Exelon Generation.

Job Performance Measure

Control Rod Difficult to Withdraw – RD Pump Trip (Alternate Path)

JPM Number: ___JPM562___

Revision Number: ___00___

Date: ___8/21/2020___

Developed By:	___Bill Kiser___	/	_____	___8/21/20___
		Instructor: Print / Sign		Date

Reviewed By:	___Brian Steele___	/	_____	___3/02/21___
		SME or Instructor: Print / Sign		Date

Reviewed By:	___Tim Windingland___	/	_____	___3/11/21___
		Operations Representative: Print / Sign		Date

Approved By:	___Matthew Beeler___	/	_____	___3/11/21___
		Training Department: Print / Sign		Date

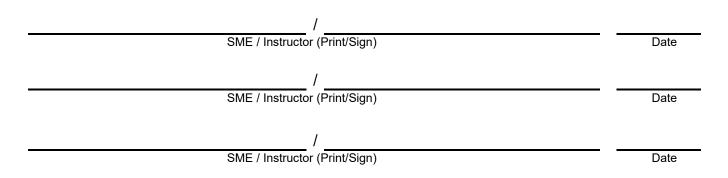SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other) _____

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified. _____

6. Task standards identified and verified by instructor or SME review. _____

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____

9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: CPS 3304.01   Revision: 38c
   Procedure: CPS 5068.03   Revision: 26a
   Procedure: CPS 5068.04   Revision: 26a
   Procedure: _____   Revision: _____

10. Verify cues both verbal and visual are free of conflict. _____

11. Verify performance time is accurate. _____

12. If the JPM cannot be performed as written with proper responses, then revise the JPM. _____

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

Revision Record (Summary)

Revision #	Summary
00	8/21/20 – New JPM.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM562 per step 2)

    a. Initialize to any suitable IC with power ascension in progress IAW CPS 3005.01 Unit Power Changes (requiring rod withdrawal).

    b. Ensure CRD Pump B is in operation with Drive Water Diff Pressure (C11-R602) reading 250 psid.

    c. Freeze the simulator.

    d. Save to a different IC if JPM is being used more than once. IC-216 is saved for the ILT 19-1 NRC exam (PW 13852).

    e. This completes the setup for this JPM.

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

2. JPM Administration

    a. Reset to the IC saved after performing step 1 above. IC-216 is saved for the ILT 19-1 NRC exam (PW 13852).

    b. Open and execute Simulator Lesson Plan ILT 19-1 NRC Exam JPMs LP.

    c. Place a flag on annunciator 5005-2K SRM Period.

    d. Place the Drive Mode Selector Switch in Single Drive.

    e. Release JPM562 which will insert malfunction YP_XMFTB_4853 (CRD Pump 'B' Trip) when CRD Press Control Valve (1C11-F003) is taken to the CLOSE position.

    f. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.

    g. Save to a different IC if required.

    h. Freeze the simulator.

INITIAL CONDITIONS

You are the extra RO.

The plant is operating at 84% power.

Power ascension is in progress IAW CPS 3005.01 Unit Power Changes.

- The 'A' RO attempted to withdraw Rod 04-29, but it failed to change position.

- The 'A' RO has recommended to the CRS that they follow the guidance in CPS 3304.01 Control Rod Hydraulic And Control (RD), section 8.3.4 Control Rod Difficult To Withdraw.

INITIATING CUE

The CRS has directed you to coordinate with the 'A' RO and raise Drive Water Differential Pressure (D/P) IAW CPS 3304.01 Control Rod Hydraulic And Control (RD), section 8.3.4 Control Rod Difficult To Withdraw.

You do not have permission to exceed 500 psid.

The 'A' RO has requested that you raise Drive Water D/P to 300 psid and inform him/her when complete.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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.
- -

Exelon Generation.

JPM Start Time: _____ JPM Sequence #: _____ of _____

Task Standard:

The examinee will attempt to raise Drive Water Differential Pressure (D/P) in response to the failure of a control rod to withdraw.

- the operating Control Rod Drive (CRD) pump will trip.
- the examinee will be required to start the standby CRD pump in order to successfully raise Drive Water D/P.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet** and the following: • CPS 3304.01 Control Rod Hydraulic And Control (RD)					
*01	8.3.4.2.b Raises Drive Water Differential Pressure (D/P).	Examinee attempts to throttle 1C11-F003, CRD Pressure Control Valve to achieve the desired pressure. • **Momentarily takes CRD Pressure Control Valve (1C11-F003) to CLOSE.**	☐	☐	____
02	Responds to trip of operating CRD pump.	Examinee: • observes trip indications: ○ CRD Pump B Red light OFF, Green & Amber lights ON ○ CRD Drive Water Pump Auto Trip (5068-3B) ○ Charging Water Pressure Low (5068-4B) • Refers to Alarm Response Procedures • Proceeds to CPS 3304.01, Section 8.3.6 • Dispatches Equipment Operator to investigate trip.	☐	☐	____

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	If the examinee: • reports receiving annunciators 5068-3B & 4B, 5006-1G, or 5000-3B, acknowledge the report. • recommends starting the standby CRD pump, acknowledge the recommendation. • requests a field operator, respond one is available via phone.				
	ALTERNATE PATH BEGINS				
*03	8.3.6.3 Isolates CRD Drive Water flow.	**Examinee closes CRD Drive Water Flow Control Valve (1C11-F002B):** • **Places CRD Flow Control station (1C11-R600) in MANUAL (M ← A)** • **Depresses the CLOSE pushbutton until output lowers to 0 gpm.**	☐	☐	___
CUE	If the examinee reports applicable ITS LCOs or required actions for lowering system pressures, acknowledge the report.				
*04	8.3.6.6 Starts the standby CRD Aux Oil Pump.	**Examinee starts the standby CRD Aux Oil Pump by placing the 'A' Aux Oil Pump switch to START then spring release to AUTO.**	☐	☐	___
NOTE:	Step 05 below is considered a critical step ONLY if the examinee fails to perform step 03.				
*05	8.3.6.8 Shuts the standby CRD pump Discharge Check Valve.	**Examinee directs the field operator to close the CRD Pump A Discharge Check Valve (1C11-F014A).**	☐	☐	___

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	**Field Operator** – acknowledge the request, release "**Shut 1C11-F014A**" and report, "1C11-F014A is SHUT".				
06	8.3.6.9 Verifies standby CRD Aux Oil Pump operation.	Examinee verifies the 'A' Aux Oil Pump operation: • Red light ON, Green light OFF. • Oil pressure is ≥ 3 psig.	☐	☐	___
CUE	**Field Operator** – when requested, report "CRD 'A' oil pressure is > 3 psig".				
NOTE:	The examinee may or may <u>not</u> allow the CRD Aux Oil Pump to run ~ 1 minute prior to starting the standby CRD pump. This is an interpretation of "IF conditions permit" and either way is acceptable.				
*07	8.3.6.10 – 8.3.6.11 Starts the standby CRD Pump. Verifies standby CRD operation.	**Examinee:** • **starts the 'A' CRD Pump by placing the CRD Pump A (1C11-C001A) switch to START then spring release to AUTO** • verifies: o Red light ON, Green light OFF. o Aux Oil Pump has auto stopped.	☐	☐	___
NOTE:	Step 08 below is considered a critical step ONLY if the examinee fails to perform step 03.				
*08	8.3.6.12 Opens the standby CRD pump Discharge Check Valve.	**Examinee directs the field operator the OPEN Pump A Discharge Check Valve (1C11-F014A).**	☐	☐	___
CUE	**Field Operator** – acknowledge the request, release "**Open 1C11-F014A**" and report, "1C11-F014A is OPEN".				

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*09	8.3.6.13 – 8.3.6.15 Establishes CRD Drive Water flow.	**Examinee opens CRD Drive Water Flow Control Valve (1C11-F002B):** • **Depresses the OPEN pushbutton until output rises to 41 to 49 gpm as indicated on CRD Hydraulics Flow Indicator (C11-R606).** • **Adjusts tape setpoint to null out deviation.** • **Places CRD Flow Control station (1C11-R600) in AUTO (M → A).**	☐	☐	___
10	8.3.6.16 – 8.3.6.23 Directs Equipment Operator to complete local actions.	Examinee directs Equipment Operator to complete the (remaining) local actions of CPS 3304.01 for a Loss of CRD Pump (sub steps 16 – 23).	☐	☐	___
CUE	**Field Operator** – if directed to complete local actions at the 'A' CRD pump, acknowledge the request and report, "I will complete the remaining steps of CPS 3304.01 Control Rod Hydraulic and Control (RD), section 8.3.6 Loss of CRD Pump".				
*11	8.3.4 Raises Drive Water D/P as necessary to achieve 300 psid.	**If necessary, examinee attempts to throttle 1C11-F003, CRD Press Control Valve to achieve the desired pressure.** **Momentarily takes CRD Pressure Control Valve (1C11-F003) to CLOSE.**	☐	☐	___
CUE	When Drive Water D/P has been raised to 300 psid, cue the examinee that the JPM is complete.				

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Control Rod Difficult to Withdraw – RD Pump Trip (Alternate Path)
JPM Number: JPM562   Revision Number: 00
Task Number and Title: 330401.36 Respond to Control Rod Difficult To Withdraw.
Task Standard: The examinee will attempt to raise Drive Water Differential Pressure (D/P) in response to the failure of a control rod to withdraw.

- the operating Control Rod Drive (CRD) pump will trip.
- the examinee will be required to start the standby CRD pump in order to successfully raise Drive Water D/P.

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
201001	A2.01	3.2	3.3

Suggested Testing Environment: Simulator
Alternate Path: ☒ Yes ☐No   SRO Only: ☐Yes ☒No   Time Critical: ☐Yes ☒No
Reference(s):

Procedure: CPS 3304.01   Revision: 38c
CPS 5068.03   Revision: 26a
CPS 5068.04   Revision: 26a

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: __15__ minutes   **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily?   ☐Yes   ☐No

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

You are the extra RO.

The plant is operating at 84% power.

Power ascension is in progress IAW CPS 3005.01 Unit Power Changes.

- The 'A' RO attempted to withdraw Rod 04-29, but it failed to change position.

- The 'A' RO has recommended to the CRS that they follow the guidance in CPS 3304.01 Control Rod Hydraulic And Control (RD), section 8.3.4 Control Rod Difficult To Withdraw.

INITIATING CUE

The CRS has directed you to coordinate with the 'A' RO and raise Drive Water Differential Pressure (D/P) IAW CPS 3304.01 Control Rod Hydraulic And Control (RD), section 8.3.4 Control Rod Difficult To Withdraw.

You do not have permission to exceed 500 psid.

The 'A' RO has requested that you raise Drive Water D/P to 300 psid and inform him/her when complete.

Exelon Generation.

