C/O when passport becomes available, later in the shift.

INITIATING CUE

DETERMINE the isolation points, which will be required for the preparation of a Clearance Order that will adequately protect Mechanical Maintenance while they UNCOUPLE the ½-RBCCW pump.

On the attached, worksheet, RECORD the ISOLATION POINT. The required HANG POSITION and any applicable HANG SEQUENCE. Additional will be provided if requested

Give the worksheet to the Unit Supervisor when complete

Provide examinee with: Attached form to document isolation points on.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator’s Use:

UNSAT requires written comments on respective step.

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- Denotes critical elements of a critical step.

Number any comments in the “Comment Number” column on the following pages. Then annotate that comment in the “Comments” section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
NOTE: Isolation points with “●” below must be included for successful completion. Selection of ADDITIONAL components would constitute failure ONLY if manipulation of the additional component would cause a plant transient or equipment damage, Examples include, closing the discharge valve on the running RBCCW pump, or opening the drain valve on an un-isolated portion of the system.					
NOTE: The order in which the candidate <i>lists</i> the isolation points on the attached form is not critical. The SEQUENCE should be used when determining if critical tasks are met.					
	Using QOM's, 4E-Prints and P&ID's, selects isolation points for the ½ RBCCW pump. Records isolation points, position and sequence for each of the following components.				
	½C RBCCW Bus 19 C/S – PTL.	Sequenced before Bus 19 fuse.	___	___	___
	½C RBCCW Bus 29 C/S – PTL.	Sequenced before Bus 29 fuse.	___	___	___
*	●Control power fuse – Removed.● Fuse XJ	Sequenced ●before Bus 19 breaker.●	___	___	___
*	●Bus 19 breaker – Racked Out.●	Sequenced ●before valves.●	___	___	___
*	● Control power fuse – Removed.● Fuse RW	Sequenced ●before Bus 29 breaker.●	___	___	___
*	●Bus 29 breaker – Racked Out.●	Sequenced ●before valves.●	___	___	___
*	●1-3799-66 – Closed.●	Sequenced ●before suction valve, if closed.●	___	___	___
*	●2-3799-66 – Closed.●	Sequenced ●before suction valve, if closed.●	___	___	___

JPM Stop Time: _____

Operator's Name: _____
Job Title: ☐ RO ☐ SRO

JPM Title: Determine Isolation Points for a Clearance Order
JPM Number: RO C Revision Number: 00
Task Number and Title:

K/A Number and Importance:
K/A: 2.2.13 **Rating:** 3.6 / 3.8

Suggested Testing Environment: Simulator or Classroom

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☐ Alternate Path: ☐ Yes ☒ No
☒ Perform ☐ SRO Only: ☐ Yes ☒ No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: ____ minutes **Actual Time Used:** ____ minutes

References:

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

- Mechanical Maintenance has an emergent work package to uncouple the ½ RBCCW pump from the motor, for motor replacement. No draining is required.
- Because of computer problems, PASSPORT IS NOT AVAILABLE, but is expected back later on your shift. The Unit Supervisor has directed you to “be ready” to write a C/O when passport becomes available, later in the shift.

INITIATING CUE

DETERMINE the isolation points, which will be required for the preparation of a Clearance Order that will adequately protect Mechanical Maintenance while they UNCOUPLE the ½-RBCCW pump.

On the attached, worksheet, RECORD the ISOLATION POINT. The required HANG POSITION and any applicable HANG SEQUENCE. Additional will be provided if requested

Give the worksheet to the Unit Supervisor when complete

Clearance Order Worksheet:

FOR EXAMINATION PURPOSES ONLY

Attach additional sheets as necessary

[illegible]

Exelon Nuclear

Job Performance Measure

Review Survey Map and Determine Personnel Exposures

JPM Number: RO D

Revision Number: 00

Date: 03/14/05

Developed By:	_____	_____
	Instructor	Date
Validated By:	_____	_____
	SME or Instructor	Date
Review By:	_____	_____
	Operations Representative	Date
Approved By:	_____	_____
	Training Department	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date

SME/Instructor	Date

SME/Instructor	Date

Revision Record (Summary)

1. **Revision 00,** This JPM was developed for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. None. This JPM may be completed at any location, provided that the appropriate reference material (listed below) is available.
2. Ensure the following reference material is available
 - A copy of RWP #: 10004577 rev. 0.
 - Survey map of the U-1 CLEAN UP HEAT EXCHANGER ROOM with dose rate for these 5 valves AO-1-1239; MO-1201-77; MO-1-1-1201-78; 1-1201-148B; 1-1201-148A at 160 mr/hr and with a dose rate of 120 mr/hr for these valves 1-1201-75; MO-1-1201-133.
 - Survey maps of the U-1 REACTOR BLDG. 2nd floor 623elv. and the U-1 CLEANUP HEAT EXCHANGER ROOM.
3. This completes the setup for this JPM.

INITIAL CONDITIONS

You are assigned to develop the Pre Job Briefing to be given to NLO's who will perform a Clearance Order in the RWCU Heat Exchanger Room. You need to choose two Non-licensed Operators from the list below to perform this task. No dose extensions will be allowed by the Radiation Protection Dept.

The Radiation Protection Department has provided the attached Survey map and RWP to assist you in your planning and the following dose history for five available Non-licensed Operators:

Name	Annual QCNP TEDE Dose	Annual Non-QCNP TEDE Dose	Previous 24 hours DDE dose from all RWPs
Corbin	587 mrem	0 mrem	0 mrem
Kaitlyn	221 mrem	110 mrem	31 mrem
Tyler	320 mrem	0 mrem	8 mrem
Jaali	186 mrem	200 mrem	75 mrem
Blake	422 mrem	0 mrem	43 mrem

Expected stay time to hang cards on the following five valves is 15 minutes. This time was determined from past job history.

AO-1-1239

MO-1201-77

MO-1-1-1201-78

1-1201-148B

1-1201-148A

Expected stay time to hang cards on the following two valves is 15 minutes. This time was determined from past job history.

