Job Performance Measure

APRM GAIN ADJUSTMENT FACTOR VERIFICATION

JPM Number: ___A-N-1-R___

Revision Number: ___00___

Date: ___11/22___

Developed By: _____Derek Siuda_____ / _____ _____
Instructor: Print / Sign   Date

Approved By: ___Jonathan Chapman___ / _____ _____
Facility Representative: 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:	DOS 0500-06	Revision:	33
Procedure:	Op Aid 188	Revision:	03
Procedure:	Op Aid 203	Revision:	09
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	New JPM developed for the ILT 22-1 (2023-301) NRC Exam

SETUP INSTRUCTIONS:

This is an admin JPM that is performed in the Simulator or Classroom

DOCUMENT PREPARATION

- Marked up copy of Data Sheet 1 from DOS 0500-06, APRM GAIN ADJUSTMENT FACTOR VERIFICATION, with Monday's data filled in.
- Clean copy of DOS 0500-06, APRM GAIN ADJUSTMENT FACTOR VERIFICATION
- Core Thermal Power Edit (OD-9)
- Op Aid 188, D2 FEEDWATER TEMPERATURE VS. CORE THERMAL POWER (ALL FWHs IN SERVICE)
- Op Aid 203, D2 TURBINE FIRST STAGE PRESSURE VS. CORE THERMAL POWER (NOMINAL FEEDWATER HEATING)

INITIAL CONDITIONS

1. Unit 2 is operating at 100% power.

2. You are the Unit 2 Aux NSO.

3. Today is Tuesday, April 11, 2023.

4. The APRM Gain Adjustment Factor Verification needs to be performed for today.

5. All Feedwater Heaters are in service.

6. 1st Stage Turbine Pressure is 803 psig per PPC point DEHC_A060.

7. Average Feedwater Temperature is 355°F per PPC point TFW.

8. Nominal AGAF is 1.00 per Unit Status Sheet.

INITIATING CUE

1. The Unit Supervisor directs you to perform DOS 0500-06, APRM GAIN ADJUSTMENT FACTOR VERIFICATION, for today.

2. Inform the Unit Supervisor when the task is 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.

- -

JPM Start Time: _____   JPM Sequence #: ____ of ____ 4

Task Standard:

The Examinee will perform DOS 0500-06, APRM GAIN ADJUSTMENT FACTOR VERIFICATION, and fill out the data sheet correctly.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Provide the Examinee with the supplied copies of: • DOS 0500-06, APRM GAIN ADJUSTMENT FACTOR VERIFICATION • Op Aid 188, D2 FEEDWATER TEMPERATURE VS. CORE THERMAL POWER (ALL FWHs IN SERVICE) • Op Aid 203, D2 TURBINE FIRST STAGE PRESSURE VS. CORE THERMAL POWER (NOMINAL FEEDWATER HEATING) See included key for required items, the required items are written in RED.				
*1.	Examinee will fill in APRM #1 data	Examinee fills in following information: • RAP 99.94 • AGAF 1.000 • After verifying H.2 is met √	☐	☐	___
*2.	Examinee will fill in APRM #2 data	Examinee fills in following information: • RAP 99.38 • AGAF 1.006 • After verifying H.2 is met √	☐	☐	___
*3.	Examinee will fill in APRM #3 data	Examinee fills in following information: • RAP 99.83 • AGAF 1.001 • After verifying H.2 is met √	☐	☐	___
*4.	Examinee will fill in APRM #4 data	Examinee fills in following information: • RAP 99.54 • AGAF 1.004 • After verifying H.2 is met √	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*5	Examinee will fill in APRM #5 data	Examinee fills in following information: • RAP 99.59 • AGAF 1.004 • After verifying H.2 is met ✔	☐	☐	___
*6.	Examinee will fill in APRM #6 data	Examinee fills in following information: • RAP 99.58 • AGAF 1.004 • After verifying H.2 is met ✔	☐	☐	___
*7.	Examinee will fill in CTP	Examinee will fill in CTP as 2955	☐	☐	___
*8.	Examinee will computer CTP%	Examinee will compute CTP% as 99.9	☐	☐	___
*9.	Examinee will identify the source of AGAF and CTP	Examinee will ✔ to signify that the information was obtained from the Core Thermal Power Edit	☐	☐	___
10.	Examinee will fill in 1st State Turbine Pressure	Per Initial Conditions of JPM 1st State Turbine Pressure is 803	☐	☐	___
11.	Examinee will identify the source of 1st Stage Turbine Pressure	Examinee will ✔ to signify that the information was obtained from DEHC_A060 per Initial Conditions of JPM	☐	☐	___
12.	Examinee will identify that T206 (T306) Alternate and Panel 902(3)-7 Alternate were not used for 1st Stage Turbine Pressure	Examinee will put a ─ in the box for T206 (T306) Alternate and Panel 902(3)-7 Alternate	☐	☐	___
*13.	Examinee will verify 1st Stage Turbine Pressure vs. CTP is within allowable range	Examinee will use Op Aid 203 to verify 1st Stage Turbine Pressure vs. CTP is within allowable range and put YES in box	☐	☐	___
14.	Examinee will fill in Average Feedwater Temperature	Per Initial Conditions of JPM Average Feedwater Temperature is 355°F	☐	☐	___
15.	Examinee will identify the source of Average Feedwater Temperature	Examinee will ✔ to signify that the information was obtained from TFW per Initial Conditions of JPM	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
16.	Examinee will identify that Panel 902(3)-7 was not used for Average Feedwater Temperature	Examinee will put a – in the box for 902(3)-7	☐	☐	___
*17.	Examinee will verify Feedwater Temperature vs. CTP is within allowable range	Examinee will use Op Aid 188 to verify Feedwater Temperature vs. CTP is within allowable range and put YES in box	☐	☐	___
Note	The next 2 boxes are N/A due to: • All Feedwater Heaters being in service per the Initial Conditions of the JPM • CTP is within allowable range for both 1st Stage Turbine Pressure and Feedwater Temperature				
18.	Examinee will fill in Nominal AGAF	Per Initial Conditions of JPM Nominal AGAF is 1.00	☐	☐	___
*19.	Examinee will record the AGAF limit	Per Table 1 of DOS 0500-06, the AGAF limit is 0.020	☐	☐	___
*20.	Examinee will identify the Adjusted High AGAF Limit	The Adjusted High AGAF Limit is 1.00 + 0.020 = 1.020	☐	☐	___
*21.	Examinee will identify the Adjusted Low AGAF Limit	The Adjusted Low AGAF Limit is 1.00 - 0.020 = 0.980	☐	☐	___
*22	Examinee will record their initials signifying completion of the surveillance	Examinee will record their initials signifying completion of the surveillance	☐	☐	___
23.	Examinee will inform Unit Supervisor of task completion	Examinee will inform Unit Supervisor of task completion	☐	☐	___
Cue	Acknowledge report				

JPM Stop Time: _____

CATEGORY 1

KEY

UNIT 2(3)
DOS 0500-06
REVISION 33

DATA SHEET 1
APRM GAIN ADJUSTMENT FACTOR

WEEK FROM 4 / 10 / 23   TO 4 / 17 / 23.