Job Performance Measure

TDRFP 'B' Startup (Alternate Path)

JPM Number: <u>JPM530</u>

Revision Number: <u>02</u>

Date: <u>8/21/2020</u>

Developed By:	<u>Bill Kiser</u> / Instructor: Print / Sign	<u>_____</u>	<u>8/21/20</u> Date
Reviewed By:	<u>Mark McCleary</u> / SME or Instructor: Print / Sign	<u>_____</u>	<u>3/04/21</u> Date
Reviewed By:	<u>Tim Windingland</u> / Operations Representative: Print / Sign	<u>_____</u>	<u>3/11/21</u> Date
Approved By:	<u>Matthew Beeler</u> / Training Department: Print / Sign	<u>_____</u>	<u>3/11/21</u> Date

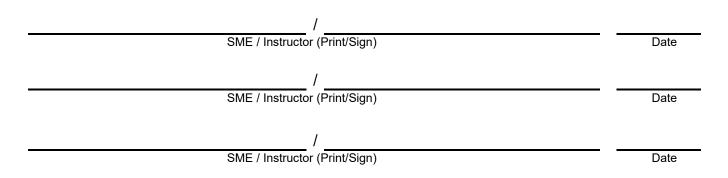SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other) _____

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified. _____

6. Task standards identified and verified by instructor or SME review. _____

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____

9. Verify the procedure(s) referenced by this JPM reflects the current revision:
    Procedure: CPS 3103.01   Revision: 34
    Procedure: CPS 5002.02   Revision: 30c
    Procedure: CPS 5002.03   Revision: 28e
    Procedure: _____   Revision: _____

10. Verify cues both verbal and visual are free of conflict. _____

11. Verify performance time is accurate. _____

12. If the JPM cannot be performed as written with proper responses, then revise the JPM. _____

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

SRRS: 3D.100; There are no retention requirements for this section

Revision Record (Summary)

Revision #	Summary
00	7/25/14 – New JPM.
01	9/16/16 – Updated references.
02	8/21/20 – Updated references and JPM template.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM530 per step 2)

   a. Initialize to any suitable IC (comparable with IC-26) with TDRFP 'A' on the MLC in auto and the TDRFP 'B' in rolling standby.

   b. Lock out RR FCVs by arming and depressing HPU A/B shutdown trip pushbuttons and then restart RR FCV HPUs inserting RR103/104-HPU A/B STATUSUP.

   c. Freeze the simulator.

   d. Save to a different IC if JPM is being used more than once. IC-217 is saved for the ILT 19-1 NRC exam (PW 13852).

   e. This completes the setup for this JPM.

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

2. JPM Administration

   a. Reset to the IC saved after performing step 1 above. IC-217 is saved for the ILT 19-1 NRC exam (PW 13852).

   b. Open and execute Simulator Lesson Plan ILT 19-1 NRC Exam JPMs LP.

   c. Release JPM530 which will:

      - Disable TDRFP 'B' trips from 1H13-P680.

      - Insert vibration alarms and indications when TDRFP 'B' speed is increased above 2800 rpm.

      - Insert seat leakage into the HPSV & HPCV (MS0ASLVALVE 9% & MS0ASLVALVE 2% respectively)

   d. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.

   e. Save to a different IC if required.

   f. Freeze the simulator.

INITIAL CONDITIONS

A reactor startup / power ascension is in progress.

Reactor power is ~ 56%.

RR flow control valves (FCVs) are currently locked out IAW CPS 3103.01 Feedwater (FW), Precaution 4.30 and CPS 3302.02 Reactor Recirculation Flow Control Hydraulic system.

Turbine Driven Reactor Feed Pump (TDRFP) 'A' is operating on the Master Level Controller (MLC) in auto feeding the RPV.

TDRFP 'B' is in rolling standby IAW CPS 3103.01 Feedwater (FW) section 8.1.4.2 TDRFP NORMAL Startup to Rolling STANDBY.

5 Condensate Polishers (A – E) are in service.

INITIATING CUE

The CRS has directed you to place TDRFP 'B' in service feeding the RPV using the 'AUTO' method IAW CPS 3103.01 Feedwater (FW) section 8.1.4.4. Transfer rolling STANDBY TDRFP to feeding RPV through 1FW002A (B).

Permission has been granted to perform all critical steps required to perform the task.

Report to the CRS after completing the task.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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: _____ JPM Sequence #: _____ of _____

<table>
<tr><td colspan="2">Task Standard:</td></tr>
<tr><td colspan="2">The examinee will attempt to place TDRFP 'B' in service feeding the RPV using the 'AUTO' method IAW CPS 3103.01 Feedwater (FW) section 8.1.4.4. TDRFP 'B' will exhibit high shaft vibration.</td></tr>
</table>

The examinee will attempt to place TDRFP 'B' in service feeding the RPV using the 'AUTO' method IAW CPS 3103.01 Feedwater (FW) section 8.1.4.4. TDRFP 'B' will exhibit high shaft vibration.

The examinee will be required to:

- reduce TDRFP 'B' speed to clear vibrations (fails)
- shutdown TDRFP 'B' (fails to trip)
- secure a TDRFP that will not trip

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet** and the following: • Marked Up copy of CPS 3103.01 Feedwater (FW) (section 8.1.4.2 TDRFP NORMAL Startup to Rolling STANDBY is complete)				
01	8.1.4.4.1 – 8.1.4.4.3 Verifies status of: • TDRFP 'B' • Condensate Polishers • 1FW010B Min Flow Valve	Examinee determines TDRFP 'B' is in rolling standby per the initiating cue. Examinee determines that 5 Condensate Polishers are adequate to perform the evolution. Examinee observes Red 'M' on the Digital Feedwater Display for 1FW010B and the 1FW010B valve icon is red.	☐	☐	___
02	8.1.4.4.4 Lowers TDRFP B speed to ~ 2370 rpm.	Examinee clicks on: • FPB • TDRFP B (and observes the blue outline on the control box) • ↓ (and observes TDRFP B RPM decreasing to ~ 2370 rpm) • Exit	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*03	8.1.4.4.5 Opens 1FW002B RFP 1B Discharge Valve.	**Examinee clicks on:** • **Valve icon for 1FW002B** • **TDRFP Main Discharge Valve 1FW002B (and observes the blue outline on the control box)** • **Open (and then verifies indication changes to 'Intermediate' and then 'Full Open')** • **Exit**	☐	☐	___
*04	8.1.4.4.6 Depresses the 1FW010B RFP 1B Min Flow Valve CLOSE pushbutton.	**Examinee clicks on:** • **Valve icon for 1FW010B** • **1FW010B Min Flow (and observes the blue outline on the control box)** • **Close** • **Exit**	☐	☐	___
NOTE:		1FW010B will not physically close with TDRFP 'B' reset and 1FW002B full open. If the examinee depresses the 1FW010B close pushbutton before 1FW002B is full open, 1FW010B will close. If this happens, the error should be considered a failure of a critical step. Step 8.1.4.4.7 is N/A.			

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*05	8.1.4.4.8.a.1) – 8.1.4.4.8.a.2) Raise TDRFP 'B' speed.	Examinee observes that TDRFP 'B' indicates 'FPB Speed Setter'. Examinee clicks on: • **FPB Speed Setter** • **TDRFP B Speed Setpoint Mode (and observes the blue outline on the control box)** • **Bring Pump On-Line (and then verifies TDRFP 'B' speed increasing)** • **Exit**	☐	☐	___
NOTE:	Annunciator 5002-2F High Vibr RFP 1B Shaft will be received when TDRFP 'B' speed increases above 2800 rpm. Annunciator 5002-3F High Vibr RFPT 1B Shaft will be received 30 seconds later.				
06	Responds to high vibration alarm(s).	Examinee refers to Alarm Response Procedures and recommends reducing turbine speed.	☐	☐	___
CUE	If the examinee: • reports receiving annunciators 5002-2F & 3F, acknowledge the report. • recommends reducing TDRFP 'B' speed, acknowledge the recommendation.				

ALTERNATE PATH BEGINS

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
07	8.1.4.4.8.a.3) Stops TDRFP 'B' Auto 'Bring Pump Online' sequence.	Examinee clicks on: • FPB Speed Setter • TDRFP B Speed Setpoint Mode (and observes the blue outline on the control box) • Speed Setter Mode • Exit	☐	☐	___
08	8.3.8.2 – 8.3.8.3 Determines high vibration condition cannot be corrected and TDRFP 'B' should be secured.	Examinee reviews CPS 3101.01 section 8.3.8.2 – 8.3.8.3 and determines: • both TDRFPs are NOT in AUTO and introducing a speed bias into TDRFP 'B' is inappropriate. • TDRFP 'B' high vibrations cannot be corrected. • Reactor power is consistent with 1 operating TDRFP. • TDRFP 'B' should be secured IAW 8.1.10.	☐	☐	___
CUE	If the examinee: • requests an Equipment Operator to investigate, acknowledge the order and then cue the examinee, "Vibrations can be felt on the floor of TB 800. I'm leaving due to safety concerns." • recommends securing TDRFP 'B', acknowledge the request.				
09	8.1.10.1 – 8.1.10.2 Prepares to Shutdown TDRFP 'B'.	Examinee verifies: • FW Level Control in Automatic and Reactor Power < 65%. • RR FCVs locked out. Examinee determines that TDRFP 'B' should be removed from service via the MANUAL (non-preferred) method.	☐	☐	___

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
10	8.1.10.2.2) Attempts to reduce TDRFP 'B' speed.	Examinee clicks on: • FPB Speed Setter • TDRFP B Speed Setpoint Mode (and observes the blue outline on the control box) • Speed Setter Mode • Exit Examinee clicks on: • FPB (pump icon) • TDRFP B (and observes the blue outline on the control box) • ↓ until setpoint (SP) indicates 0 RPM (and then observes that TDRFP 'B' speed begins to lower, but stabilizes at ~ 2000 RPM and that annunciators 5002-2F and 3F remain locked in) • Exit	☐	☐	___

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
11	8.1.10.4 (8.3.15.1 – 8.3.15.3) Attempts to trip TDRFP 'B'.	(8.3.15.1) Examinee will close/verify close TDRFP Main Discharge Valve 1FW002B shut. (8.3.15.2) Examinee verifies TDRFP B M/A station is MANUAL / MINIMUM. Examinee clicks on: • FPB Trip/Reset pushbutton • TDRFP B (and observes the blue outline on the control box) • TDRFP B Trip (and then observes that the HP and LP Stop Valves remain full open) • Exit (may or may not perform) Examinee reports failure of the 'B' TDRFP to trip to the CRS.	☐	☐	___
CUE	If the examinee reports failure of the 'B' TDRFP to trip, acknowledge the report.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*12	8.3.14 Secures TDRFP 'B' (will <u>not</u> trip from P680).	On 1H13-P680-5002, the examinee: • depresses the 'L' pushbutton on the 'B' TDRFP SLIM Controller and verifies the 'L' pushbutton red light illuminates. • verifies SLIM controller output to 0%. **Examinee locates control switch for 1B21-F303B on 1H13-P870-5016, rotates the control switch counter clockwise to the close position, and then verifies the green light illuminates and the red light extinguishes.** Examinee verifies TDRFP 'B' RPM lowering, and that the high vibration annunciators clear.	☐	☐	___
CUE	When TDRFP 'B' RPMs are lowering and the high vibration annunciators clear, cue the examinee that the JPM is complete.				