1-1201-75

MO-1-1201-133

INITIATING CUE

Review the RWP and Survey maps and select two Non-licensed Operators to perform the task. Notify the Unit 1 Unit Supervisor which Non-licensed Operators you select.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

.....

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- Denotes critical elements of a critical step.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

.....

EVALUATOR: The candidate must determine that dose for the task will be 70 mrem and then select two Operators to perform the task they should select Corbin and Tyler as they are the only Operators that can receive the necessary dose to perform this task. See the table below for projected dose + todays dose for each Operator. The calculation for dose projection is also listed below.

Operator Name	Projected dose for task	Operators dose today	Projected + Todays dose = Total dose
Corbin	70 mrem	0 mrem	70 mrem
Kaitlyn	70 mrem	31 mrem	101 mrem
Tyler	70 mrem	8 mrem	78 mrem
Jaali	70 mrem	75 mrem	145 mrem
Blake	70 mrem	43 mrem	113 mrem

Calculation:

- 5 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 160 \text{ mr/hr}=40\text{mrem}$
- 2 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 120 \text{ mr/hr}=30\text{mrem}$
- $40\text{mrem} + 30 \text{ mrem} = 70 \text{ mrem}$ projected dose for clearance

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: <ul style="list-style-type: none"> EVALUATOR: Give the candidate a copy of the following documents: RWP #: 10004577 rev. 0. Survey map of the U-1 CLEAN UP HEAT EXCHANGER ROOM Survey map of the U-1 REACTOR BLDG. 2nd floor 623elv 					
EVALUATOR: The following steps can be performed in any order.					
	Reviews the RWP to determine approved Dose rates.	Reviews the RWP and determines the ED Dose alarm is set for 80 mrem.	—	—	—
EVALUATOR: The next step requires the candidate to correctly read the survey map to determine dose rates. The candidate calculations will be wrong if the candidate chooses smearable contamination count instead of area dose rate.					
	Reviews Survey Maps to determine area dose rates.	Reviews the survey maps and determines area dose rates to be 160 mr for 5 valves and 120 mr for 2 valves.	—	—	—
EVALUATOR: The candidate will need to perform the following calculation to determine total projected dose the NLOs are expected to receive. This calculation is listed here for your reference: <ul style="list-style-type: none"> 5 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 160 \text{ mr/hr}=40\text{mrem}$ 2 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 120 \text{ mr/hr}=30\text{mrem}$ projected dose for clearance - $40\text{mrem} + 30 \text{ mrem} = 70 \text{ mrem}$ 					
	Calculates the projected dose that will be received for the task.	Determines the NLO's will receive 70 mrem on this task.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p>EVALUATOR: In the next step the candidate will compare the projected dose for the task (70 mrem) to the list of available operators and adds the dose they already received today and compares this to the allowable dose from the RWP (80 mrem ED Dose Alarm) and determines only Corbin and Tyler can perform the task.</p> <p>Note: The RWP Dose Approval is 100 mrem/day. This should not be used in planning a job brief as the NLOs must exit the area when the ED Dose Alarm activates at 80 mrem.</p>					
Operator Name	Projected dose for task	Operators dose today	Projected + Todays dose = Total dose		
Corbin	70 mrem	0 mrem	70 mrem		
Kaitlyn	70 mrem	31 mrem	101 mrem		
Tyler	70 mrem	8 mrem	78 mrem		
Jaali	70 mrem	75 mrem	145 mrem		
Blake	70 mrem	43 mrem	113 mrem		
	Compares the projected dose to the list of available operators and allowable dose from the RWP.	Compares the projected dose to the list of available operators and adds the dose they already received and compares this to the allowable dose from the RWP and determines only Corbin and Tyler can perform the task.	—	—	—
	Chooses two NLO's to perform the task.	Selects Corbin and Tyler to perform the task.	—	—	—
	•Notifies the Unit 1 Unit Supervisor of NLO's selected. •	Notifies the Unit 1 Unit Supervisor Corbin and Tyler have been selected to perform the First Hang.	—	—	—
CUE	Candidate should report the task is complete.				

JPM Stop Time: _____

Operator's Name: _____
 Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Review Survey Map and Determine Personnel Exposures
 JPM Number: RO D Revision Number: 00
 Task Number and Title:

K/A Number and Importance:
K/A: 2.3.2 **Rating:** 2.5/2.9

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☐ Perform
 Alternate Path: ☐ Yes ☒ No
 SRO Only: ☐ Yes ☒ No

Time Critical: ☐ Yes ☐ No

Estimated Time to Complete: 15 minutes **Actual Time Used:** _____ minutes

References: RWP 1004577 provided by Rad Protection.

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

You are assigned to develop the Pre Job Briefing to be given to NLO's who will perform a Clearance Order in the RWCU Heat Exchanger Room. You need to choose two Non-licensed Operators from the list below to perform this task. No dose extensions will be allowed by the Radiation Protection Dept.

The Radiation Protection Department has provided the attached Survey map and RWP to assist you in your planning and the following dose history for five available Non-licensed Operators:

Name	Annual QCNP TEDE Dose	Annual Non-QCNP TEDE Dose	Previous 24 hours DDE dose from all RWPs
Corbin	587 mrem	0 mrem	0 mrem
Kaitlyn	221 mrem	110 mrem	31 mrem
Tyler	320 mrem	0 mrem	8 mrem
Jaali	186 mrem	200 mrem	75 mrem
Blake	422 mrem	0 mrem	43 mrem

Expected stay time to hang cards on the following five valves is 15 minutes. This time was determined from past job history.

AO-1-1239

MO-1201-77

MO-1-1-1201-78

1-1201-148B

1-1201-148A

Expected stay time to hang cards on the following two valves is 15 minutes. This time was determined from past job history.

1-1201-75

MO-1-1201-133

INITIATING CUE

Review the RWP and Survey maps and select two Non-licensed Operators to perform the task. Notify the Unit 1 Unit Supervisor which Non-licensed Operators you select.