	MON	TUE	WED	THU	FRI	SAT	SUN
APRM #1　　RAP*	99.71	99.94					
AGAF	1.003	1.000					
√ if AC H.2 met	✓	✓					
APRM #2　　RAP*	99.62	99.38					
AGAF	1.004	1.006					
√ if AC H.2 met	✓	✓					
APRM #3　　RAP*	100.05	99.83					
AGAF	1.000	1.001					
√ if AC H.2 met	✓	✓					
APRM #4　　RAP*	99.96	99.57					
AGAF also √ if AC H.2 met)	1.001	1.004					
√ if AC H.2 met	✓	✓					
APRM #5　　RAP*	100.10	99.59					
AGAF	0.999	1.004					
√ if AC H.2 met	✓	✓					
APRM #6　　RAP*	99.62	99.58					
AGAF	1.004	1.004					
√ if AC H.2 met	✓	✓					
CTP	2954	2955					
CTP% = (CTP/2957) * 100%	99.9	99.9					
AGAF and CTP Obtained From (Identify source) Core Thermal Power Edit (√)	✓	✓					
1st Stage Turb. Press.	802	803					
1st Stage Turb. Press. Obtained From (Identify source) (√) DEHC_A060 Preferred	✓	✓					
T206(T306) Alternate	—	—					
Panel 902(3)-7 Alternate	—	—					

* RAP = Indicated APRM reading.

KEY

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CATEGORY 1

KEY

UNIT 2(3)
DOS 0500-06
REVISION 33

DATA SHEET 1
APRM GAIN ADJUSTMENT FACTOR (CONTINUED)

	MON	TUE	WED	THU	FRI	SAT	SUN
(AC) Using graph of 1st Stage Turb. Press. Vs CTP, CTP within allowable range (Yes or No).	YES	YES					
Avg. Feedwater Temperature	355	355					
Feedwater Heater Temperature Obtained From (Identify source) TFW (√) Preferred	✓	✓					
Panel 902(3)-7	—	—					
(AC) IF all FW Heaters are in service, THEN using graph of Feedwater Temperature vs. CTP, CTP within allowable range (Yes, NO, or N/A).	YES	YES					
(AC) IF any FW Heater is removed from service, THEN using graph of Feedwater Temperature Operating Domain, CTP within NOMINAL FEEDWATER HEATING, REDUCED FEEDWATER HEATING, FCL LIMITED or ACCEPTABLE region (Yes, NO, or N/A).	N/A	N/A					
IF CTP outside allowable for either 1st Stage Turbine Pressure or Feedwater Temperature, THEN notify Unit Supv. AND initial, otherwise N/A.	N/A	N/A					
Nominal AGAF	1.00	1.00					
Record AGAF Limit	0.020	0.020					
Adjusted High AGAF Limit = (Nominal AGAF + AGAF Limit)	1.020	1.020					
Adjusted Low AGAF Limit = (Nominal AGAF - AGAF Limit)	0.980	0.980					
Recorded By: NSO Initials	⟲	TRAINING INITIALS					
Reviewed By: Unit Supervisor Initials	⟲						

KEY

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JPM SUMMARY

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

Job Title: ☒ RO

JPM Title: APRM Gain Adjustment Factor Verification

JPM Number: A-N-1-R   **Revision Number:** 00

Task Number and Title: 299L080, Perform the administrative duties for conduct of surveillance, special, or complex procedures.

Task Standard: The Examinee will perform DOS 0500-06, APRM GAIN ADJUSTMENT FACTOR VERIFICATION, and fill out the data sheet correctly.

K/A Number and Importance: Generic 2.1.18   3.6 / --

Suggested Testing Environment: Classroom

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

Reference(s):
  Procedure: DOS 0500-06   Revision: 33
  Procedure: Op Aid 188   Revision: 03
  Procedure: Op Aid 203   Revision: 09

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

1. Unit 2 is operating at 100% power.

2. You are the Unit 2 Aux NSO.

3. Today is Tuesday, April 11, 2023.

4. The APRM Gain Adjustment Factor Verification needs to be performed for today.

5. All Feedwater Heaters are in service.

6. 1st Stage Turbine Pressure is 803 psig per PPC point DEHC_A060.