JPM Stop Time: _____

• •

JPM SUMMARY

Operator's Name: _____   **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: TDRFP 'B' Startup (Alternate Path)

JPM Number: JPM530   Revision Number: 02

Task Number and Title: 310301.40d TDRFP Normal Startup/Rolling Standby Operation.

Task Standard: The examinee will attempt to place TDRFP 'B' in service feeding the RPV using the 'AUTO' method IAW CPS 3103.01 Feedwater (FW) section 8.1.4.4. TDRFP 'B' will exhibit high shaft vibration.

The examinee will be required to:

- reduce TDRFP 'B' speed to clear vibrations (fails)
- shutdown TDRFP 'B' (fails to trip)
- secure a TDRFP that will not trip

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
259001	A4.02	3.9	3.7

Suggested Testing Environment: Simulator

Alternate Path: ☒ Yes ☐ No   SRO Only: ☐ Yes ☒ No   Time Critical: ☐ Yes ☒ No

Reference(s):

Procedure: CPS 3103.01 _____   Revision: ___ 34 ___
CPS 5002.02 _____   Revision: ___ 30c ___
CPS 5002.03 _____   Revision: ___ 28e ___

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

Testing Method: ☐ Simulate   ☒ Perform

Estimated Time to Complete: ___ 25 ___ minutes   **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

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

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

A reactor startup / power ascension is in progress.

Reactor power is ~ 56%.

RR flow control valves (FCVs) are currently locked out IAW CPS 3103.01 Feedwater (FW), Precaution 4.30 and CPS 3302.02 Reactor Recirculation Flow Control Hydraulic system.

Turbine Driven Reactor Feed Pump (TDRFP) 'A' is operating on the Master Level Controller (MLC) in auto feeding the RPV.

TDRFP 'B' is in rolling standby IAW CPS 3103.01 Feedwater (FW) section 8.1.4.2 TDRFP NORMAL Startup to Rolling STANDBY.

5 Condensate Polishers (A – E) are in service.

INITIATING CUE

The CRS has directed you to place TDRFP 'B' in service feeding the RPV using the 'AUTO' method IAW CPS 3103.01 Feedwater (FW) section 8.1.4.4. Transfer rolling STANDBY TDRFP to feeding RPV through 1FW002A (B).

Permission has been granted to perform all critical steps required to perform the task.

Report to the CRS after completing the task.

Job Performance Measure

Main Turbine Control Valve Tests

JPM Number: <u>JPM501</u>

Revision Number: <u>01</u>

Date: <u>8/21/2020</u>

Developed By:	<u>Bill Kiser</u> /	<u>Instructor: Print / Sign</u>	<u>8/21/20</u> Date
Reviewed By:	<u>Brian Steele</u> /	<u>SME or Instructor: Print / Sign</u>	<u>3/02/21</u> Date
Reviewed By:	<u>Tim Windingland</u> /	<u>Operations Representative: Print / Sign</u>	<u>3/11/21</u> Date
Approved By:	<u>Matthew Beeler</u> /	<u>Training Department: Print / Sign</u>	<u>3/11/21</u> Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other) _____

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified. _____

6. Task standards identified and verified by instructor or SME review. _____

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____

9. Verify the procedure(s) referenced by this JPM reflects the current revision:
    Procedure: ___CPS 9031.07___ Revision: ___34a___
    Procedure: _____ Revision: _____
    Procedure: _____ Revision: _____
    Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. _____

11. Verify performance time is accurate. _____

12. If the JPM cannot be performed as written with proper responses, then revise the JPM. _____

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____ _____
SME / Instructor (Print/Sign)   Date

_____ / _____ _____
SME / Instructor (Print/Sign)   Date

_____ / _____ _____
SME / Instructor (Print/Sign)   Date

Revision Record (Summary)

Revision #	Summary
00	3/6/18 – New JPM.
01	8/21/20 – Updated JPM template.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM501 per step 2)

    a. Initialize to any suitable IC with the Main Turbine on-line.

    b. Freeze the simulator.

    c. Save to a different IC if JPM is being used more than once. IC-218 is saved for the ILT 19-1 NRC exam (PW 13852).

    d. This completes the setup for this JPM.

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

2. JPM Administration

    a. Reset to the IC saved after performing step 1 above. IC-218 is saved for the ILT 19-1 NRC exam (PW 13852).

    b. No simulator lesson plan is required for this JPM.

    c. Ensure computer points C71-NC013, 14, 15, 16, 17, 18, 19, and 20 are displayed on PPC Display #10.

    d. Freeze the simulator.

INITIAL CONDITIONS

The plant is in Mode 1.

The Main Turbine is on-line.

CPS 9031.07 Main Turbine Control Valve Tests is scheduled to be performed over your shift and the next shift.

INITIATING CUE

The CRS has directed you to perform CPS 9031.07 Main Turbine Control Valve Tests on #1 and #2 Turbine Control Valves (CVs).

Annunciators associated with CPS 9031.07 Main Turbine Control Valve Tests are to be considered "Expected Annunciators" and treated as such. All other annunciators not associated with the Main Turbine Control Valve testing will be handled by another RO.

CPS 9031.07 Section 5.0 Prerequisites are complete.

The activity has been screened for elevated risk.

Another operator will monitor CV positions on 1H13-P678.

Plant conditions are stable.

Report to the CRS after completing the assigned portion of the task.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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.

- -

SRRS: 3D.100; There are no retention requirements for this section

JPM Start Time: _____   JPM Sequence #: _____ of _____

Task Standard:
The examinee will successfully complete on-line testing of Main Turbine Control Valves (CVs) #1 and #2 IAW CPS 9031.07 Main Turbine Control Valve Tests.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet** and a Marked Up copy of CPS 9031.07 Main Turbine Control Valve Tests. Ensure step 5.9.2 is marked as follows: • 115 VAC Present? – No for each CV • Contact Continuity – Open for CVs 1-3, Shut for CV-4 • Results – SAT for each CV				
NOTE:	Ensure an instructor is stationed at 1H13-P678 Standby Information Panel to monitor CV position during the test.				
01	8.1.1 – 8.1.2 Performs pre-test verifications for CV-1.	Examinee verifies: • RPS and turbine trips reset and plant conditions stable, and • Section 5.0 Prerequisites complete and acceptable for CV-1.	☐	☐	___
NOTE:	If requested by the examinee, initial step 8.1.1 as the independent verifier.				
CUE	For step 02, the instructor at 1H13-P678 will provide the following cues when requested by the examinee: • When CV-1 has been closed: "CV-1 operated smoothly, indicates closed, and fast closed the last 10% of valve travel". • When CV-1 has been re-opened: "CV-1 has returned to the pre-test position". • Initial the IV for step 8.1.4.1.				

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*02	8.1.3 Depresses CV-1 Test push-button.	**Examinee depresses and holds the CV-1 TEST push-button,** and then verifies the following: • 5004-2D DIV 1 OR 4 TCV FST CL TRIP annunciator energizes. • Computer point C71NC017 TCV FAST CLOSURE CH A actuation. • Smooth CV-1 operation with fast closing during ~ the last 10% of valve closure.	☐	☐	___
*03	8.1.4 Releases CV-1 Test push-button.	**Examinee releases the CV-1 TEST push-button,** and then verifies the following: • CV-1 returns to pre-test position. • 5004-2D DIV 1 OR 4 TCV FST CL TRIP annunciator de-energizes. • Computer point C71NC017 TCV FAST CLOSURE CH A resets.	☐	☐	___
04	8.2.1 – 8.2.2 Performs pre-test verifications for CV-2.	Examinee verifies: • RPS and turbine trips reset and plant conditions stable, and • Section 5.0 Prerequisites complete and acceptable for CV-2.	☐	☐	___
NOTE:	If requested by the examinee, initial step 8.2.1 as the independent verifier.				

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	For step 05, the instructor at 1H13-P678 will provide the following cues when requested by the examinee: • When CV-2 has been closed: "CV-2 operated smoothly, indicates closed, and fast closed the last 10% of valve travel". • When CV-2 has been re-opened: "CV-2 has returned to the pre-test position". • Initial the IV for step 8.2.4.1.				
*05	8.2.3 Depresses CV-2 Test push-button.	**Examinee depresses and holds the CV-2 TEST push-button,** and then verifies the following: • 5005-2D DIV 2 OR 3 TCV FST CL TRIP annunciator energizes. • Computer point C71NC018 TCV FAST CLOSURE CH B actuation. • Smooth CV-2 operation with fast closing during ~ the last 10% of valve closure.	☐	☐	___
*06	8.2.4 Releases CV-2 Test push-button.	**Examinee releases the CV-2 TEST push-button,** and then verifies the following: • CV-2 returns to pre-test position. • 5005-2D DIV 2 OR 3 TCV FST CL TRIP annunciator de-energizes. • Computer point C71NC018 TCV FAST CLOSURE CH B resets.	☐	☐	___
CUE	JPM is complete.				

JPM Stop Time: _____

....

JPM SUMMARY

Operator's Name: _____ **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Main Turbine Control Valve Tests

JPM Number: JPM501   Revision Number: 01

Task Number and Title: 903107.01 Main Turbine Control Valve Tests.

Task Standard: The examinee will successfully complete on-line testing of Main Turbine Control Valves (CVs) #1 and #2 IAW CPS 9031.07 Main Turbine Control Valve Tests.

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
241000	A1.08	3.3	3.2

Suggested Testing Environment: Simulator

Alternate Path: ☐ Yes ☒ No   SRO Only: ☐ Yes ☒ No   Time Critical: ☐ Yes ☒ No

Reference(s):

  Procedure: CPS 9031.07   Revision: 34a

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

Testing Method: ☐ Simulate   ☒ Perform

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

EVALUATION SUMMARY:

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

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

SRRS: 3D.105 (when utilized for operator initial or continuing training)

INITIAL CONDITIONS

The plant is in Mode 1.

The Main Turbine is on-line.

CPS 9031.07 Main Turbine Control Valve Tests is scheduled to be performed over your shift and the next shift.

INITIATING CUE

The CRS has directed you to perform CPS 9031.07 Main Turbine Control Valve Tests on #1 and #2 Turbine Control Valves (CVs).

Annunciators associated with CPS 9031.07 Main Turbine Control Valve Tests are to be considered "Expected Annunciators" and treated as such. All other annunciators not associated with the Main Turbine Control Valve testing will be handled by another RO.

CPS 9031.07 Section 5.0 Prerequisites are complete.

The activity has been screened for elevated risk.

Another operator will monitor CV positions on 1H13-P678.

Plant conditions are stable.

Report to the CRS after completing the assigned portion of the task.

Exelon Generation.