Exelon Nuclear

Job Performance Measure

Initiate a Fire Impairment Permit Requiring Compensatory Actions

JPM Number: SRO A

Revision Number: 00

Date: 03/15/05

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Approved By: _____
Training Department Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor

Date

SME/Instructor

Date

SME/Instructor

Date

Revision Record (Summary)

1. **Revision 00,** This JPM was developed for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 21 (rst 21).

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. **NOTE:** This JPM may be conducted in any appropriate setting; i.e. simulator, classroom etc.

3. Verify the following for this JPM setup:

- A current revision of OP-MW-201-007 Attachment 1 “Fire Protection Impairment Permit” is filled out with the following errors:
 - 1) Two detectors that make a detection system inoperable (ref. QCAP 1500-01 Attachment A) and the detection system in turn makes the suppression system inoperable (ref. QCAP 1500-01 Attachment C).
 - 2) Fill out section II. “FIRE MARSHAL REVIEW” of the Fire Protection Impairment Permit as follows:
 - a. Mark None in the Fire Watch Performed By: block.
 - b. Check NO in the box for Additional Compensatory Measures.
 - 3) Fill out another Fire Protection Impairment Permit correctly to provide an example to the Evaluator.

4. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Work Execution Center Senior Reactor Operator.
- An Instrument Maintenance Supervisor has requested a permit to allow testing of smoke detectors in the CRD area. The work will continue into the next shift.

INITIATING CUE

Review Fire Protection Impairment Permit 05-05. Approve the permit OR explain the reason(s) why you cannot.

EVALUATOR: Provide candidate with a copy of fire permit 05-05 and OP-MW-201-007 “FIRE PROTECTION SYSTEM”

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

.....

Information For Evaluator’s Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- Denotes critical elements of a critical step.

Number any comments in the “Comment Number” column on the following pages. Then annotate that comment in the “Comments” section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

.....

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
EVALUATOR: Give the candidate a copy of the Fire Protection Impairment Permit and OP-MW-201-007 “FIRE PROTECTION SYSTEM”.					
	Obtains Procedures	Obtains a copy of OP-MW-201-007 and QCAP 1500-01.	—	—	—
EVALUATOR: The candidate may perform the following steps in any order.					
	Reviews Fire Permit.	Reviews Fire Permit to determine what is being impaired. Determines that two detectors will be disconnected (1-4133-101 and 1-4133-102).	—	—	—
Att. A page 2	Determines effect of disconnecting detectors.	Reviews QCAP 1500-01 Att. A page 2 and determines the two detectors if removed will make the detection system inoperable (3 or 4 are required).	—	—	—
<p>EVALUATOR: if the candidate states he cannot approve the permit because of errors, prompt him explain all of the errors on the permit for you.</p> <p>The following errors are built into the permit:</p> <p>The Fire Protection Permit was filled out improperly in section II. “FIRE MARSHAL REVIEW” as follows:</p> <ul style="list-style-type: none"> • None is marked in the “Fire Watch Required:” block (should be marked “hourly with performed by marked as “IMD”) • NO is checked in the box for “Additional Compensatory Measures” (should be marked “YES” and a Description of the additional Compensatory Measures should be included i.e. “backup suppression established or verified.”) <p>The two detectors that were chosen make a detection system inoperable (ref. QCAP 1500-01 Attachment A page 2), and the detection system <i>in turn</i> makes the preaction suppression system inoperable (ref. QCAP 1500-01 Attachment C page2).</p>					

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
Att. C page 2	Determines consequence of making the detection system inoperable.	Reviews QCAP 1500-01 Att. C page 2 (or determines info from QCAP 1500-01 Att. A page 2) and determines that making the <i>detection</i> system inoperable makes the <i>suppression</i> system inoperable.	—	—	—
*D.1.c.(2) *D.2.c.(2)	•Determines hourly fire watch required. •	Reviews QCAP 1500-01 step D.1.c.(2) and D.2.c.(2) and determines an hourly fire watch must be conducted if this permit is approved.	—	—	—
D.2.c.(4)	•Determines backup suppression required. •	Reviews step D.2.c.(4) and determines backup suppression will also be required.			
NOTE: The candidate may choose to correct the provided impairment. This is acceptable.					
	•Reviews the permit for accuracy and Notifies the Evaluator of his conclusions •	The candidate reviews the permit for accuracy in accordance with OP-MW-201-007 “FIRE PROTECTION SYSTEM IMPAIRMENT CONTROL” step 4.4 and determines the fire impairment permit cannot be approved as written because the Fire Protection Permit was filled out improperly in section II. “FIRE MARSHAL REVIEW” None is marked in the “Fire Watch Performed By:” block (should be marked “hourly) and NO is checked in the box for “Additional Compensatory Measures” (should be marked “YES” and a Description of the additional Compensatory Measures should be included i.e. “backup suppression required).	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
EVALUATOR: After the candidate explains why he cannot approve the fire permit as written as the IM Supervisor requesting the permit that you will rewrite the permit and bring it back for approval on the next shift.					
EVALUATOR: The JPM is complete.					

JPM Stop Time: _____

Operator's Name: _____
 Job Title: ☒ SRO

JPM Title: Initiate a Fire Impairment Permit Requiring Compensatory Actions
 JPM Number: SRO A Revision Number: 00
 Task Number and Title:

K/A Number and Importance: **K/A: 2.1.25** **Rating: 3.1**

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☐ Perform
 Alternate Path: ☐ Yes ☒ No
 SRO Only: ☒ Yes ☐ No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 35 minutes **Actual Time Used:** _____ minutes

References: QCAP 1500-01 Rev. 20 & OP-MW-201-007 Rev. 3

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

- You are the Work Execution Center Senior Reactor Operator.
- An Instrument Maintenance Supervisor has requested a permit to allow testing of smoke detectors in the CRD area. The work will continue into the next shift.