7. Average Feedwater Temperature is 355°F per PPC point TFW.

8. Nominal AGAF is 1.00 per Unit Status Sheet.

INITIATING CUE

1. The Unit Supervisor directs you to perform DOS 0500-06, APRM GAIN ADJUSTMENT FACTOR VERIFICATION, for today.

2. Inform the Unit Supervisor when the task is complete.

HEAT BALANCE DATA EDIT

```
POWER (MW)                          ENTHALPY/SUBCOOLING (BTU/LB)
==============================================================================
ELECTR.(GMWE)     951.14 ( 99.64%)  DHS                      24.37
CORE (GMWT)      2955.22 ( 99.94%)  FEEDWATER (HFW)         328.77
FEEDWATER (QFW)  2943.30            RECIRC INLET (HD)       520.95
CR DRIVES (QCR)     9.86            CLEAN UP IN(HCU1)       517.05
CLEAN UP (QCU)      7.89            CLEANUP OUT (HCU2)      428.59
RAD. LOSS (QRAD)    1.80            WATER SAT (HF)          544.60
PUMPS (QPUMP)       7.42            HEAT OF VAP. (HG)       646.69
PUMP A              3.89            STEAM SAT. (HG)        1191.29
PUMP B              4.09            RX EXIT (HS)           1191.29
EFFICIENCY                 32.18%   CONTROL ROD (HCR)        69.90


FLOW   (MLB/HR)                     LOAD LINE SUMMARY
==============================================================================
TOTAL CORE (WT)   95.97 ( 97.93%)   CORE POWER               99.95%
SUBSTIT (WTSUB)   96.87             CORE FLOW (WT)           97.93%
FEEDWATER (WFW)   11.65             LOAD LINE               101.08%
CLEANUP (WCU)      0.30             LOAD LINE LIMIT         101.13%
DRIVE (WD)        31.57             FLOW BASIS                MEAS.
RATED DRIVE (WDRAT) 31.97
CONTROL ROD (WCR)  0.03


TEMPERATURE                         PRESSURE
==============================================================================
FEEDWATER (TFW)   354.98            DOME (PR)              1014.22
RECIRC IN (TD)    527.45            PRESSURE DROP (DPM)     17.96
CLEAN-UP IN (TCU1) 524.28
CLEAN-UP OUT (TCU2) 448.43


APRM CALIBRATION
==============================================================================
           1-A     2-B     3-C     4-D     5-E     6-F
   RAP    99.94   99.38   99.83   99.54   99.59   99.58
   AGAF   1.000   1.006   1.001   1.004   1.004   1.004

   WDC     6.20   11.49   18.55   25.61   31.97   36.20
   WTC    25.00   40.00   60.00   80.00   98.00  110.00


       ***   FAILED SENSORS   ***


L08-17-A BAD  | L16-17-A MAN | L32-49-B DNSC | L24-33-B DNSC | L24-17-D DNSC
L24-09-C DNSC
```
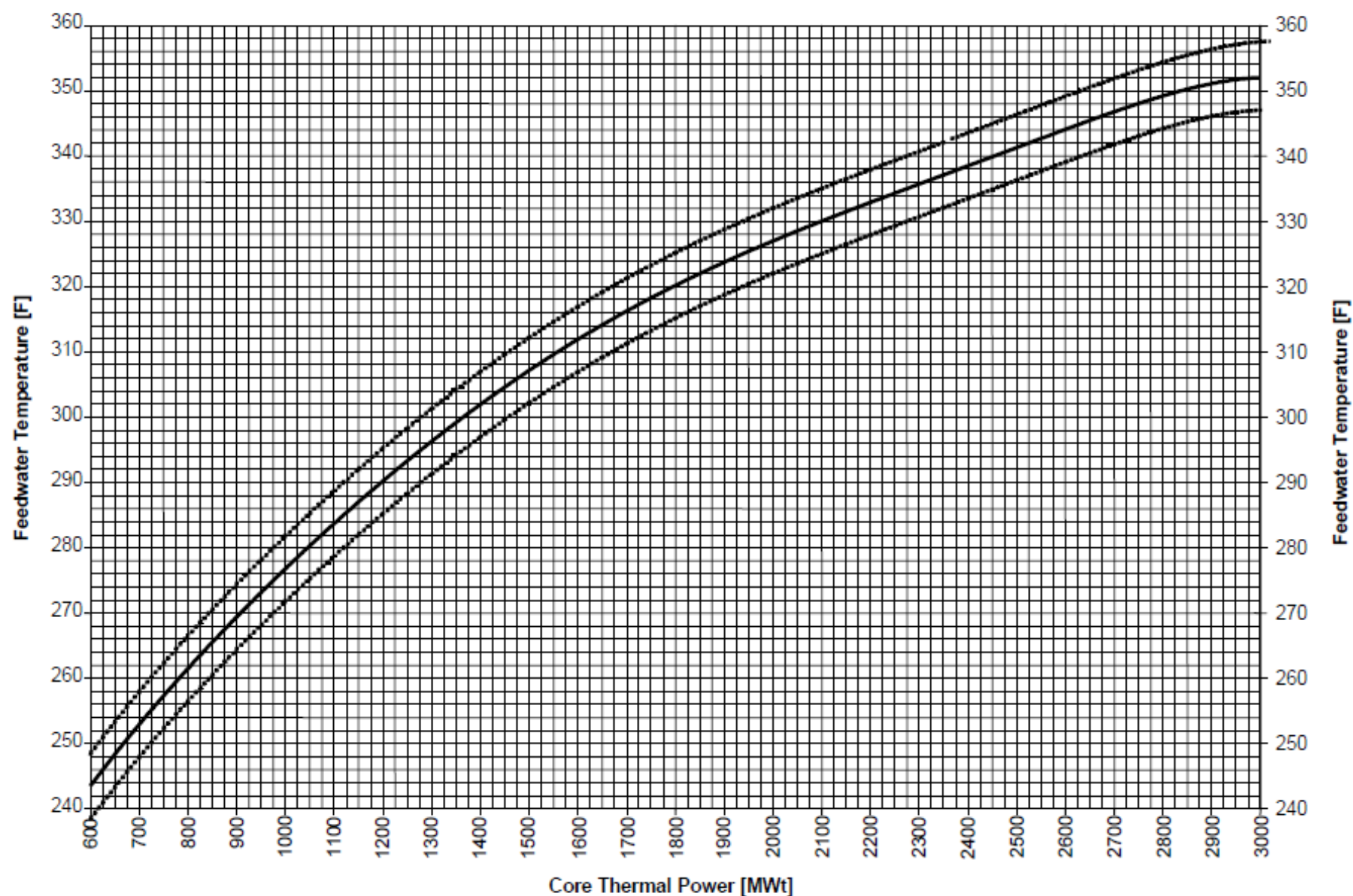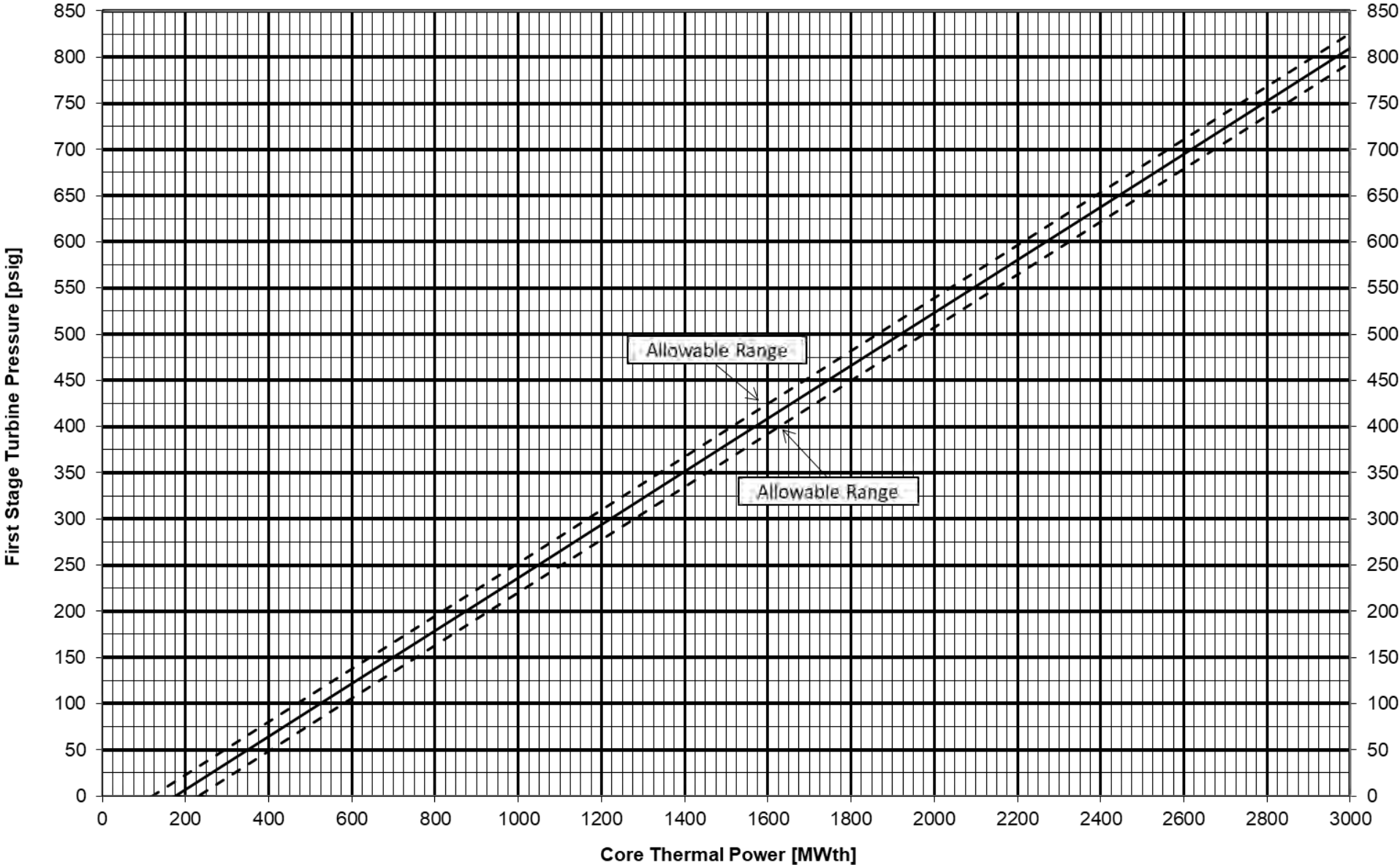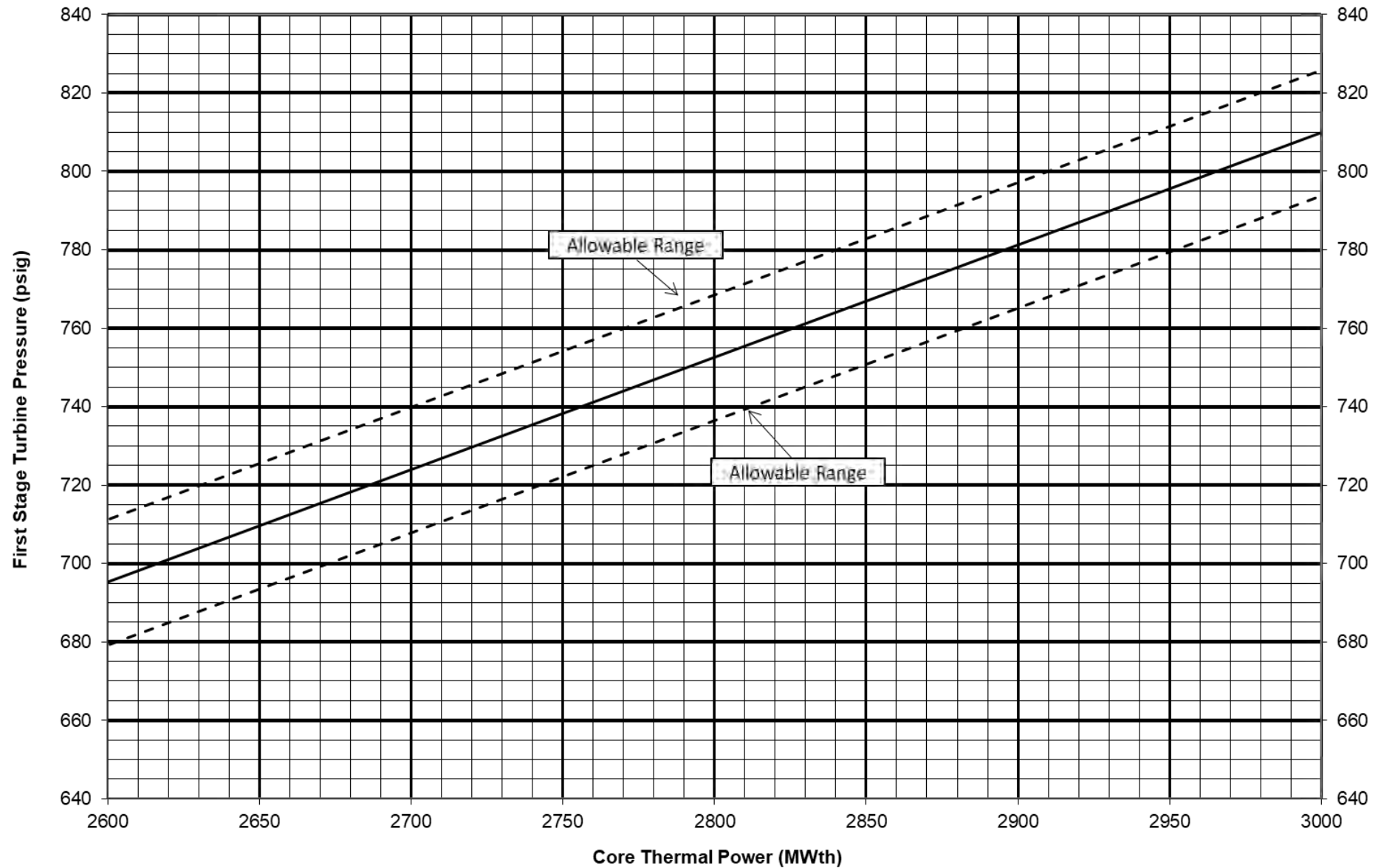
D2 Feedwater Temperature vs. Core Thermal Power (All FWHs in Service)