Job Performance Measure

On-Line Testing Of The Turning Gear Oil Pump 1TO04P

JPM Number: JPM563

Revision Number: 00

Date: 8/21/2020

Developed By: Bill Kiser / _____ 8/21/20
Instructor: Print / Sign   Date

Reviewed By: Scott Labunski / _____ 3/02/21
SME or Instructor: Print / Sign   Date

Reviewed By: Tim Windingland / _____ 3/11/21
Operations Representative: Print / Sign   Date

Approved By: Matthew Beeler / _____ 3/11/21
Training Department: Print / Sign   Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other) _____

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified. _____

6. Task standards identified and verified by instructor or SME review. _____

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____

9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: _CPS 3105.01_ Revision: _44b_
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. _____

11. Verify performance time is accurate. _____

12. If the JPM cannot be performed as written with proper responses, then revise the JPM. _____

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____ _____
SME / Instructor (Print/Sign)   Date

_____ / _____ _____
SME / Instructor (Print/Sign)   Date

_____ / _____ _____
SME / Instructor (Print/Sign)   Date

SRRS: 3D.100; There are no retention requirements for this section

Revision Record (Summary)

Revision #	Summary
00	8/21/20 – New JPM.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM563 per step 2)

    a. Initialize to any suitable at power IC (reactor power operations IAW CPS 3005.01 Unit Power Changes).

    b. Verify normal TG / TG Lube Oil system operation.

    c. Freeze the simulator.

    d. Save to a different IC if JPM is being used more than once. IC-218 is saved for the ILT 19-1 NRC exam (PW 13852).

    e. This completes the setup for this JPM.

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

2. JPM Administration

    a. Reset to the IC saved after performing step 1 above. IC-218 is saved for the ILT 19-1 NRC exam (PW 13852).

    b. Open and execute Simulator Lesson Plan ILT 19-1 NRC Exam JPMs LP.

    c. Release JPM563 which will:

    - Alarm annunciator 5018-1A Low Pressure Main Turbine Brg Oil Header when Turning Gear Oil Pump (TGOP) Test switch is placed in "Test B" and clear annunciator 5018-1A when TGOP Test switch is returned to "OFF".

    - Simulate the starting of TGOP using 1PS-TO009B (field action).

    d. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

    e. Save to a different IC if required.

    f. Freeze the simulator.

SRRS: 3D.100; There are no retention requirements for this section

INITIAL CONDITIONS

You are the Extra RO.

The Turbine Lube Oil system is operating normally IAW CPS 3105.01 Turbine (TG, EHC, TS).

A Field Operator has been briefed and is standing by to perform any required field operations.

INITIATING CUE

The CRS has directed you to establish communications with the field and perform on-line testing of the Turning Gear Oil Pump (1TO04P) IAW CPS 3105.01 Turbine (TG, EHC, TS) section 8.1.13 On-Line Testing of the Turning Gear Oil Pump (1TO04P).

Report to the CRS after completing the task.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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: _____ JPM Sequence #: _____ of _____

Task Standard:

The examinee will successfully complete on-line testing of the Turning Gear Oil Pump (1TO04P) IAW CPS 3105.01 Turbine (TG, EHC, TS) section 8.1.13 On-Line Testing of the Turning Gear Oil Pump (1TO04P).

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet** and a copy of CPS 3105.01 Turbine (TG, EHC, TS).				
*01	8.1.13.1 Prevents auto starting of the Turbine Bearing Lift Pumps when the Turning Gear Oil Pump (TGOP) is started.	**Examinee places pump control switches in "PULL-TO-LOCK" for Turbine Bearing Lift Pumps.** Examinee verifies (red light OFF, green light OFF): • 1TO11P & 1TO12P • 1TO14P & 1TO15P • 1TO13P & 1TO16P	☐	☐	___
CUE	If the examinee fails to establish phone communications with the Field Operator (Booth Operator) prior to performance of Step 02, remind him/her to do so.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*02	8.1.13.2 – 8.1.13.3 Starts the Turning Gear Oil Pump (TGOP) – TEST A.	**Examinee places the TURNING GEAR OIL PUMP TEST switch to "TEST A".** Examinee verifies the TGOP automatically starts by observing: • TGOP Control Switch (red light ON, green light OFF) • AUTO START TURB AUXILIARY PUMP/MOTOR annunciator alarming (5017-6A LIT) • Local pressure indicator 1PI-TO104 INCREASES (as reported from the field).	☐	☐	___
CUE	If the examinee reports receipt of annunciator 5017-6A AUTO START TURB AUXILIARY PUMP/ MOTOR, acknowledge the report. **Field Operator** – when requested by the examinee, report "local pressure indicator 1PI-TO104 indication increased in conjunction with the TGOP start".				
*03	8.1.13.4 Places Turning Gear Oil Pump Test switch to OFF.	**Examinee places the TURNING GEAR OIL PUMP TEST switch to "OFF".**	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*04	8.1.13.5 Stops the Turning Gear Oil Pump (TGOP).	**Examinee places the Turning Gear Oil Pump (1TO04P) control switch to "AUTO/AFTER STOP".** Examinee verifies the TGOP stops by observing: • TGOP Control Switch (red light OFF, green light ON) • AUTO START TURB AUXILIARY PUMP/MOTOR annunciator clear (5017-6A OFF) • Local report (from the Field Operator).	☐	☐	___
CUE	If the examinee reports clearing of annunciator 5017-6A AUTO START TURB AUXILIARY PUMP/ MOTOR, acknowledge the report. **Field Operator** – if requested by the examinee, report "the TGOP is stopped".			

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*05	8.1.13.6 – 8.1.13.7 Starts the Turning Gear Oil Pump (TGOP) – TEST B.	**Examinee places the TURNING GEAR OIL PUMP TEST switch to "TEST B".** Examinee verifies the TGOP automatically starts by observing: • LOW PRESS MAIN TURBINE BRG OIL HEADER annunciator alarming (5018-1A LIT) • TGOP Control Switch (red light ON, green light OFF) • AUTO START TURB AUXILIARY PUMP/MOTOR annunciator alarming (5017-6A LIT) • Local pressure indicator 1PI-TO104 INCREASES (as reported from the field).	☐	☐	___
CUE	If the examinee reports receipt of annunciators 5017-6A AUTO START TURB AUXILIARY PUMP/ MOTOR and 5018-1A LOW PRESS MAIN TURBINE BRG OIL HEADER, acknowledge the report. **Field Operator** – when requested by the examinee, report "local pressure indicator 1PI-TO104 indication increased in conjunction with the TGOP start".			
*06	8.1.13.8 Places Turning Gear Oil Pump Test switch to OFF.	**Examinee places the TURNING GEAR OIL PUMP TEST switch to "OFF".**	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*07	8.1.13.9 Stops the Turning Gear Oil Pump (TGOP).	**Examinee places the Turning Gear Oil Pump (1TO04 P) control switch to "AUTO/AFTER STOP".** Examinee verifies the TGOP stops by observing: • LOW PRESS MAIN TURBINE BRG OIL HEADER annunciator clear (5018-1A OFF) • TGOP Control Switch (red light OFF, green light ON) • AUTO START TURB AUXILIARY PUMP/MOTOR annunciator clear (5017-6A OFF) • Local report (from the Field Operator).	☐	☐	___
CUE	If the examinee reports clearing of annunciators 5017-6A AUTO START TURB AUXILIARY PUMP/ MOTOR and 5018-1A LOW PRESS MAIN TURBINE BRG OIL HEADER, acknowledge the report. **Field Operator** – when requested by the examinee, report "the TGOP is stopped".			

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*08	8.1.13.10.1 – 8.1.13.10.3 Starts the Turning Gear Oil Pump (TGOP) – pressure switch 1PS-TO009B.	**Examinee directs Field Operator to perform the following:** • **SHUT Shaft Pmp Disch Press Rt (1TO007).** • **Monitor pressure (1PI-TO100) while <u>slowly</u> loosening the drain plug/cap between 1TO007 and pressure switch 1PS-TO009B.** Examinee verifies the TGOP automatically starts by observing: • TGOP Control Switch (red light ON, green light OFF) • AUTO START TURB AUXILIARY PUMP/MOTOR annunciator alarming (5017-6A LIT) • Local pressure indicator 1PI-TO104 INCREASES (as reported from the field).	☐	☐	___
CUE	If the examinee reports receipt of annunciator 5017-6A AUTO START TURB AUXILIARY PUMP/ MOTOR, acknowledge the report. **Field Operator** – when requested by the examinee, report: • "1TO007 is SHUT". • BOOTH OPERATOR release '1TO04P Pump Start' and report "1PI-TO100 indicated approximately 190 psig in conjunction with the TGOP start". • "local pressure indicator 1PI-TO104 indication increased in conjunction with the TGOP start".			

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*09	8.1.13.10.4 – 8.1.13.10.5 Restores pressure switch 1PS-TO009B.	**Examinee directs Field Operator to perform the following:** • **Tighten the drain plug/cap snug tight.** • **Slowly OPEN Shaft Pmp Disch Press Rt (1TO007).**	☐	☐	___
*10	8.1.13.10.6 Stops the Turning Gear Oil Pump (TGOP).	**Examinee places the Turning Gear Oil Pump (1TO04 P) control switch to "AUTO/AFTER STOP".** Examinee verifies the TGOP stops by observing: • TGOP Control Switch (red light OFF, green light ON) • AUTO START TURB AUXILIARY PUMP/MOTOR annunciator clear (5017-6A OFF) • Local report (from the Field Operator).	☐	☐	___
CUE	If the examinee reports clearing of annunciator 5017-6A AUTO START TURB AUXILIARY PUMP/ MOTOR, acknowledge the report. **Field Operator** – when requested by the examinee, report: • "Drain plug/cap is snug tight." • "1TO007 is OPEN". • "the TGOP is stopped".				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*11	8.1.13.11 Restores auto start capability of the Turbine Bearing Lift Pumps.	**Examinee places pump control switches in "AUTO" for Turbine Bearing Lift Pumps.** Examinee verifies (red light OFF, green light ON): • 1TO11P & 1TO12P • 1TO14P & 1TO15P • 1TO13P & 1TO16P	☐	☐	___
CUE	JPM is complete.				

JPM Stop Time: _____

● ●

JPM SUMMARY

Operator's Name: _____   **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: On-Line Testing Of The Turning Gear Oil Pump 1TO04P

JPM Number: JPM563   Revision Number: 00

Task Number and Title: 310501.99 Monitor the Main Turbine System Operation in all Modes during Normal and Off-Normal Conditions.

Task Standard: The examinee will successfully complete on-line testing of the Turning Gear Oil Pump (1TO04P) IAW CPS 3105.01 Turbine (TG, EHC, TS) section 8.1.13 On-Line Testing of the Turning Gear Oil Pump (1TO04P).