INITIATING CUE

Review Fire Protection Impairment Permit 05-05. Approve the permit OR explain the reason(s) why you cannot.

Exelon Nuclear

Job Performance Measure

Verify Reactor Mode Change Requirements

JPM Number: SRO B

Revision Number: 00

Date: 03/14/05

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Approved By: _____
Training Department Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date
SME/Instructor	Date
SME/Instructor	Date

Revision Record (Summary)

1. **Revision 00,** This JPM was modified from JPM ADM-A.1.1-SRO, Quad Cities NRC Exam March, 2000, IAW ILT NRC Exam 03-01, IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. None. This JPM may be completed at any location, provided that the appropriate reference material is available.
2. Ensure the following references are available
 - QCGP 1-1 page 64, signed off through F.6.ah
 - QCGP 1-1 Attachment E completed as follows:
 - All Unit 1 24 month surveillances dated AFTER May 5, 2003.
 - All Unit 1 92 day surveillances dated AFTER Jan 10, 2005 except as noted below.
 - All Unit 2 surveillances marked “N/A”.
 - Unit 1 Division I Low Condenser Vacuum Scram Calibration And Functional Test (N/A for Unit Two) is marked “Jan 8, 2005” (page 143)
 - Unit 1 Division I APRM Downscale Control Rod Block Functional Test (N/A for Unit Two) is marked “N/A” (page 144)
 - A Calendar for 2005.
3. This completes the setup for this JPM.

INITIAL CONDITIONS

- Today is May 5th, 2005.
- You are the Unit 1 Supervisor. Unit 1 is at 10% reactor power, starting up following an outage. QCGP 1-1 is in progress. All procedure steps up to, and including F.6.ah have been completed.

INITIATING CUE

The Shift Manager has directed you to perform QCGP 1-1 step F.6.ai to VERIFY MODE 1 surveillance requirements met, and report to the Shift Manager when complete.

If MODE 1 surveillance requirements are not met, report to the Shift Manager, any action(s) required, to meet the requirements.

Provide the candidate with a working copy of QCGP 1-1 page 64, completed through step F.6.ah, AND a copy of Attachment E with dates filled in as described in setup.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

.....

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- Denotes critical elements of a critical step.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

.....

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
F.6.ai	Reviews Attachment E to ensure all Mode 2 to Mode 1 surveillance requirements are met		—	—	—
NOTE: There are TWO ERRORS on Attachment E that the candidate must identify. The ORDER which the candidate identifies the errors will affect the role-play required of the Evaluator.					
ATT E pg 143*	<ul style="list-style-type: none"> ●Candidate identifies that the Unit 1 Division I Low Condenser Vacuum Scram Calibration And Functional Test was completed on Jan 8, 2004 and that this is TOO LONG AGO, to meet the TS requirement + allowable extension. (92 days + 25%) - 115 days)● 	Recognizes that the test should have been completed no longer ago than Jan 10, 2005.	—	—	—
CUE: IF the error above is reported FIRST: Report, as the Operations Predefine Coordinator, that the date listed is NOT CORRECT. The surveillance was completed on <u>Jan 18, 2005</u>. CHANGE the date to “Jan 18, 2005”, <u>INITIAL AND DATE THE CHANGE</u> and INITIAL THE RIGHT COLLUM. If the error above is reported SECOND: Report, as the Operations Predefine Coordinator, that you have verified that the date listed is CORRECT.					
ATT E pg 144*	<ul style="list-style-type: none"> ●Candidate identifies that the Unit 1 Division I APRM Downscale Control Rod Block Functional Test (N/A for Unit Two) is marked “N/A” but should not be.● (page 144) 		—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE: IF the error above is reported FIRST: IF ASKED, report, as the Operations Predefine Coordinator, that the surveillance was last performed on <u>January 20, 2005</u>. CHANGE the “N/A” to “Jan 20, 2005” then <u>INITIAL AND DATE THE CHANGE</u>, and INITIAL THE RIGHT COLLUM. If the error above is reported SECOND: Report, as the Operations Predefine Coordinator, that the surveillance was last completed on Jan 9, 2005					
			—	—	—
CUE: IF BOTH errors are reported SIMULTANEOUSLY (at the end): Only acknowledge and repeat back the report.					
	The candidate reports to the Shift Manager step F.6.ai can NOT be signed off without first completing the required surveillance.		—	—	—
NOTE: WHICH surveillance is required to be performed will depend on the ORDER that they were reported, and the variable role-play required of the Evaluator. (See above)					
	Candidate reports task complete:		—	—	—

JPM Stop Time: _____

Operator's Name: _____
 Job Title: ☐ SRO

JPM Title: Verify Reactor Mode Change Requirements
 JPM Number: SRO B Revision Number: 00
 Task Number and Title:

K/A Number and Importance:
K/A: 2.1.12 **Rating:** 4.0

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☐ Perform
 Alternate Path: ☐ Yes ☒ No
 SRO Only: ☒ Yes ☐ No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 30 minutes **Actual Time Used:** _____ minutes

References:

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

- Today is May 5th, 2005.
- You are the Unit 1 Supervisor. Unit 1 is at 10% reactor power, starting up following an outage. QCGP 1-1 is in progress. All procedure steps up to, and including F.6.ah have been completed.

INITIATING CUE

The Shift Manager has directed you to perform QCGP 1-1 step F.6.ai to VERIFY MODE 1 surveillance requirements met, and report to the Shift Manager when complete.

If MODE 1 surveillance requirements are not met, report to the Shift Manager, any action(s) required, to meet the requirements.