D2 Turbine First Stage Pressure vs. Core Thermal Power (Nominal Feedwater Heating)

D2 Turbine First Stage Pressure vs. Core Thermal Power (Nominal Feedwater Heating)

DATA SHEET 1
APRM GAIN ADJUSTMENT FACTOR

WEEK FROM 4 / 10 / 23   TO   4 / 17 / 23 .

	MON	TUE	WED	THU	FRI	SAT	SUN
APRM #1 RAP*	99.71						
AGAF	1.003						
√ if AC H.2 met	✓						
APRM #2 RAP*	99.62						
AGAF	1.004						
√ if AC H.2 met	✓						
APRM #3 RAP*	100.05						
AGAF	1.000						
√ if AC H.2 met	✓						
APRM #4 RAP*	99.96						
AGAF also √ if AC H.2 met)	1.001						
√ if AC H.2 met	✓						
APRM #5 RAP*	100.10						
AGAF	0.999						
√ if AC H.2 met	✓						
APRM #6 RAP*	99.62						
AGAF	1.004						
√ if AC H.2 met	✓						
CTP	2954						
CTP% = (CTP/2957) * 100%	99.9						
AGAF and CTP Obtained From (Identify source) Core Thermal Power Edit (√)	✓						
1st Stage Turb. Press.	802						
1st Stage Turb. Press. Obtained From (Identify source) (√) DEHC_A060 Preferred	✓						
T206(T306) Alternate	—						
Panel 902(3)-7 Alternate	—						

* RAP = Indicated APRM reading.