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
245000	A4.01	2.7	2.7

Suggested Testing Environment: Simulator
Alternate Path: ☐ Yes ☒No   SRO Only: ☐Yes ☒No   Time Critical: ☐Yes ☒No
Reference(s):

  Procedure: CPS 3105.01 _____   Revision: ____ 44b ____

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

Testing Method: ☐ Simulate   ☒ Perform

Estimated Time to Complete: ___15___ minutes   **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily?   ☐Yes   ☐No

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

You are the Extra RO.

The Turbine Lube Oil system is operating normally IAW CPS 3105.01 Turbine (TG, EHC, TS).

A Field Operator has been briefed and is standing by to perform any required field operations.

INITIATING CUE

The CRS has directed you to establish communications with the field and perform on-line testing of the Turning Gear Oil Pump (1TO04P) IAW CPS 3105.01 Turbine (TG, EHC, TS) section 8.1.13 On-Line Testing of the Turning Gear Oil Pump (1TO04P).

Report to the CRS after completing the task.

Exelon Generation.

Job Performance Measure

CNMT Pool Makeup From Suppression Pool

JPM Number: ___JPM531___

Revision Number: ___03___

Date: ___8/21/2020___

Developed By: ___Bill Kiser___ / _____ __8/21/20__
                     Instructor: Print / Sign   Date

Reviewed By: ___Brian Steele___ / _____ __3/04/21__
                     SME or Instructor: Print / Sign   Date

Reviewed By: ___Tim Windingland___ / _____ __3/11/21__
                     Operations Representative: Print / Sign   Date

Approved By: ___Matthew Beeler___ / _____ __3/11/21__
                     Training Department: Print / Sign   Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other)

   _____

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified.

   _____

6. Task standards identified and verified by instructor or SME review.

   _____

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

   _____

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured.

   _____

9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: _CPS 3312.01_____ Revision: __47d__
   Procedure: _CPS 3317.01_____ Revision: __33e__
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict.

    _____

11. Verify performance time is accurate.

    _____

12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

    _____

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:

    _____

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

Revision Record (Summary)

Revision #	Summary
00	8/25/15 – New JPM.
01	7/28/17 – Updated initiating cue to reflect new hard card 4411.03H001. Made the JPM setup more automatic.
02	3/6/18 – Updated procedure references and changed to new JPM template.
03	8/21/20 – Updated references. Updated JPM template.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM531 per step 2)

    a. Reset the simulator to any Mode 4 IC with RHR Pump 'A' in standby.

    b. Dump the upper containment pools by performing the following:

        *   Shut 1FC036, FC Sply CNMT Outbd Isol Vlv.

        *   Shut 1FC037, FC Sply CNMT Inbd Isol Vlv.

        *   Open 1SM001A, Supp Pool Dump Vlv.

        *   Open 1SM002A, Supp Pool Dump Vlv.

        *   Open 1SM001B, Supp Pool Dump Vlv.

        *   Open 1SM002B, Supp Pool Dump Vlv.

    c. **Shut 1SM001A, 2A, 1B, AND 2B as <u>soon</u> as 5040-5E LOW LEVEL CNMT XFER POOL is received (note – delaying this action will add substantial time to the JPM).**

    d. Freeze the simulator.

    e. Save to a different IC if JPM is being used more than once. IC-219 is saved for the ILT 19-1 NRC exam (PW 13852).

    f. This completes the setup for this JPM.

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

2. JPM Administration

    a. Reset to the IC saved after performing step 1 above. IC-219 is saved for the ILT 19-1 NRC exam (PW 13852).

    b. Open and execute Simulator Lesson Plan ILT 19-1 NRC Exam JPMs LP.

    c. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

    d. Save to a different IC if required.

    e. Freeze the simulator.

    f. Releasing JPM531 will energize 1E12-F037A. Perform when requested by examinee.

INITIAL CONDITIONS

The plant is in Mode 4.

An event occurred requiring the Upper Containment Pools to be dumped using CPS 4411.03H001, DUMP UPPER POOL Hard Card.

The event has been mitigated and recovery actions are in progress.

The Supp Pool Dump Valves (1SM001A, 2A, 1B, and 2B) have been reclosed IAW CPS 3220.01 Suppression Pool Makeup (SM) section 8.7 Recovery from Suppression Pool Dump Valve Actuation.

An Equipment Operator has performed the valve alignment verifications in CPS 3317.01 steps 8.1.4.9.1 and 8.1.4.9.2, and is standing by on Containment 828' Elevation to monitor Upper Containment Pool level locally.

Chemistry has verified that Suppression Pool water chemistry meets the requirements for transfer to the Upper Containment Pools.

INITIATING CUE

The CRS has directed you to restore Upper Containment Pool level per CPS 3312.01 Residual Heat Removal (RHR) section 8.3.2 Pumping Suppression Pool To CNMT Pool using Residual Heat Removal (RHR) Pump 'A' beginning at step 8.3.2.5.

You have Plant Manager's permission to perform the directed task.

Report to the CRS after completing the task.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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.

![Exelon Generation logo]

JPM Start Time: _____ JPM Sequence #: _____ of _____

Task Standard:

The examinee will successfully restore Upper Containment Pool level IAW CPS 3312.01 Residual Heat Removal (RHR) section 8.3.2 Pumping Suppression Pool To CNMT Pool using Residual Heat Removal (RHR) Pump 'A'.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet** and: • CPS 3312.01 Residual Heat Removal (RHR) • CPS 3317.01 Fuel Pool Cooling and Cleanup (FC) with steps 8.1.4.9.1 and 8.1.4.9.2 marked as complete.				
*01	8.3.2.6 Shuts breaker for RHR System 1A Shutdown Cooling Upper Pool Valve (1E12-F037A).	**Examinee directs the Field Operator to:** • **shut the breaker for 1E12-F037A at AB MCC 1A2 Cub 1B**, and • place Alarm Bypass Switch 1E12S070A to Normal at AB MCC 1A2 Cub 1B.	☐	☐	___
CUE	When requested by the examinee, acknowledge the request and: **Field Operator** – cue simulator booth operator to insert REMOTE 1. Report, "the breaker for 1E12-F037A is shut". **Field Operator** – report, "Alarm Bypass Switch 1E12S070A is in Normal".				

Exelon Generation.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
02	8.3.2.8 – 8.3.2.9 Performs pre-transfer activities.	Examinee verifies: • 1RIX-PR038 Shutdown Service Water A Effluent PRM indicates reliable on the MCR AR/PR LAN • 1E12-F048A RHR 'A' Heat Exchanger Bypass Valve is open (red light on, green light off).	☐	☐	___
*03	8.3.2.10 Starts RHR Pump A.	**Examinee:** • **Starts RHR Pump 'A'.** • Verifies the pump is running (red light is ON, green light is Off) and current is indicated on RHR Pump A Amps Meter.	☐	☐	___
*04	8.3.2.11 – 8.3.2.12 Commences SP to Upper Cnmt Pool transfer.	**Examinee:** • **Opens1E12-F037A until RHR Pump A Flow indicator E12-R603A indicates ≥4300 gpm at 1H13-P601-5064.** • Verifies flow to CNMT pools by observing flow on RHR Pump A flow meter.	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	If the examinee: • reports starting RHR Pump 'A', acknowledge the report. • reports commencing filling the Upper Containment Pools to the Field Operator and/or the CRS, acknowledge the report. • Requests status of Upper Containment Pool Level, as the Field Operator report, "the Upper Containment Pool Level is rising". When 5040-5E Low Level Cnmt Xfer Pool Clears, cue the examinee as the Equipment Operator, "the upper containment pool level is ~ 6 inches from the bottom edge of the lowest skimmer and rising".				
NOTE:	The cue for step 05 to close 1E12-F037A is triggered when annunciator 5040-5F Low Level Upper CNMT Pool resets. Be prepared to provide the cue to the examinee when annunciator 5040-5F resets. At 5000 gpm RHR flow, it will take ~ 5-6 minutes for 5040-5F to reset.				
*05	8.3.2.13.1 Secures Suppression Pool to Upper Containment Pool transfer.	• **Examinee shuts 1E12-F037A until the green light is ON and the red light is OFF.**	☐	☐	___
CUE	When annunciator 5040-5F Low Level Upper Cnmt Pool RESETS, cue the examinee (as the Equipment Operator in the Containment) that Upper Containment Pool Level has covered the weir walls.				
*06	8.3.2.13.2 Secures RHR Pump A.	**Examinee:** • **Secures RHR Pump and verifies red light is OFF and green light is ON.**	☐	☐	___
CUE	If the examinee reports securing RHR Pump 'A', acknowledge the report. JPM is complete.				

JPM Stop Time: _____

• •

Exelon Generation®

JPM SUMMARY

Operator's Name: _____   **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: CNMT Pool Makeup From Suppression Pool

JPM Number: JPM531   Revision Number: 00

Task Number and Title: 331201.26 Pump the Suppression Pool To CNMT Pool.

Task Standard: The examinee will successfully restore Upper Containment Pool level IAW CPS 3312.01 Residual Heat Removal (RHR) section 8.3.2 Pumping Suppression Pool To CNMT Pool using Residual Heat Removal (RHR) Pump 'A'.

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
223001	2.1.23	4.3	4.4

Suggested Testing Environment: Simulator

Alternate Path: ☐ Yes ☒No   SRO Only: ☐Yes ☒No   Time Critical: ☐Yes ☒No

Reference(s):

Procedure: CPS 3312.01 _____   Revision: 47d ___
                     CPS 3317.01 _____   Revision: 33e ___

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

Testing Method: ☐ Simulate   ☒ Perform

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

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily?   ☐Yes   ☐No

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

SRRS: 3D.105 (when utilized for operator initial or continuing training)

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

The plant is in Mode 4.

An event occurred requiring the Upper Containment Pools to be dumped using CPS 4411.03H001, DUMP UPPER POOL Hard Card.

The event has been mitigated and recovery actions are in progress.

The Supp Pool Dump Valves (1SM001A, 2A, 1B, and 2B) have been reclosed IAW CPS 3220.01 Suppression Pool Makeup (SM) section 8.7 Recovery from Suppression Pool Dump Valve Actuation.

An Equipment Operator has performed the valve alignment verifications in CPS 3317.01 steps 8.1.4.9.1 and 8.1.4.9.2, and is standing by on Containment 828' Elevation to monitor Upper Containment Pool level locally.

Chemistry has verified that Suppression Pool water chemistry meets the requirements for transfer to the Upper Containment Pools.

INITIATING CUE

The CRS has directed you to restore Upper Containment Pool level per CPS 3312.01 Residual Heat Removal (RHR) section 8.3.2 Pumping Suppression Pool To CNMT Pool using Residual Heat Removal (RHR) Pump 'A' beginning at step 8.3.2.5.

You have Plant Manager's permission to perform the directed task.

Report to the CRS after completing the task.

Exelon Generation.