Exelon Nuclear

Job Performance Measure

Review Abnormal Component Position Sheet

JPM Number: SRO C

Revision Number: 0

Date: 03/14/05

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Approved By: _____
Training Department Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date
----------------	------

SME/Instructor	Date
----------------	------

SME/Instructor	Date
----------------	------

Revision Record (Summary)

Revision 00, This JPM was developed for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. None. This JPM may be completed at any location, provided that the appropriate reference material (listed below) is available.
2. Ensure the following JPM material and references are available
 - OP-AA-108-101 Attachment 2, ACPS 05-05 filled out as follows:
 - ACPS#: 05-05
 - Station: Quad
 - Unit Two
 - System RHRSW
 - Action Required for Removal: Place CO
 - The following SIX Yes/No questions: Circle "N"
 - SRO Approval Signed, Date (today) Time (now)
 - SRO Peer Check Blank
 - SRO Approval for Restoration: Blank

EPN	EST Number	Normal Position	Abnormal (Desired) Position
2-1001-1A		Open	Closed
2-1001-3A		Open	Closed
2-1001-4A		Open	Closed
2-1001-186A		Closed	Closed
2-1099-100A		Closed & capped	Uncapped & open

- OP-AA-108-101 Attachment 3, Numbering Log, filled out with 05-01 thru 05-04 completed AND lined out with color highlighter indicating completion. For 05-05 write "Quad Cities, 2, RHRSW, Isolate 2A RHRSW pump seal leak"
3. This completes the setup for this JPM.

INITIAL CONDITIONS

Unit 2 is Operating at rated power. You are the Unit 2 Supervisor on midnight shift. During rounds, the U2 NLO reported a large seal leak from the 2A RHRSW High Pressure Pump outboard seal. You have declared the 2A RHRSW pump INOPERABLE and directed the NSO to place it in PTL.

ALL Tech Spec required LCO action statements have been entered. This is the ONLY LCO affecting Unit 2.

IR #123456 has been generated, documenting the unplanned LCO entry and requesting Work Request generation to repair the leak.

The Shift Manager has directed the pump isolated, using Equipment Status Tags (EST) until dayshift, when a Clearance Order can be prepared and placed. The Shift Technical Advisor (STA) has prepared Abnormal Component Position Sheet (ACPS) 05-05 per OP-AA-108-101 to isolate the leak. He has also prepared the tags to be hung in the plant. The ACPS needs an SRO Peer Check.

For this exercise, assume that using an APCS and EST tags has been determined to be appropriate, and that Engineering concurs that a 10CFR50.59 review is NOT required. (1st 6 questions are, in fact “No”)

INITIATING CUE

Perform the SRO Peer Check of ACPS 05-05 per OP-AA-108-101. If you approve the ACPS, notify the NSO who will coordinate the pre-job brief and dispatch of the Non Licensed Operators. If you do NOT approve, indicate why not.

Provide examinee with: OP-AA-108-101 Attachment 2 (ACPS 05-05)
OP-AA-108-101 Attachment 3 (Numbering Log)
OP-AA-108-101
M-79

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator’s Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- Denotes critical elements of a critical step.

Number any comments in the “Comment Number” column on the following pages. Then annotate that comment in the “Comments” section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local

operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

.....

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
	Reviews OP-AA-108-101 Attachment 2		—	—	—
EVALUATOR: Candidate may report the errors and omissions below in ANY ORDER					
*	●Candidate reports that he / she CAN NOT approve the ACPS●		—	—	—
*	<p>Candidate Reports the following omissions and errors</p> <p>The ACPS does not contain the pump ●Control Switch●, breaker or control power fuses.</p> <p>Only SOME of the EST tags have the ACPS number (05-05) on them as required.</p> <p>●Tag # 10490 is incorrectly prepared for <u>2-1001-2A</u> instead of 2-1001-3A●</p> <p>●ACPS incorrectly CLOSES <u>2-1001-4A</u> & <u>2-1001-186A</u> which would render the <u>ENTIRE LOOP</u> of RHRSW INOPERABLE, instead of just the A pump●</p> <p>ACPS does not ensure pump depressurization, because ONLY 2-1099-100A is opened. 2-1099-96 must also be opened to provide drain path</p>		—	—	—
			—	—	—
EVALUATOR: WHEN the candidate has indicated ALL the reasons why he / she can not authorize the ACPS, indicate that this JPM is complete.					

JPM Stop Time: _____

Operator's Name: _____
 Job Title: ☐ NLO ☐ RO ☒ SRO ☐ STA ☐ SRO Cert

JPM Title: Review Abnormal Component Position Sheet
 JPM Number: SRO C Revision Number: 0
 Task Number and Title: **LNF-PGCM** - Operational Configuration Control

K/A Number and Importance:
K/A: 2.2.11 **Rating:** 3.4

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☒ Perform
 Alternate Path: ☐ Yes ☒ No
 SRO Only: ☒ Yes ☐ No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 20 minutes **Actual Time Used:** _____ minutes

References:

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

Unit 2 is Operating at rated power. You are the Unit 2 Supervisor on midnight shift. During rounds, the U2 NLO reported a large seal leak from the 2A RHRSW High Pressure Pump outboard seal. You have declared the 2A RHRSW pump INOPERABLE and directed the NSO to place it in PTL.

ALL Tech Spec required LCO action statements have been entered. This is the ONLY LCO affecting Unit 2.

IR #123456 has been generated, documenting the unplanned LCO entry and requesting Work Request generation to repair the leak.

The Shift Manager has directed the pump isolated, using Equipment Status Tags (EST) until dayshift, when a Clearance Order can be prepared and placed. The Shift Technical Advisor (STA) has prepared Abnormal Component Position Sheet (ACPS) 05-05 per OP-AA-108-101 to isolate the leak. He has also prepared the tags to be hung in the plant. The ACPS needs an SRO Peer Check.

For this exercise, assume that using an APCS and EST tags has been determined to be appropriate, and that Engineering concurs that a 10CFR50.59 review is NOT required. (1st 6 questions are, in fact “No”)

INITIATING CUE

Perform the SRO Peer Check of ACPS 05-05 per OP-AA-108-101. If you approve the ACPS, notify the NSO who will coordinate the pre-job brief and dispatch of the Non Licensed Operators. If you do NOT approve, indicate why not.