DATA SHEET 1
APRM GAIN ADJUSTMENT FACTOR (CONTINUED)

	MON	TUE	WED	THU	FRI	SAT	SUN
(AC) Using graph of 1st Stage Turb. Press. Vs CTP, CTP within allowable range (Yes or No).	YES						
Avg. Feedwater Temperature	355						
Feedwater Heater Temperature Obtained From (Identify source) TFW (√) Preferred	✓						
Panel 902(3)-7	—						
(AC) IF all FW Heaters are in service, THEN using graph of Feedwater Temperature vs. CTP, CTP within allowable range (Yes, NO, or N/A).	YES						
(AC) IF any FW Heater is removed from service, THEN using graph of Feedwater Temperature Operating Domain, CTP within NOMINAL FEEDWATER HEATING, REDUCED FEEDWATER HEATING, FCL LIMITED or ACCEPTABLE region (Yes, NO, or N/A).	N/A						
IF CTP outside allowable for either 1st Stage Turbine Pressure or Feedwater Temperature, THEN notify Unit Supv. AND initial, otherwise N/A.	N/A						
Nominal AGAF	1.00						
Record AGAF Limit	0.020						
Adjusted High AGAF Limit = (Nominal AGAF + AGAF Limit)	1.020						
Adjusted Low AGAF Limit = (Nominal AGAF - AGAF Limit)	0.980						
Recorded By: NSO Initials	⊕						
Reviewed By: Unit Supervisor Initials	ᛕ						

Job Performance Measure

TORUS WATER LEVEL CORRECTION SURVEILLANCE

JPM Number: A-N-2-R

Revision Number: 01

Date: 12/22

Developed By: Derek Siuda   /
Instructor: Print / Sign   Date

Approved By: Jonathan Chapman   /
Facility Representative: Print / Sign   Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

> **NOTE:** All steps of this checklist should be performed upon initial validation.
> Prior to JPM usage, revalidate JPM using steps 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:	DOS 1600-16	Revision:	08
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	New JPM developed for 2019 ILT NRC Exam
01	Updated JPM for the ILT 22-1 (2023-301) NRC Exam

SETUP INSTRUCTIONS:

This is an admin JPM that is performed in the Simulator or Classroom

DOCUMENT PREPARATION

Provide a clean copy of DOS 1600-16, Suppression Chamber Water Level Correction

INITIAL CONDITIONS

1. You are an extra NSO.

2. It is Monday Night Shift.

3. Maintenance is in progress on Unit 2 Drywell Cooler breakers.

4. Torus water level is -4.5 inches as indicated on LI 2-1602-3 on panel 902-3.

5. Drywell pressure is 1.44 psig.

6. Torus pressure is 0.02 psig.

INITIATING CUE

1. The Unit Supervisor has directed you to complete DOS 1600-16, SUPPRESSION CHAMBER WATER LEVEL CORRECTION, and verify all requirements are within specifications.

2. Inform the Unit Supervisor when the task is 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.
- -

JPM Start Time: _____   JPM Sequence #:   of   4

Task Standard:

Examinee will complete DOS 1600-16, Suppression Chamber Water Level Correction, and identify corrected Suppression Chamber water level is outside Tech Spec limits.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Provide the examinee with the supplied copy of DOS 1600-16.				
1.	Complete Data Sheet 1	Locates Data Sheet 1.	☐	☐	___
2.	Record indicated Suppression Chamber level using LI 2-1602-3 on 902-3 or local sight glass level per DOS 1600-02 (inches)	See attached KEY.	☐	☐	___
3.	Record drywell pressure (psig)	See attached KEY.	☐	☐	___
4.	Record Suppression Chamber pressure (psig)	See attached KEY.	☐	☐	___
*5.	Calculates Drywell to Suppression Chamber differential pressure (2-3) (psid)	See attached KEY.	☐	☐	___
*6.	Using Figure 1, determines if Suppression Chamber water level is within the Tech Spec limits	Examinee determines that corrected Suppression Chamber water level is outside Tech Spec limits.	☐	☐	___
7.	Informs Unit Supervisor of discrepancies and that the task is complete	Examinee notifies the Unit Supervisor.	☐	☐	___
Cue	Acknowledge report				

JPM Stop Time: _____

CATEGORY   1

UNIT 2(3)
DOS 1600-16
REVISION 08

DATA SHEET 1

SUPPRESSION CHAMBER WATER LEVEL VERIFICATION

	MON	TUES	WED	THUR	FRI	SAT	SUN
1. Record indicated Suppression Chamber level using LI 2(3)-1602-3 on 902(3)-3 or local sight glass level per DOS 1600-02 (inches)	-4.5						
2. Record drywell pressure. (psig)	1.44						
3. Record Suppression Chamber pressure. (psig)	0.02						
4. Drywell to Suppression Chamber differential pressure (2-3). (psid)	(1.42)						
5. (AC) Using figure 1, determine if Suppression Chamber water level is within the Tech Spec limits. (Yes/No)	(No)						

Independent Verification
Calculation (Sign/Date)   _____   _____   _____
MON   TUES   WED

THUR   FRI   SAT

SUN

COMMENTS:

Critical items

![Constellation logo]

CATEGORY 1

UNIT 2(3)
DOS 1600-16
REVISION 08

FIGURE 1
PRESSURE TO LEVEL CORRELATION

UNSAFE AREA   SAFE AREA   UNSAFE AREA

Corrected Torus Level

Tech Spec Maximum Water Level

Tech Spec Minimum Water Level

Drywell to Torus Differential Pressure

2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
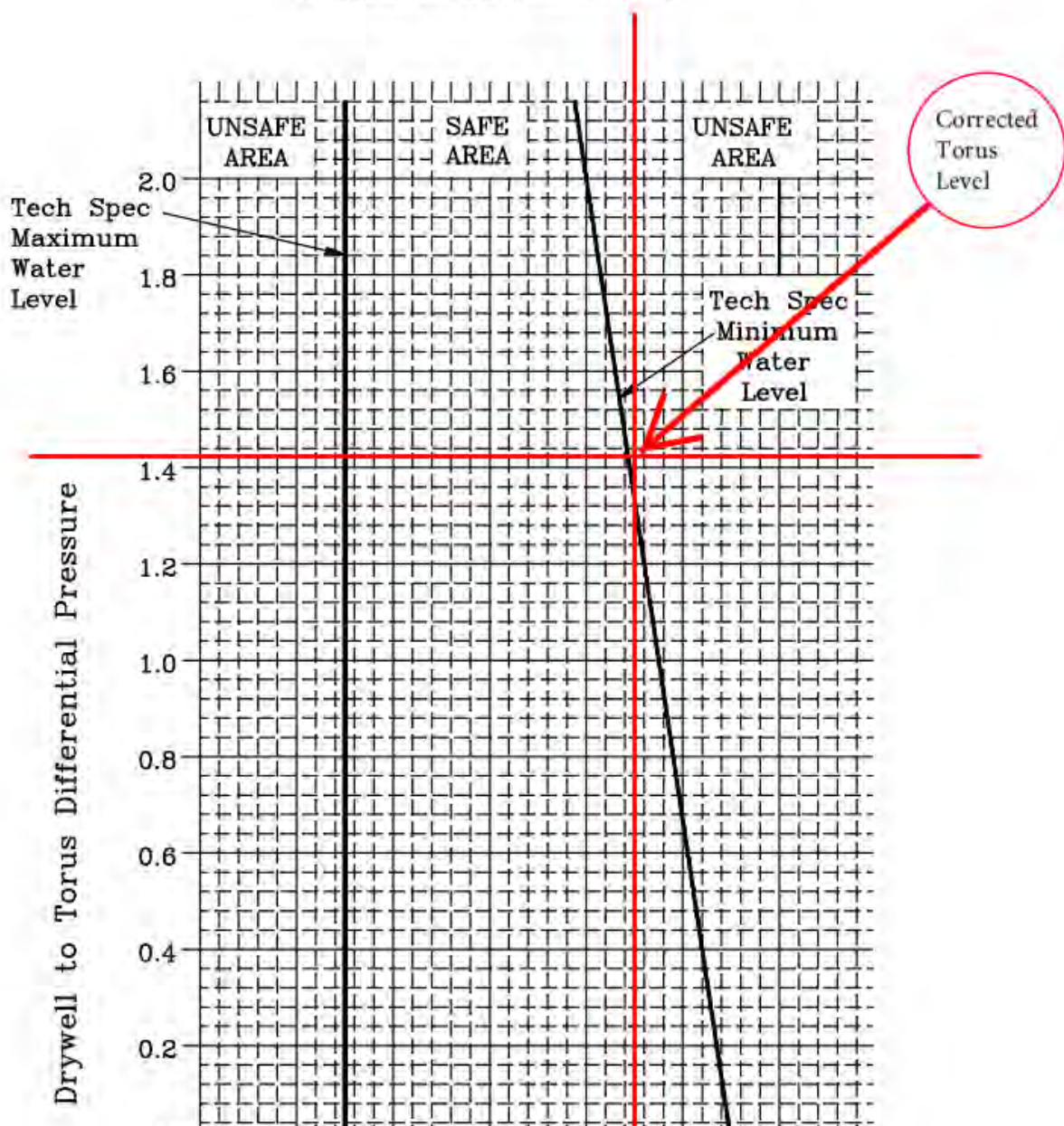
JPM SUMMARY