Job Performance Measure

Transferring 4160V Bus 1B1 from the Main to the Reserve Source
IAW CPS 3501.01 (Alternate Path)

JPM Number: JPM432

Revision Number: 01

Date: 8/24/2020

Developed By: ___Bill Kiser___ / _____   8/24/20
                      Instructor: Print / Sign   Date

Reviewed By: ___Mark McCleary___ / _____   3/02/21
                      SME or Instructor: Print / Sign   Date

Reviewed By: ___Tim Windingland___ / _____   3/11/21
                      Operations Representative: Print / Sign   Date

Approved By: ___Matthew Beeler___ / _____   3/11/21
                      Training Department: Print / Sign   Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other) _____

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified. _____

6. Task standards identified and verified by instructor or SME review. _____

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____

9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: 3501.01   Revision: 29a
   Procedure: _____   Revision: _____
   Procedure: _____   Revision: _____
   Procedure: _____   Revision: _____

10. Verify cues both verbal and visual are free of conflict. _____

11. Verify performance time is accurate. _____

12. If the JPM cannot be performed as written with proper responses, then revise the JPM. _____

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

Revision Record (Summary)

Revision #	Summary
00	8/21/15 – New JPM.
01	8/24/20 – Updated references. Updated JPM template.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM432 per step 2)

    a. Initialize to any suitable IC in which the RAT and ERAT transformers are available.

    b. Ensure 4160V Bus 1B1 is aligned to the RAT.

    c. Freeze the simulator.

    d. Save to a different IC if JPM is being used more than once. IC-218 is saved for the ILT 19-1 NRC exam (PW 13852).

    e. This completes the setup for this JPM.

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

2. JPM Administration

    a. Reset to the IC saved after performing step 1 above. IC-218 is saved for the ILT 19-1 NRC exam (PW 13852).

    b. Open and execute Simulator Lesson Plan ILT 19-1 NRC Exam JPMs LP.

    c. Release JPM432 which will perform the following:

    -   After the Reserve Breaker Sync switch is turned on, the lesson plan will override the 4160V Bus 1B1 Res Bkr Sync switch back to off, and also override the running and incoming voltage meters to mask that the Sync Switch is turned off. This will result in failure of the Reserve Feed Breaker for 1B1 to close in when paralleling to the ERAT.

    -   Inserts a bus 1B1 overcurrent trip if the sync switch isn't turned off before releasing the Reserve Feed Breaker control switch to deenergize 4160V Bus 1B1.

    d. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.

    e. Verify proper operation of sync switch.

    f. Save to a different IC if required.

    g. Freeze the simulator.

INITIAL CONDITIONS

You are the 'B' RO.

CPS 9080.02 DIESEL GENERATOR 1B OPERABILITY - MANUAL AND QUICK START OPERABILITY is scheduled to be performed.

INITIATING CUE

To support performance of CPS 9080.02, the CRS has directed you to transfer 4160V Bus 1B1 from the RAT to the ERAT per CPS 3501.01 HIGH VOLTAGE AUXILIARY POWER SYSTEM.

Report to the CRS after completing the task.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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: _____ JPM Sequence #: _____ of _____

Task Standard:

The examinee will attempt to transfer 4160V Bus 1B1 from the RAT to the ERAT per CPS 3501.01 HIGH VOLTAGE AUXILIARY POWER SYSTEM; then recognize the failure of the breaker to close and turn the sync switch to OFF before releasing the 4160V Bus 1B1 Res Bkr control switch.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet** and the following: • CPS 3501.01 High Voltage Auxiliary Power System				
01	8.1.8.1 Determines Voltage Monitoring is NOT required.	Examinee observes Emergency Reserve Auxiliary Transformer (ERAT) SVC indications (output voltage & VARS, SVC breaker positions) on 1H13-P870-5010 and determines that voltage monitoring is NOT required.	☐	☐	___
*02	8.1.8.2 Places the Bus Res {Mn} Bkr Sync keylock switch to the ON position.	**Examinee locates the 4160V Bus 1B1 Res Bkr Sync switch on 1H13-P877-5061 and turns the switch clockwise to the ON position.**	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
03	8.1.8.3 Adjusts 4160V Bus Incoming Voltage within 4084-4300V.	Examinee verifies that voltage is between 4084 - 4300V on 4160V Bus 1B1 Incoming Voltage meter on 1H13-P877-5061 and determines that voltage adjustment is NOT required.	☐	☐	___
04	8.1.8.4 Verifies the synchroscope is steady at ~ the 12 o'clock position.	Examinee verifies that 4160V Bus 1B1 Synchroscope on 1H13-P877-5061 is steady at ~ the 12 o'clock position.	☐	☐	___
	ALTERNATE PATH BEGINS				
*05	8.1.8.5 Closes the Bus Res Bkr, and <u>prior</u> to releasing the switch to the AUTO position, verify: • Closed indication on the source breaker, and • A load shift is indicated on the bus load meters. Recognizes source breaker failed to close, <u>Then</u> places the sync switch to OFF <u>prior</u> to releasing the switch to the AUTO position (preventing the auto trip of the load breaker and the resulting loss of the bus).	**Examinee locates the 4160V Bus 1B1 Res Bkr control switch on 1H13-P877-5061, rotates the CS clockwise to the close position.** **Examinee recognizes the failure of the breaker to close and turns the sync switch to OFF before releasing the 4160V Bus 1B1 Res Bkr control switch.**	☐	☐	___

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	If the examinee reports the failure of the 4160V Bus 1B1 Reserve Feed Breaker to close, acknowledge the report. JPM is complete.				

JPM Stop Time: _____

···

Exelon Generation.

JPM SUMMARY

Operator's Name: _____ **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Transferring 4160V Bus 1B1 from the Main to the Reserve Source IAW CPS 3501.01 (Alternate Path)

JPM Number: JPM432   Revision Number: 01

Task Number and Title: 350101.23 Transfer a 6900V or 4160V Bus TO or FROM its Reserve {Main} Source.

Task Standard: The examinee will attempt to transfer 4160V Bus 1B1 from the RAT to the ERAT per CPS 3501.01 HIGH VOLTAGE AUXILIARY POWER SYSTEM; then recognize the failure of the breaker to close and turn the sync switch to OFF before releasing the 4160V Bus 1B1 Res Bkr control switch.

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
262001	A4.04	3.6	3.7

Suggested Testing Environment: Simulator

Alternate Path: ☒ Yes ☐ No   SRO Only: ☐ Yes ☒ No   Time Critical: ☐ Yes ☒ No

Reference(s):

  Procedure: CPS 3501.01   Revision: 29a

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

Testing Method: ☐ Simulate   ☒ Perform

Estimated Time to Complete: 10   minutes   **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

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

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

You are the 'B' RO.

CPS 9080.02 DIESEL GENERATOR 1B OPERABILITY - MANUAL AND QUICK START OPERABILITY is scheduled to be performed.

INITIATING CUE

To support performance of CPS 9080.02, the CRS has directed you to transfer 4160V Bus 1B1 from the RAT to the ERAT per CPS 3501.01 HIGH VOLTAGE AUXILIARY POWER SYSTEM.

Report to the CRS after completing the task.

Job Performance Measure

Shift CCW Pumps (Alternate Path)

JPM Number: _____JPM466_____

Revision Number: _____01_____

Date: _____8/24/2020_____

Developed By: _____Bill Kiser_____ / _____ 8/24/20
Instructor: Print / Sign   Date

Reviewed By: _____Scott Labunski_____ / _____ 3/02/21
SME or Instructor: Print / Sign   Date

Reviewed By: _____Tim Windingland_____ / _____ 3/11/21
Operations Representative: Print / Sign   Date

Approved By: _____Matthew Beeler_____ / _____ 3/11/21
Training Department: Print / Sign   Date

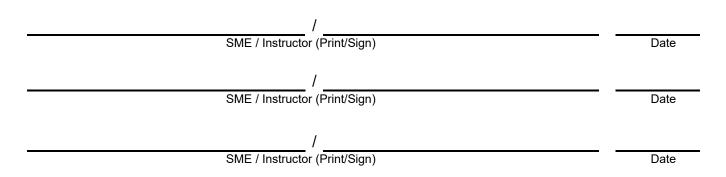SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other)

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified.

6. Task standards identified and verified by instructor or SME review.

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured.

9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure:	3203.01	Revision:	37
Procedure:	5040.01	Revision:	28d
Procedure:	3317.01	Revision:	33e
Procedure:	3317.02	Revision:	18d

10. Verify cues both verbal and visual are free of conflict.

11. Verify performance time is accurate.

12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:

_____ / _____   _____
  SME / Instructor (Print/Sign)   Date

_____ / _____   _____
  SME / Instructor (Print/Sign)   Date

_____ / _____   _____
  SME / Instructor (Print/Sign)   Date

Revision Record (Summary)

Revision #	Summary
00	6/18/15 – New JPM.
01	8/24/20 – Updated references. Updated JPM template.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM466 per step 2)

   a. Initialize to any suitable at power IC.

   b. Freeze the simulator.

   c. Save to a different IC if JPM is being used more than once. IC-216 is saved for the ILT 19-1 NRC exam (PW 13852).

   d. This completes the setup for this JPM.

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

2. JPM Administration

   a. Reset to the IC saved after performing step 1 above. IC-216 is saved for the ILT 19-1 NRC exam (PW 13852).

   b. Open and execute Simulator Lesson Plan ILT 19-1 NRC Exam JPMs LP.

   c. Release JPM466 which will perform the following:

      - Insert YP_XMFTB_3918 to trip CCW Pump 1B 45 seconds after 1CC01PC control switch is taken to STOP.

      - Insert override to make CCW Pump 1C appear to run in a 'deadheaded' condition if started after 1CC02C is reported SHUT (S_A11_A07_S03=5, S_A11_A07_S03=2, H_A11_A07_DS09_1=ON, H_A11_A07_DS08_1=OFF, H_A11_A07_DS07_1=OFF, H_A11_A04_M06_1=1, time delay = 3 seconds, H_A11_A04_MO6_1=0.6).

   d. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.

   e. Save to a different IC if required.

   f. Freeze the simulator.

SRRS: 3D.100; There are no retention requirements for this section

INITIAL CONDITIONS

You are the 'B' RO.

The plant is operating at power.

The CRS has just informed the Control Room team that they will be making preparations to hang a clearance for MMD to perform maintenance on CCW Pump 1C.

INITIATING CUE

Shift CCW pumps from B/C CCW Pumps operating to A/B CCW Pumps operating IAW CPS 3203.01 COMPONENT COOLING WATER (CC) Section 8.1.2 Pump Shift.

A Field Operator is stationed to support the task.

Report to the CRS after completing the task.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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: _____ JPM Sequence #: _____ of _____

Task Standard:

The examinee will respond to a loss of Component Cooling Water (CCW) pumps (1 continues to run) by securing the running Fuel Pool Cooling (FC) pump and shutting the FC Heat Exchanger (HX) valves IAW CPS 3317.01 FUEL POOL COOLING AND CLEANUP (FC).