Exelon Nuclear

Job Performance Measure

Review Survey Map and Determine Personnel Exposures

JPM Number: SRO D

Revision Number: 00

Date: 03/14/05

Developed By:	_____	_____
	Instructor	Date
Validated By:	_____	_____
	SME or Instructor	Date
Review By:	_____	_____
	Operations Representative	Date
Approved By:	_____	_____
	Training Department	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor

Date

SME/Instructor

Date

SME/Instructor

Date

Revision Record (Summary)

1. **Revision 00,** This JPM was developed for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

1. None. This JPM may be completed at any location, provided that the appropriate reference material (listed below) is available.
2. Ensure the following reference material is available
 - A copy of RWP #: 10004577 rev. 0.
 - Survey map of the U-1 CLEAN UP HEAT EXCHANGER ROOM with dose rate for these 5 valves AO-1-1239; MO-1201-77; MO-1-1-1201-78; 1-1201-148B; 1-1201-148A at 160 mr/hr and with a dose rate of 120 mr/hr for these valves 1-1201-75; MO-1-1201-133.
 - Survey maps of the U-1 REACTOR BLDG. 2nd floor 623elv. and the U-1 CLEANUP HEAT EXCHANGER ROOM.
3. This completes the setup for this JPM.

INITIAL CONDITIONS

You are assigned to develop the Pre Job Briefing to be given to NLO's who will perform a Clearance Order in the RWCU Heat Exchanger Room. You need to choose two Non-licensed Operators from the list below to perform this task. No dose extensions will be allowed by the Radiation Protection Dept.

The Radiation Protection Department has provided the attached Survey map and RWP to assist you in your planning and the following dose history for five available Non-licensed Operators:

Name	Annual QCNP TEDE Dose	Annual Non-QCNP TEDE Dose	Previous 24 hours DDE dose from all RWPs
Corbin	587 mrem	0 mrem	0 mrem
Kaitlyn	221 mrem	110 mrem	31 mrem
Tyler	320 mrem	0 mrem	8 mrem
Jaali	186 mrem	200 mrem	75 mrem
Blake	422 mrem	0 mrem	43 mrem

Expected stay time to hang cards on the following five valves is 15 minutes. This time was determined from past job history.

AO-1-1239

MO-1201-77

MO-1-1-1201-78

1-1201-148B

1-1201-148A

Expected stay time to hang cards on the following two valves is 15 minutes. This time was determined from past job history.

1-1201-75

MO-1-1201-133

INITIATING CUE

Review the RWP and Survey maps and select two Non-licensed Operators to perform the task. Notify the Unit 1 Unit Supervisor which Non-licensed Operators you select.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

.....

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- Denotes critical elements of a critical step.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

.....

EVALUATOR: The candidate must determine that dose for the task will be 70 mrem and then select two Operators to perform the task they should select Corbin and Tyler as they are the only Operators that can receive the necessary dose to perform this task. See the table below for projected dose + todays dose for each Operator. The calculation for dose projection is also listed below.

Operator Name	Projected dose for task	Operators dose today	Projected + Todays dose = Total dose
Corbin	70 mrem	0 mrem	70 mrem
Kaitlyn	70 mrem	31 mrem	101 mrem
Tyler	70 mrem	8 mrem	78 mrem
Jaali	70 mrem	75 mrem	145 mrem
Blake	70 mrem	43 mrem	113 mrem

Calculation:

- 5 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 160 \text{ mr/hr}=40\text{mrem}$
- 2 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 120 \text{ mr/hr}=30\text{mrem}$
- $40\text{mrem} + 30 \text{ mrem} = 70 \text{ mrem}$ projected dose for clearance

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
NOTE: <ul style="list-style-type: none"> EVALUATOR: Give the candidate a copy of the following documents: RWP #: 10004577 rev. 0. Survey map of the U-1 CLEAN UP HEAT EXCHANGER ROOM Survey map of the U-1 REACTOR BLDG. 2nd floor 623elv 					
EVALUATOR: The following steps can be performed in any order.					
	Reviews the RWP to determine approved Dose rates.	Reviews the RWP and determines the ED Dose alarm is set for 80 mrem.	—	—	—
EVALUATOR: The next step requires the candidate to correctly read the survey map to determine dose rates. The candidate calculations will be wrong if the candidate chooses smearable contamination count instead of area dose rate.					
	Reviews Survey Maps to determine area dose rates.	Reviews the survey maps and determines area dose rates to be 160 mr for 5 valves and 120 mr for 2 valves.	—	—	—
EVALUATOR: The candidate will need to perform the following calculation to determine total projected dose the NLOs are expected to receive. This calculation is listed here for your reference: <ul style="list-style-type: none"> 5 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 160 \text{ mr/hr}=40\text{mrem}$ 2 valve clearance projected dose = $15 \text{ min}/60 \text{ min}=1/4$ or $.25 \times 120 \text{ mr/hr}=30\text{mrem}$ projected dose for clearance - $40\text{mrem} + 30 \text{ mrem} = 70 \text{ mrem}$ 					
	Calculates the projected dose that will be received for the task.	Determines the NLO's will receive 70 mrem on this task.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p>EVALUATOR: In the next step the candidate will compare the projected dose for the task (70 mrem) to the list of available operators and adds the dose they already received today and compares this to the allowable dose from the RWP (80 mrem ED Dose Alarm)and determines only Corbin and Tyler can perform the task.</p> <p>Note: The RWP Dose Approval is 100 mrem/day. This should not be used in planning a job brief as the NLOs must exit the area when the ED Dose Alarm activates at 80 mrem.</p>					
Operator Name	Projected dose for task	Operators dose today	Projected + Todays dose = Total dose		
Corbin	70 mrem	0 mrem	70 mrem		
Kaitlyn	70 mrem	31 mrem	101 mrem		
Tyler	70 mrem	8 mrem	78 mrem		
Jaali	70 mrem	75 mrem	145 mrem		
Blake	70 mrem	43 mrem	113 mrem		
	Compares the projected dose to the list of available operators and allowable dose from the RWP.	Compares the projected dose to the list of available operators and adds the dose they already received and compares this to the allowable dose from the RWP and determines only Corbin and Tyler can perform the task.	—	—	—
	Chooses two NLO's to perform the task.	Selects Corbin and Tyler to perform the task.	—	—	—
	•Notifies the Unit 1 Unit Supervisor of NLO's selected.•	Notifies the Unit 1 Unit Supervisor Corbin and Tyler have been selected to perform the First Hang.	—	—	—
CUE	Candidate should report the task is complete.				