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

Job Title: ☒ RO

JPM Title: Torus Water Level Correction Surveillance

JPM Number: A-N-2-R   **Revision Number:** 01

Task Number and Title: 299L080, Perform the administrative duties for conduct of surveillance, special, or complex procedures.

Task Standard: Examinee will complete DOS 1600-16, Suppression Chamber Water Level Correction, and identify corrected Suppression Chamber water level is outside Tech Spec limits.

K/A Number and Importance: Generic 2.1.25   3.9 / 4.2

Suggested Testing Environment: Classroom

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

Reference(s):
  Procedure: ___DOS 1600-16___   Revision: ___08___
  Procedure: _____   Revision: _____
  Procedure: _____   Revision: _____

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

1. You are an extra NSO.

2. It is Monday Night Shift.

3. Maintenance is in progress on Unit 2 Drywell Cooler breakers.

4. Torus water level is -4.5 inches as indicated on LI 2-1602-3 on panel 902-3.

5. Drywell pressure is 1.44 psig.

6. Torus pressure is 0.02 psig.

INITIATING CUE

1. The Unit Supervisor has directed you to complete DOS 1600-16, SUPPRESSION CHAMBER WATER LEVEL CORRECTION, and verify all requirements are within specifications.

2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

VERIFY STANDBY LIQUID CONTROL HEATER SURVEILLANCE

JPM Number: A-N-3-R

Revision Number: 03

Date: 12/22

Developed By: Derek Siuda   / _____   _____
                              Instructor: Print / Sign   Date

Approved By: Jonathan Chapman   / _____   _____
                              Facility Representative: Print / Sign   Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

> **NOTE:** All steps of this checklist should be performed upon initial validation.
> Prior to JPM usage, revalidate JPM using steps 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: ___DOS 1100-02___   Revision: ___17___
   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
01	Bank JPM
02	Updated for the ILT 18-1 (2019-301) NRC Exam
03	Updated for the ILT 22-1 (2023-301) NRC Exam

SETUP INSTRUCTIONS:

This is an admin JPM that is performed in the Simulator or Classroom

DOCUMENT PREPARATION

- Markup a copy of DOS 1100-02, STANDBY LIQUID CONTROL TANK HEATER SURVEILLANCE TEST.
- Copy of Tech Spec Figure 3.1.7-2, SODIUM PENTABORATE TEMPERATURE REQUIREMENTS.

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.

2. DOS 1100-02 was performed last shift.

3. Last shift chemistry reported sodium pentaborate concentration in the SBLC storage tank is 15%.

4. The EO reported all surveillance requirements were within specifications.

INITIATING CUE

1. The Unit Supervisor has directed you to verify all requirements are within specifications, and paperwork is correct.

2. Inform the Unit Supervisor when the task is 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.
▪▪▪

JPM Start Time: _____   JPM Sequence #: _____ of   4

Task Standard:

Examinee will review the completed DOS 1100-02, STANDBY LIQUID CONTROL TANK HEATER SURVEILLANCE TEST, identify the errors made and that the Acceptance Criteria has not been met.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Provide the examinee with the provided copy of DOS 1100-02. When examinee goes to locate the Tech Spec 3.1.7-2 table, provide them with the included copy.				
*1.	Examinee should identify step I.4 should NOT have been initialed.	Identifies that step should NOT have been initialed.	☐	☐	___
*2.	Examinee should identify step I.9.g should NOT have been N/A'd.	Identifies that step should NOT have been N/A'd.	☐	☐	___
3.	Notify Unit Supervisor of discrepancies.	Notifies Unit Supervisor, to verify/correct issues.	☐	☐	___
Cue	Acknowledge report				

JPM Stop Time: _____

CATEGORY 1

INITIAL

(I.) (3.) Read and record SBLC line temperature(s):

    (•) SBLC A SUCTION
        TEMPERATURE, TIC 2(3)-1161   __91__ °F

    (•) SBLC B SUCTION
        TEMPERATURE, TIC 2(3)-1162   __87__ °F

    (•) SBLC RECIRC
        TEMPERATURE, TIC 2(3)-1163   __82__ °F

(4.) Verify all applicable SBLC line temperature ≥ 83°F
    (Desired temperature range is 87 to 110°F).

(5) Record the As Found setpoint from
    the SP window of the indicator: __90__

(6) At TIC 2(3)-1154, U2(3) SBLC TANK HEATER CONTROL,
    momentarily depress SET/ENT ([←⏎]) to display the
    Output Value screen (small "o" appears on left side of
    SP window) AND determine heater output state (100 = ON,
    0 = OFF).

(7) Momentarily depress SET/ENT to display the Setpoint
    screen.

(8) IF the heaters are OFF, THEN perform the following to
    raise the controller setpoint until TIC 2(3)-1154, U2(3)
    SBLC TANK HEATER CONTROL, heaters turn on.

    (a.) Momentarily depress Δ key to raise setpoint 1°F
        (SP decimal point will flash).

    (b.) Momentarily depress SET/ENT to program the new
        setpoint (SP decimal point steady).

    (c.) Momentarily depress SET/ENT to display the Output
        Value screen (small "o" appears on left side of SP
        window) AND determine the heater state
        (100 = ON, 0 = OFF).

    (d.) Momentarily depress SET/ENT to display the
        Setpoint screen.

    (e.) Repeat Steps I.8.a through I.8.d UNTIL Output
        Value indicates "100" (heaters on).

4 of 7

CATEGORY 1

UNIT 2(3)
DOS 1100-02
REVISION 17

INITIAL

(I) (9.) Perform the following to determine the SBLC storage tank heater turn off setpoint: .

(a) Momentarily depress ∇ key to lower setpoint 1°F (SP decimal point will flash).

(b) Momentarily depress SET/ENT to program the new setpoint (SP decimal point steady).