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet** and the following: • CPS 3203.01 Component Cooling Water (CC)				
01	8.1.2.1 Vents Component Cooling Water (CCW) pump 'A' casing.	Examinee directs the Field Operator vent the standby CCW pump IAW CPS 3203.01.	☐	☐	___
CUE	If the examinee directs the Field Operator to vent the standby CCW pump, acknowledge the order and report " the 'A' Component Cooling Water Pump venting is complete".				
*02	8.1.2.2 Starts Component Cooling Water (CCW) pump 'A'.	**Examinee places control switch for 1CC01PA at 1H13-P800-5040 to the 'START' position.** Examinee verifies RED light ON, GREEN light OFF. Observes CCW Pump 1A motor current pegs high then lowers to the normal band (~53amps).	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*03	8.1.2.3 – 8.1.2.5 Secures Component Cooling Water (CCW) pump 'C'.	Examinee directs the Field Operator to slowly shut 1CC002C.	☐	☐	___
		Examinee places control switch for 1CC01PC at 1H13-P800-5040 to the 'STOP' position. Examinee verifies RED light OFF, GREEN light ON.	☐	☐	___
		Examinee directs the extra EO to open 1CC002C.	☐	☐	___

CUE	If the examinee directs the Field Operator to: • slowly shut 1CC002C, acknowledge the order and report "1CC002C is Shut". • slowly open 1CC002C, acknowledge the order and report "1CC002C will <u>not</u> Open". If the examinee reports the failure of 1CC002C and/or requests maintenance support, as CRS acknowledge the report/request and respond, Maintenance is notified".

ALTERNATE PATH BEGINS

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
04	Responds to AUTO TRIP PUMP/MOTOR annunciator 5040-1B. Recognizes that CCW Pump 'B' and 'C' are unavailable.	Examinee: • acknowledges and announces annunciator. • recognizes and reports CCW Pump 'B' is TRIPPED. • reviews Annunciator Response Procedure (ARP).	☐	☐	___
		Examinee recognizes there is only one CCW pump available (No standby) and that the following must be performed: • Shutdown the running FC pump per CPS 3317.01 FUEL POOL COOLING AND CLEANUP (FC).	☐	☐	___
NOTE:	Investigation will NOT reveal any cause and if attempted, CCW Pump 'B' will not restart. Heat Exchange isolation will occur after pump is secured.				
CUE	If the examinee requests permission or recommends securing FC per the 5040-1B ARP actions, direct the examinee to perform recommended actions. Provide examinee a copy of CPS 3317.01 FUEL POOL COOLING AND CLEANUP (FC) once he/she locates the MCR copy.				
05	CPS 3317.01 8.1.3.1 – 8.1.3.3 8.1.4.12.1 – 8.1.4.12.2 Performs prep activities to shutdown Fuel Pool Cooling (FC).	Examinee determines: • IFTS is not lined up for operation. • FC pumps are not being shifted. • Upper Pool level is being maintained by a Field Operator	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	If asked, respond as CRS or WCS as applicable, "A Field Operator is stationed to maintain Upper Pool level per step 8.1.4.12.2 of CPS 3317.01 FUEL POOL COOLING AND CLEANUP (FC)".				
*06	CPS 3317.01 8.1.4.12.3 Secures FC return flow from Containment Pools.	**Examinee shuts 1FC007 or 1FC008 by taking its respective control switch to the 'CLOSE' position.** Examinee verifies 1FC007(8) GREEN light ON, RED light OFF.	☐	☐	___
*07	CPS 3317.01 8.1.4.12.4 Secures FC supply flow to Containment Pools.	**Examinee shuts 1FC037 or 1FC036 by taking its respective control switch to the 'CLOSE' position.** Examinee verifies 1FC037(36) GREEN light ON, RED light OFF.	☐	☐	___
08	CPS 3317.01 8.1.4.12.5 Completes manual isolation of FC return flow from Containment Pools.	Examinee shuts 1FC008 or 1FC007 by taking its respective control switch to the 'CLOSE' position. Examinee verifies 1FC008(7) GREEN light ON, RED light OFF.	☐	☐	___
09	CPS 3317.01 8.1.4.12.6 Completes manual isolation of FC supply flow to Containment Pools.	Examinee shuts 1FC036 or 1FC037 by taking its respective control switch to the 'CLOSE' position. Examinee verifies 1FC036(37) GREEN light ON, RED light OFF.	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
10	CPS 3317.01 8.1.3.4 Removes Filter Demineralizer from service.	Examinee contacts a Field Operator or request the CRS / WCS direct a Field Operator to remove the on service FC filter demineralizer from service IAW CPS 3317.02.	☐	☐	___
CUE	Acknowledge request and report, "The on service FC filter Demineralizer has been removed from service IAW CPS 3317.02.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
11	CPS 3317.01 8.1.3.5 – 8.1.3.6 Isolates Filter Demineralizer.	Examinee shuts the following valves by placing the control switches to the 'CLOSE' position and verifies GREEN light ON, RED light OFF. • 1FC017, FC Demin Inlet Header Valve. • 1FC023, FC Demin Outlet Header Valve. • 1FC016B, FC Pump 1B Discharge Crosstie Valve. • 1FC024B, FC Heat Exchanger 1B Inlet Crosstie Valve.	☐	☐	___
		Examinee shuts the following valve by placing the control switch to the 'CLOSE' position and verifies GREEN light ON, RED light OFF. • 1FC004B, Filter Demineralizer Bypass to Heat Exchanger Valve.	☐	☐	___
*12	CPS 3317.01 8.1.3.7 Stops operating FC pump.	**Examinee places control switch for 1FC02PB, FC pump 1B to the 'STOP' position.** Examinee verifies RED light OFF, GREEN light ON.	☐	☐	___
*13	CPS 3317.01 8.1.3.8 Isolates FC pump.	**Examinee places control switch for 1FC011B, FC Pmp 1B Suct Valve to the 'CLOSE' position.** Examinee verifies GREEN light ON, RED light OFF.	☐	☐	___

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
14	CPS 3317.01 8.1.3.9 Ensures FC Surge Tank level is maintained within specifications.	Examinee contacts a Field Operator or request the CRS / WCS direct a Field Operator to lower FC Surge Tank level per CPS 3317.01 section 8.1.4.16 as necessary to maintain level < 27 feet.	☐	☐	___
CUE	If asked, respond as CRS or WCS as applicable, "A Field Operator is stationed to maintain FC Surge Tank level per step 8.1.3.9 of CPS 3317.01 FUEL POOL COOLING AND CLEANUP (FC)".				
*15	CPS 3317.01 8.1.3.10 ARP 5040-1B Shuts FC Heat Exchanger Outlet Valves.	**Examinee places control switch for 1CC076B to the 'CLOSE' position.** Examinee verifies GREEN light ON, RED light OFF.	☐	☐	___
CUE	JPM is complete.				

JPM Stop Time: _____

....

JPM SUMMARY

Operator's Name: _____ **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Shift CCW Pumps (Alternate Path)

JPM Number: JPM466   Revision Number: 01

Task Number and Title: 320301.31 Operate CCW With One or Two Pumps and One Hx In Service.

Task Standard: The examinee will respond to a loss of Component Cooling Water (CCW) pumps (1 continues to run) by securing the running Fuel Pool Cooling (FC) pump and shutting the FC Heat Exchanger (HX) valves IAW CPS 3317.01 FUEL POOL COOLING AND CLEANUP (FC).

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
400000	A2.01	3.3	3.4

Suggested Testing Environment: Simulator

Alternate Path: ☒ Yes ☐ No   SRO Only: ☐ Yes ☒ No   Time Critical: ☐ Yes ☒ No

Reference(s):

Procedure: CPS 3203.01   Revision: 37
Procedure: CPS 5040.01   Revision: 28d
Procedure: CPS 3317.01   Revision: 33e
Procedure: CPS 3317.02   Revision: 18d

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

Testing Method: ☐ Simulate   ☒ Perform

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

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily?   ☐ Yes   ☐ No

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

You are the 'B' RO.

The plant is operating at power.

The CRS has just informed the Control Room team that they will be making preparations to hang a clearance for MMD to perform maintenance on CCW Pump 1C.

INITIATING CUE

Shift CCW pumps from B/C CCW Pumps operating to A/B CCW Pumps operating IAW CPS 3203.01 COMPONENT COOLING WATER (CC) Section 8.1.2 Pump Shift.

A Field Operator is stationed to support the task.

Report to the CRS after completing the task.

Job Performance Measure

Startup the Control Room Ventilation System (VC) in the High Radiation Mode (Alternate Path)

JPM Number: ___JPM565___

Revision Number: ___00___

Date: ___8/24/2020___

Developed By: _____Bill Kiser_____ / _____ ___8/24/20___
　　　　　　　　　　　　Instructor: Print / Sign　　　　　　　　　　　　　　Date

Reviewed By: _____Brian Glynn_____ / _____ ___10/14/20___
　　　　　　　　　　　SME or Instructor: Print / Sign　　　　　　　　　　　　Date

Reviewed By: _____Tim Windingland_____ / _____ ___3/11/21___
　　　　　　　　　Operations Representative: Print / Sign　　　　　　　　　　Date

Approved By: _____Matthew Beeler_____ / _____ ___3/11/21___
　　　　　　　　　Training Department: Print / Sign　　　　　　　　　　　　Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)
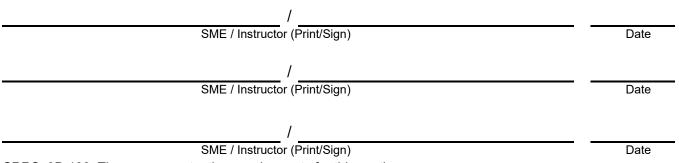
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JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

> **NOTE:** All steps of this checklist should be performed upon initial validation.
> Prior to JPM usage, revalidate JPM using steps 9 and 13 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, simulator, or other) _____

4. Initial setup conditions are identified.

5. Initiating cue (and terminating cue if required) are properly identified. _____

6. Task standards identified and verified by instructor or SME review. _____

7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____

8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____

9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure:		Revision:	
Procedure:	CPS 3402.01	Revision:	33
Procedure:	CPS 3402.01H002	Revision:	0a
Procedure:	CPS 5050.07	Revision:	33c
Procedure:	CPS 5052.07	Revision:	34a
Procedure:	CPS 5050.02	Revision:	34
Procedure:	CPS 5050.08	Revision:	31d

10. Verify cues both verbal and visual are free of conflict.

11. Verify performance time is accurate. _____

12. If the JPM cannot be performed as written with proper responses, then revise the JPM. _____

13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

_____ / _____   _____
SME / Instructor (Print/Sign)   Date

SRRS: 3D.100; There are no retention requirements for this section

Revision Record (Summary)

Revision #	Summary
00	8/24/20 – New JPM.

SETUP INSTRUCTIONS

1. IC Setup (NA if administering JPM565 per step 2)

    a. Initialize to any suitable IC with Control Room Ventilation (VC) train 'A' running in normal mode.

    b. Freeze the simulator.

    c. Save to a different IC if JPM is being used more than once. IC-216 is saved for the ILT 19-1 NRC exam (PW 13852).

    d. This completes the setup for this JPM.