JPM Stop Time: _____

Operator's Name: _____
 Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Review Survey Map and Determine Personnel Exposures
 JPM Number: SRO D Revision Number: 00
 Task Number and Title:

K/A Number and Importance:
K/A: 2.3.2 **Rating:** 2.5/2.9

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☒ Perform
 Alternate Path: ☐ Yes ☒ No
 SRO Only: ☐ Yes ☒ No

Time Critical: ☐ Yes ☐ No

Estimated Time to Complete: 15 minutes **Actual Time Used:** _____ minutes

References: RWP 1004577 provided by Rad Protection.

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

You are assigned to develop the Pre Job Briefing to be given to NLO's who will perform a Clearance Order in the RWCU Heat Exchanger Room. You need to choose two Non-licensed Operators from the list below to perform this task. No dose extensions will be allowed by the Radiation Protection Dept.

The Radiation Protection Department has provided the attached Survey map and RWP to assist you in your planning and the following dose history for five available Non-licensed Operators:

Name	Annual QCNP TEDE Dose	Annual Non-QCNP TEDE Dose	Previous 24 hours DDE dose from all RWPs
Corbin	587 mrem	0 mrem	0 mrem
Kaitlyn	221 mrem	110 mrem	31 mrem
Tyler	320 mrem	0 mrem	8 mrem
Jaali	186 mrem	200 mrem	75 mrem
Blake	422 mrem	0 mrem	43 mrem

Expected stay time to hang cards on the following five valves is 15 minutes. This time was determined from past job history.

AO-1-1239

MO-1201-77

MO-1-1-1201-78

1-1201-148B

1-1201-148A

Expected stay time to hang cards on the following two valves is 15 minutes. This time was determined from past job history.

1-1201-75

MO-1-1201-133

INITIATING CUE

Review the RWP and Survey maps and select two Non-licensed Operators to perform the task. Notify the Unit 1 Unit Supervisor which Non-licensed Operators you select.

Exelon Nuclear

Job Performance Measure

Determine EP Classification and Prepare NARS Form

JPM Number: SRO E

Revision Number: 00

Date: 03/14/05

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Approved By: _____
Training Department Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor

Date

SME/Instructor

Date

SME/Instructor

Date

Revision Record (Summary)

1. **Revision 00,** This JPM has been modified from SRO-006-I for ILT NRC Exam 03-01 IAW NUREG 1021, Rev 9.

SIMULATOR SETUP INSTRUCTIONS

Candidate to be provided (or have access to) EP-AA-1006, Radiological Emergency Plan Annex for Quad Cities Station (EAL Manual) and a copy of completed Utility Message #1 NARS form.

Page 1 (front)

Utility Message No. 1

State Message No. N/A

Status.....[B] Drill/Exercise

Block #2. Station.....[F] Quad Cities

Block #3. Onsite Condition.....[B] Alert

Block #4. Accident Classified:Time:14:30

.....Date: today

.....EAL# = FA1

Block #4. Accident Terminated:Time:=N/A

.....Date:=N/A

Block #5. Release Status.....[A] None

Block #6. Type of Release[A] Not Applicable

Block #7. Wind Direction74 degrees

Block #8. Wind Speed:[A] Meters/Sec 3.46

.....[B] Miles/Hr 7.64

Block #9. Recommended Actions....[A] None

Block #10. Additional Information...None

Verified with[Joe Sta (or other signature)]

Approved by.....[Mark Jensen (or other signature)]

Block #11Transmitted By [Joe Sta (or other)]

 Phone Number[309-227-2301]

 Time/Date[1442 / today]

Page 2 (back)

In the Quad Cities box check all Initial and Final boxes under NARS Code 43

INITIAL CONDITIONS

- Unit 1 was operating at 100% rated power when, at time 1400, a transient occurred that caused an automatic scram. The Emergency Plan was activated and an Alert (FA1) was classified at time 1430 due to high drywell radiation of 140 R/hr.
- NARS notification, Utility Message No. 1 was made at 14:42
- ENS notification is in progress.
- TSC and OSC activation is in progress. The TSC is NOT YET ready to take command and control.
- You are the Shift Emergency Director.
- **It is now 1500**
 - Drywell radiation is 7500 R/hr.
 - All other containment parameters are normal.

There has been NO CHANGE in release status OR meteorological data, since Utility Message No. 1 was sent.

This is a DRILL, NOT an actual event.

This JPM IS time critical.

INITIATING CUE

As the Shift Emergency Director, DETERMINE if a change in Emergency Classification is required.

- IF a change in classification IS REQUIRED, THEN PREPARE the necessary forms that would allow another SRO to complete the required State and Local Notifications.
- IF a change in classification IS NOT REQUIRED, THEN INDICATE in the space below, what Drywell Radiation Condition changes WOULD require a change in Emergency Classification.

Provide examinee with: Candidate needs to have access to Emergency Plan procedures and blank NARS form as found in the simulator.
Copy of EP-MW-114-100 Attachment 1 “Nuclear Accident Reporting System” (NARS) Utility Message #1 form completely filled out for an Alert, as indicated in setup instructions.

Fill in the JPM Start Time when the student declares the new classification.

.....

Information For Evaluator's Use

UNSAT requires written comments on respective step.

*Denotes critical steps.

Denotes critical elements of a critical step.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

This JPM contains TWO time-critical tasks that are sequential.