(c) Momentarily depress SET/ENT to display the Output Value screen (small "o" appears on left side of SP window) AND determine the heater output state (100 = ON, 0 = OFF).

(d) Momentarily depress SET/ENT to display Setpoint screen.

(e) Repeat Steps I.9.a through I.9.d UNTIL Output Value indicates "0" (heaters off).

(f.) WHEN heaters indicate OFF,
THEN record indicated setpoint: ___79___

(g.) (AC) IF heater turn off temperature is ≥5°F below the existing fluid temperature, THEN notify the Operations Shift Supervisor.

(Init. or N/A) ___N/A___

(10). Perform the following to determine the SBLC storage tank heater turn on setpoint:

(a) Momentarily depress Δ key to raise setpoint 1°F (SP decimal point will flash).

(b) Momentarily depress SET/ENT to program the new setpoint (SP decimal point steady).

(c) Momentarily depress SET/ENT to display the Output Value screen (small "o" appears on left side of SP window) AND determine the heater state (100 = ON, 0 = OFF).

(d.) Momentarily depress SET/ENT to display the Setpoint screen.

(e.) Repeat Steps I.10.a through I.10.d UNTIL Output Value indicates "100" (heaters on).

(f.) WHEN heaters indicate ON,
THEN record indicated setpoint: ___87___

5 of 7

JPM SUMMARY

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

Job Title: ☒ RO

JPM Title: Verify Standby Liquid Control Heater Surveillance

JPM Number: A-N-3-R   **Revision Number:** 03

Task Number and Title: 299L080, Perform the administrative duties for conduct of surveillance, special, or complex procedures.

Task Standard: Examinee will review the completed DOS 1100-02, STANDBY LIQUID CONTROL TANK HEATER SURVEILLANCE TEST, identify the errors made and that the Acceptance Criteria has not been met.

K/A Number and Importance: Generic 2.2.12   3.7 / 4.1

Suggested Testing Environment: Classroom

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

Reference(s):
  Procedure: ___DOS 1100-02___   Revision: ___17___
  Procedure: _____   Revision: _____
  Procedure: _____   Revision: _____

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

1. You are the Unit 2 Aux NSO.

2. DOS 1100-02 was performed last shift.

3. Last shift chemistry reported sodium pentaborate concentration in the SBLC storage tank is 15%.

4. The EO reported all surveillance requirements were within specifications.

INITIATING CUE

1. The Unit Supervisor has directed you to verify all requirements are within specifications, and paperwork is correct.

2. Inform the Unit Supervisor when the task is complete.

STANDBY LIQUID CONTROL TANK HEATER SURVEILLANCE TEST

REQUIREMENTS

   1.   Technical Specifications.

INDEPENDENT TECHNICAL REVIEW:

Disciplines	NPPT	RO	RE/QNE	CH	RS	I&C	M&ES
Required:	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[X]

    Unit 1 Review Required: [ ] YES [X] NO

    Special Reviews: NONE.

PLANT OPERATIONS REVIEW COMMITTEE (PORC):

    PORC REQUIRED   [ ] YES [X] NO

APPROVAL AUTHORITY:

    Shift Operations Supervisor (SOS), or designee

POST PERFORMANCE REVIEWS:

    NONE.

STANDBY LIQUID CONTROL TANK HEATER SURVEILLANCE TEST

A. PURPOSE:

This procedure verifies the operability of SBLC tank heaters.

B. USER REFERENCES:

1. Technical Specifications:

   a. Section 3.1.7, Standby Liquid Control (SLC) System.

2. Prints:

   a. M-33(M-364), Diagram of Standby Liquid Control Piping.

   b. 12E-2460(12E-3460), Schematic Diagram Standby Liquid Control.

C. SUPPLEMENTS:

NONE.

D. EQUIPMENT REQUIRED:

NONE.

E. PREREQUISITES:

NONE.

F. PRECAUTIONS:

NONE.

G. LIMITATIONS AND ACTIONS:

1. SBLC Storage Tank temperature should be stable during performance of this procedure.

CATEGORY 1

CATEGORY 1

UNIT 2(3)
DOS 1100-02
REVISION 17

H. ACCEPTANCE CRITERIA:

1. Acceptance criteria is denoted by (AC) at the beginning of the step to which it applies.

2. Controller heater turn on and turn off temperature within 5° of actual SBLC storage tank solution temperature.

3. No grounds or bad phases on SBLC storage tank heaters (all ground detector warning lights are equally bright.

4. IF acceptance criteria is NOT met THEN, notify Operations Shift Supervisor.

I. PROCEDURE:

INITIAL

NOTE

1. SBLC Tank Temperature Controllers and Suction Temperature Indicators are located:

- SBLC Tank Temperature Controller, TIC 2(3)-1154 is located on Instrument Rack 2202(3)-31.

- SBLC A SUCTION TEMPERATURE, TIC 2(3)-1161, is located local to SBLC suction piping.

- SBLC B SUCTION TEMPERATURE, TIC 2(3)-1162, is located local to SBLC suction piping.

- SBLC RECIRC TEMPERATURE, TIC 2(3)-1163, is located local to the recirculation piping.

2. Heater ground detectors are located on the respective SBLC Storage Tank.

---

1. Read and record SBLC storage tank solution temperature from TIC 2(3)-1154, U2(3) SBLC TANK HEATER CONTROL, at Panel 2202(3)-31:

    102 °F

2. Verify SBLC storage tank solution temperature is within the Acceptable Operating Region of Tech Spec Figure 3.1.7-2, Sodium Pentaborate Temperature Requirements. (Desired temperature range is 87 to 110°F)

CATEGORY 1

INITIAL

(I.) (3.)   Read and record SBLC line temperature(s):   ⊗

    (•) SBLC A SUCTION
        TEMPERATURE, TIC 2(3)-1161   __91__ °F   ⊗

    (•) SBLC B SUCTION
        TEMPERATURE, TIC 2(3)-1162   __87__ °F   ⊗

    (•) SBLC RECIRC
        TEMPERATURE, TIC 2(3)-1163   __82__ °F   ⊗

(4)   Verify all applicable SBLC line temperature $\geq 83°F$
      (Desired temperature range is 87 to 110°F).   ⊗

(5)   Record the As Found setpoint from
      the SP window of the indicator: __95__   ⊗

(6)   At TIC 2(3)-1154, U2(3) SBLC TANK HEATER CONTROL,
      momentarily depress SET/ENT ([←⏎]) to display the
      Output Value screen (small "o" appears on left side of
      SP window) AND determine heater output state (100 = ON,
      0 = OFF).   ⊗

(7)   Momentarily depress SET/ENT to display the Setpoint
      screen.   ⊗

(8)   IF the heaters are OFF, THEN perform the following to
      raise the controller setpoint until TIC 2(3)-1154, U2(3)
      SBLC TANK HEATER CONTROL, heaters turn on.   ⊗

    (a) Momentarily depress Δ key to raise setpoint 1°F
        (SP decimal point will flash).   ⊗

    (b) Momentarily depress SET/ENT to program the new
        setpoint (SP decimal point steady).   ⊗

    (c) Momentarily depress SET/ENT to display the Output
        Value screen (small "o" appears on left side of SP
        window) AND determine the heater state
        (100 = ON, 0 = OFF).   ⊗

    (d) Momentarily depress SET/ENT to display the
        Setpoint screen.   ⊗

    (e) Repeat Steps I.8.a through I.8.d UNTIL Output
        Value indicates "100" (heaters on).   ⊗

CATEGORY 1

INITIAL

(I) (9.) Perform the following to determine the SBLC storage tank heater turn off setpoint:

(a) Momentarily depress ∇ key to lower setpoint 1°F (SP decimal point will flash).