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

2. JPM Administration

    a. Reset to the IC saved after performing step 1 above. IC-216 is saved for the ILT 19-1 NRC exam (PW 13852).

    b. Open and execute Simulator Lesson Plan ILT 19-1 NRC Exam JPMs LP.

    c. Release JPM565 which will insert the following malfunctions and overrides:

        *   A12_A03_S72_1 Press (VC M/U Train A Hi Rad Reset PB)

        *   VC0VCVC115YAFP 100% (VC115YA Fail To Position)

        *   A12_A05_S19 Bypass (VC Supply Air/Filter Dampers 0VC9YA-11YA)

        *   A12_A03_M01_1 0.58 (OS Air Inlet Rad Monitor Div 1 Rad Level – 100 mR/hr)

        *   A12_A03_M02_1 0.35 (OS Air Inlet Rad Monitor Div 1 Rad Level – 8 mR/hr)

        *   A12_A04_M01_1 0.6 (OS Air Inlet Rad Monitor Div 2 Rad Level – 100 mR/hr)

        *   A12_A04_M02_1 0.5 (OS Air Inlet Rad Monitor Div 2 Rad Level – 40 mR/hr)

        *   CAM1PR009ATV_VALUE1 14 (1RIX-PR009A Ch 1 Override – 100 mR/hr)

        *   CAM1PR009CTV_VALUE1 4 (1RIX-PR009C Ch 1 Override – 8 mR/hr

        *   CAM1PR009BTV_VALUE1 12 (1RIX-PR009B Ch 1 Override – 100 mR/hr)

        *   CAM1PR009DTV_VALUE1 5 (1RIX-PR009D Ch 1 Override – 40 mR/hr)

        *   A12_A01_07_11_TVM Steady (5050-7L Malfunction Hi Smoke / Rad / Chlorine Supply Filter Dampers Div 1) following 30 sec time delay.

d. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.

e. Save to a different IC if required.

f. Freeze the simulator.

INITIAL CONDITIONS

You are the 'B' RO.

A Loss of Coolant Accident (LOCA) has occurred resulting in a reactor scram.

INITIATING CUE

THIS IS A TIME CRITICAL JPM.

You have just received the following annunciators:

- 5050-7L MALFUNCTION HI SMOKE/RAD/CL SUP FILT DMPRS DIV 1
- 5050-7M HI RADIATION CONT RM HVAC SYS DIVISION 1
- 5052-7L MALFUNCTION HI SMOKE/RAD/CL SUP FILT DMPRS DIV 2
- 5052-7M HI RADIATION CONT RM HVAC SYS DIVISION 2

Respond to annunciators as appropriate.

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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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 IS A TIME CRITICAL JPM. Per OP-CL-102-106 Operator Response Time Master List At CPS, on a failure of the operating VC train to start High Rad Mode (TCA 7), the operator must shift to the opposite VC train and initiate High Rad mode. This must occur within 20 minutes of an unisolable Large Line Break LOCA (which is a DBA LOCA) concurrent with a LOOP (ref: EC340118/Alternate Source Term).

The timeclock starts when the candidate acknowledges the initiating cue.

· ·

SRRS: 3D.100; There are no retention requirements for this section

JPM Start Time: _____   JPM Sequence #: _____   of _____

Task Standard:
The examinee will attempt to place the operating Control Room HVAC (VC) train in Hi Rad Mode, but will NOT be successful. Using the Emergency Shift Of Operating Trains – Hard Card OR CPS 3402.01 Control Room HVAC (VC) Step 8.3.9.1, the examinee will successfully secure the operating VC train and start the standby train (in Hi Rad Mode).

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the **Cue Sheet.** When it is located in the MCR, provide the examinee with CPS 3402.01 Control Room HVAC (VC).				
01	Reviews applicable Annunciator Response Procedures (ARPs).	Examinee reviews ARPs for annunciators: • 5050/52-7L • 5050/52-7M Examinee proceeds to CPS 3402.01 Control Room HVAC (VC).	☐	☐	___
NOTE:	The examinee may skip this step and choose to proceed directly to CPS 3402.01 8.3.9 (Hard Card at P801). This is a conservative action and should be documented as a competency hit. The examinee may skip this step if following 5050/5052-7L ARP Operator Actions and proceed directly to step 03.				
02	3402.01 8.3.3.1 – 8.3.3.2 Attempts to place the operating Control Room HVAC (VC) train in Hi Rad Mode.	Examinee determines that operation of VC in the High Radiation mode may still be achieved manually. • On 1H13-P801-5050/5052, the examinee Depresses <u>both</u> Cont Rm Mu Trn Hi Rad initiation push-buttons.	☐	☐	___
CUE	If the examinee reports applicable LCO to the CRS, acknowledge the report.				

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
03	3402.01 8.3.3.3 5050/5052-7L ARP Attempts to manually place the Supply Filter Train 'A' in service.	Examinee determines that the Supply Filt Trn A did not unisolate. • On 1H13-P801-5050, the examinee rotates the Sply Air Fltr Dmprs 0VC09YA/ 10YA/11YA control switch to the FILTER position. Examinee determines that operation of VC in the High Radiation mode cannot be achieved on the operating train.	☐	☐	____
ALTERNATE PATH BEGINS					
CUE	If the examinee reports shifting Control Room Ventilation (VC) trains, acknowledge the report.				
*04	3402.01 8.3.9.1.1 - 2 (Hard Card at P801) Secures the operating VC train.	**On 1H13-P801-5050, the examinee rotates the control switch for 0VC03CA, Cont Rm Train A Supply Fan to the STOP position.** • Verifies 0VC03CA, Cont Rm Train A Supply Fan stops (green light ON, red light OFF) • Verifies 0VC04CA, Cont Rm Rtrn Fan stops (green light ON, red light OFF)	☐	☐	____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*05	3402.01 8.3.9.1.3 - 4 (Hard Card at P801) Starts the standby train (in Hi Rad Mode)	**On 1H13-P801-5052, the examinee rotates the control switch for 0VC03CB, Cont Rm Trn B Supply Fan to the START position.** • Verifies 0VC03CB, Cont Rm Trn B Supply Fan starts (red light ON, green light OFF) • Verifies 0VC04CB, Cont Rm Rtrn Fan starts (red light ON, green light OFF)	☐	☐	___
*06	3402.01 8.3.9.1.5 – 8.3.9.1.7 (Hard Card at P801) Opens/verifies open the correct Min Air Flow damper.	Determines that 1RIX-PR009A and 1RIX-PR009B radiation levels indicate higher than 1RIX-PR009C and 1RIX-PR009D.	☐	☐	___
		On 1H13-P801-5050, the examinee verifies 0VC01YA, Cont Rm Min O.A. Intake Damper A OPEN (red light ON, green light OFF)	☐	☐	___
		On 1H13-P801-5052, the examinee rotates the control switch for 0VC01YB, Cont Rm Min O.A. Intake Damper B to the SHUT position. Verifies 0VC01YB, Cont Rm Min O.A. Intake Damper B SHUT (red light OFF, green light ON)	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	*Evaluator record the following:* • *Time step 06 is complete: _____* • *JPM start time (page 7): _____* • *Difference between JPM start and step 06 completion: _____* Verify difference in times recorded does not exceed 20 minutes.				
07	3402.01 8.3.9.2 (Hard Card at P801) Verifies proper train response per CPS 3402.01 section 8.3.3.	Examinee verifies: Sply Air Filt Trn B alignment (8.3.3.3) Cont Rm HVAC MU Air Fan B running (8.3.3.4) MU Filt flow path alignment (8.3.3.5)	☐	☐	____

Examinee verifies:

Sply Air Filt Trn B alignment (8.3.3.3)

Component	Position	Green Light	Red Light
0VC09YB	Open	OFF	ON
0VC10YB	Shut	ON	OFF
0VC11YB	Open	OFF	ON

Cont Rm HVAC MU Air Fan B running (8.3.3.4)

Component	Position	Green Light	Red Light
0VC05CB	ON	OFF	ON

MU Filt flow path alignment (8.3.3.5)

Component	Position	Green Light	Red Light
0VC02YB	Open	OFF	ON
0VC06YB	Open	OFF	ON
0VC114YB	Modulating	ON	ON

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
07 (cont.)		Damper alignment including Max Intake and Purge dampers/MCR Locker fan (8.3.3.7)			

Component	Position	Green Light	Red Light
0VC03YA/B	Shut	ON	OFF
0VC05YA/B	Shut	ON	OFF
0VC48YA/B	Shut	ON	OFF
0VC49YA/B	Shut	ON	OFF
0VC81YA/B	Shut	ON	OFF
0VC115YA/B	Shut	ON	OFF
0VC69Y	Shut	ON	OFF
0VC70Y	Shut	ON	OFF
0VC11C	OFF	ON	OFF

CUE	The JPM is complete.

JPM Stop Time: _____

....

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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JPM SUMMARY

Operator's Name: _____ **Emp. ID#:** _____

Job Title: ☐ EO ☐ RO ☐SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Startup the Control Room Ventilation System (VC) in the High Radiation Mode (Alternate Path)

JPM Number: JPM565   Revision Number: 00

Task Number and Title: 340201.31 High Radiation Isolation Operations Of The Control Room Ventilation System.

Task Standard: The examinee will attempt to place the operating Control Room HVAC (VC) train in Hi Rad Mode, but will NOT be successful. Using the Emergency Shift Of Operating Trains – Hard Card OR CPS 3402.01 Control Room HVAC (VC) Step 8.3.9.1, the examinee will successfully secure the operating VC train and start the standby train (in Hi Rad Mode).

K/A Number and Importance:

K/A System	K/A Number	Importance (RO/SRO)	
2930003	A4.01	3.2	3.2

Suggested Testing Environment: Simulator

Alternate Path: ☒ Yes ☐ No   SRO Only: ☐ Yes ☒ No   Time Critical: ☒ Yes ☐ No

Reference(s):

Procedure:	CPS 3402.01	Revision:	33
	CPS 3402.01H002		0a
	CPS 5050.07	Revision:	33c
	CPS 5052.07	Revision:	34a
	CPS 5050.02	Revision:	34
	CPS 5050.08		31d

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: ___15___ minutes   **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

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

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

SRRS: 3D.105 (when utilized for operator initial or continuing training)

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

You are the B RO.

A Loss of Coolant Accident (LOCA) has occurred resulting in a reactor scram.

INITIATING CUE

THIS IS A TIME CRITICAL JPM.

You have just received the following annunciators:

- 5050-7L MALFUNCTION HI SMOKE/RAD/CL SUP FILT DMPRS DIV 1
- 5050-7M HI RADIATION CONT RM HVAC SYS DIVISION 1
- 5052-7L MALFUNCTION HI SMOKE/RAD/CL SUP FILT DMPRS DIV 2
- 5052-7M HI RADIATION CONT RM HVAC SYS DIVISION 2

Respond to annunciators as appropriate.