The FIRST time critical task is to declare the new EAL classification within 15 minutes after the candidate acknowledges the initiating cue.

The SECOND time critical task is to complete necessary forms to allow notification of state and local agencies to begin within 15 minutes after declaring the new EAL classification.

.....

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
	Refers to EP-AA-1006 Quad Cities Annex				
	Determines that the increase in DW radiation requires upgrading the classification to a Site Area Emergency	Recognizes that the conditions for FS1 are met, because Drywell Radiation levels indicate a loss of both fuel cladding (Graph 2.c) and Reactor coolant (Graph 3.c)			
NOTE: The FIRST time-critical task completes upon declaration of the Site Area Emergency per EAL FS1.					
*	•Declares a Site Area Emergency within 15 minutes •	Drywell Radiation Levels indicate loss of RCS and Fuel Clad but NOT a potential loss of containment. (FS1)	—	—	—
Record time of declaration _____ (END of <u>1st</u> time-critical task, START of <u>2nd</u>)					
1.3.D	References EP-AA-112-100-F-01, Shift Emergency Director Checklist	INITIATE required State / Local classification as required per the Notifications procedure.			
	Refers to EP-MW-114-100 MWROG OFFSITE NOTIFICATIONS as necessary to fill out NARS form.		—	—	—
EVALUATOR: When candidate locates the NARS form (if administered in the simulator, or indicates that he / she needs a NARS form, if administered elsewhere, Give the candidate a blank copy of the NARS form.					
NARS form	Fills out Utility Message Number.	Records Utility Message #2.	—	—	—
NARS form	Fills out State Message Number.	Records N/A for State Message Number.	—	—	—
Block #1	Fills out block #1 information regarding Status.	Records [B] Drill/Exercise in block #1.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
Block #2	Fills out block #2 information regarding Station.	Records [F] Quad Cities in block #2.	—	—	—
*Block #3	●Fills out block #3 information regarding onsite condition. ●	Records [C] Site Area Emergency.	—	—	—
Block #4	Fills out block #4 information regarding Accident Classified & Accident Terminated.	Records Accident Classification as Time= time from above Date= today's date EAL=FS1 Records N/A for Accident Terminated Time and Date.	—	—	—
*Block #5	●Fills out block #5 information regarding Release Status. ●	Records [A] None.	—	—	—
*Block #6	●Fills out block #6 information regarding Type of Release. ●	Records [A] N/A.	—	—	—
EVALUATOR: Candidate may take information from initial conditions that state “There has been NO Change in release status, or meteorological data” OR they may look up the data on the station computer to complete Blocks #7 and 8. If they choose to look up real data, when they find the real data, give them the following cue “Wind Direction is 74 degrees with speed of 7.64 miles per hour/3.46 meters per second”.					
Block #7	Fills out block #7 information regarding Wind Direction.	Records 74 degrees.	—	—	—
Block #8	Fills out block #8 information regarding Wind Speed.	Records [A] Meters/Sec = 3.46 and [B] Miles/Hr = 7.64	—	—	—
*Block #9	●Fills out block #9 information regarding Recommended Actions.●	Records [A] None	—	—	—
Block #10	Fills out block #10 Additional Information.	Records NONE.	—	—	—
NARS form	●Submits NARS form for verification within 15 minutes●	Submits NARS form for verification.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
Evaluator: Record time NARS form submitted for verification. _____ (END of second time-critical task.)					
CUE: When candidate submits the NARS form for verification, STATE that the form is acceptable for transmittal (regardless of whether it actually is). The candidate should inform you the task is complete.					

JPM Stop Time: _____

Operator's Name: _____
 Job Title: ☐ SRO

JPM Title: Determine EP Classification and Prepare NARS Form
 JPM Number: SRO E Revision Number: 00
 Task Number and Title: **S-GSEP-P01** Given an event, classify the event and activate the GSEP organization in accordance with EP-AA-111 and EP-AA-112.

K/A Number and Importance:
K/A: 2.4.41 **Rating:** 4.1

Suggested Testing Environment: Simulator

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant

Testing Method: ☐ Simulate ☒ Perform
 Alternate Path: ☐ Yes ☒ No
 SRO Only: ☒ Yes ☐ No

Time Critical: ☒ Yes ☐ No 15 minutes to declare, AND 15 minutes from time of declaration to notification of state and local authorities.

Estimated Time to Complete: 12 minutes **Actual Time Used:** _____ minutes

References: EP-AA-111 r9, EMERGENCY CLASSIFICATION AND PROTECTIVE ACTION RECOMMENDATIONS.
 EP-AA-1006 r19 RADIOLOGICAL EMERGENCY PLAN ANNEX FOR QUAD CITIES STATION (EAL MANUAL)
 EP-AA-112-100 r7, CONTROL ROOM OPERATIONS
 EP-MW-114-100 r5, MIDWEST REGION OFFSITE NOTIFICATIONS

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

- Unit 1 was operating at 100% rated power when, at time 1400, a transient occurred that caused an automatic scram. The Emergency Plan was activated and an Alert (FA1) was classified at time 1430 due to high drywell radiation of 140 R/hr.
- NARS notification, Utility Message No. 1 was made at 14:42
- ENS notification is in progress.
- TSC and OSC activation is in progress. The TSC is NOT YET ready to take command and control.
- You are the Shift Emergency Director.
- **It is now 1500**
 - Drywell radiation is 7500 R/hr.
 - All other containment parameters are normal.

There has been NO CHANGE in release status OR meteorological data, since Utility Message No. 1 was sent.

This is a DRILL, NOT an actual event.

This JPM IS time critical.

INITIATING CUE

As the Shift Emergency Director, DETERMINE if a change in Emergency Classification is required.

- IF a change in classification IS REQUIRED, THEN PREPARE the necessary forms that would allow another SRO to complete the required State and Local Notifications.
- IF a change in classification IS NOT REQUIRED, THEN INDICATE in the space below, what Drywell Radiation Condition changes WOULD require a change in Emergency Classification.