(b) Momentarily depress SET/ENT to program the new setpoint (SP decimal point steady).

(c) Momentarily depress SET/ENT to display the Output Value screen (small "o" appears on left side of SP window) AND determine the heater output state (100 = ON, 0 = OFF).

(d) Momentarily depress SET/ENT to display Setpoint screen.

(e) Repeat Steps I.9.a through I.9.d UNTIL Output Value indicates "0" (heaters off).

(f.) WHEN heaters indicate OFF, THEN record indicated setpoint: 79

(g.) (AC) IF heater turn off temperature is ≥5°F below the existing fluid temperature, THEN notify the Operations Shift Supervisor.

(Init. or N/A)   N/A

(10). Perform the following to determine the SBLC storage tank heater turn on setpoint:

(a) Momentarily depress Δ key to raise setpoint 1°F (SP decimal point will flash).

(b) Momentarily depress SET/ENT to program the new setpoint (SP decimal point steady).

(c) Momentarily depress SET/ENT to display the Output Value screen (small "o" appears on left side of SP window) AND determine the heater state (100 = ON, 0 = OFF).

(d.) Momentarily depress SET/ENT to display the Setpoint screen.

(e.) Repeat Steps I.10.a through I.10.d UNTIL Output Value indicates "100" (heaters on).

(f.) WHEN heaters indicate ON, THEN record indicated setpoint: 87

INITIAL

(I) (10). (g.) (AC) IF heater turn on temperature is ≥25°F above the existing fluid temperature, THEN notify the Operations Shift Supervisor.

(Init. or N/A) N/A

(11). Set TIC 2(3)-1154, U2(3) SBLC TANK HEATER CONTROL setpoint to 95°F:

(a) Momentarily depress Δ/∇ to adjust setpoint to 95°F (SP decimal point will flash).

(b) Momentarily depress SET/ENT to program the new setpoint (SP decimal point steady).

(12). © At Panel 2202(3)-31 place U2(3) SBLC TANK HEATER CONTROL (U3 Only TE 3-1154), switch in ON. © (W-5)

(•) IF leaving the area (i.e. Bulb Replacement), THEN place TIC 2(3)-1154, U2(3) SBLC TANK HEATER CONTROL, in AUTO.

(13) (AC) Note the status of all three heater ground detector lights on the STANDBY LIQUID CONTROL SYSTEM TANK HEATER GROUND DETECTOR. To check for a ground, bad phase or bad bulb, refer to chart in section J.

(14). IF any ground detector warning light is not bright, THEN test bulb by depressing the SBLC TANK HEATER GROUND DETECTOR for that heater. N/A

(•) Replace any lamp not going to full brilliance when button is pushed with a bulb type matching correctly lit lamps and retest bulb). N/A

(15. Record status of ground detector lamps. (Circle word in each table as appropriate.)

Light status WITHOUT test button depressed			Light status WITH test button depressed			
A	BRIGHT	DIM	OUT	A	BRIGHT	DIM	OUT	N/A
B	BRIGHT	DIM	OUT	B	BRIGHT	DIM	OUT	N/A
C	BRIGHT	DIM	OUT	C	BRIGHT	DIM	OUT	N/A

(16) © At Panel 2202(3)-31 place SBLC TANK HEATER CONTROL (TIC 2(3)-1154, U2(3) SBLC TANK HEATER CONTROL), switch in AUTO. ©(W-5)

CATEGORY 1

DISCUSSION:

The SBLC Storage Tank temperature Controller consists of digital indicating controller displaying both the tank temperature and the control setpoint temperature.

The SBLC storage tank heater ground detector lights are "Y" connected to the terminals of the heaters. The center of the "Y" is connected to ground through the pushbutton switch. A short on any leg of the heater will cause a change in the phase potentials with respect to ground. With the pushbutton released, the indicating lights will indicate the differences in phase potentials with respect to ground by their difference in brilliance. With the pushbutton depressed and all phases operating, all indicating lights should light with equal brilliance. If any indicating light appears dim or does not light when the pushbutton is depressed, a bad bulb or failure of one or more of the phases is indicated. The ground indicating lights are operable only when the heaters are energized.

BUTTON RELEASED	BUTTON DEPRESSED	STATUS
X	N/A	Acceptable
O	X	Ground
O	O	Bad Phase or Bad Bulb

X = Full Brilliance
O = Dim or Out

W. WRITER'S REFERENCES:

1.   Buffalo Tank Division drawing T-5124, Short Warning Lamp for Electric Heater.

2.   Fenwal Series 551XX Temperature Indicating Controller Installation Instructions.

3.   SPC #02-97-054, and SPC #03-97-055, "Setpoints for SBLC pump suction temperature switches and the tank temperature indicating controller".

4.   NED Letter dated 3/27/91, Standby Liquid Control Tank Level and Temperature Restrictions.

5.   NTS 237-100-91-02501E-02, I.R. 237/91025 Procedure Revisions Required to complete Safety Related Contact Testing Program.

6.   Yokogawa Series UT350/UT320 Digital Indicating Controllers, User's Manual.

Job Performance Measure

DETERMINE ACTIONS FOR A FIRE

JPM Number: A-N-4-R

Revision Number: 04

Date: 12/22

Developed By: Derek Siuda   / _____

                         Instructor: Print / Sign   Date

Approved By: Jonathan Chapman   / _____

                         Facility Representative: Print / Sign   Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

> **NOTE:** All steps of this checklist should be performed upon initial validation.
> Prior to JPM usage, revalidate JPM using steps 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: DOA 0010-10   Revision: 28

   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	New JPM for ILT 12-1 (2013-301) NRC Exam
01	Revised for ILT 15-1 (2016-301) NRC Exam
02	Revised for ILT 20-1 (2021-301) NRC Exam and new revision (01) of TQ-AA-150-J020
03	Updated for the 2022 LORT Requal Exam
04	Updated for the ILT 22-1 (2023-301) NRC Exam

SETUP INSTRUCTIONS:

This is an admin JPM that is performed in the Simulator or Classroom

DOCUMENT PREPARATION

A clean copy of DOA 0010-10, FIRE/EXPLOSION.

INITIAL CONDITIONS

1. Unit 2 and U3 are at 100%

2. You are an Aux NSO.

3. A fire is burning in the U2 TBX EL 517' (clean side) air compressor and switchgear room (Fire Zone 8.2.5.A), no explosion has occurred.

4. The fire started at 0817.

5. The fire has been classified as a major fire.

6. The Fire brigade has been alerted and is attempting to combat the fire.

7. The Shift Manager has determined that there is a potential entry into DSSP 0100-B1.

8. It is now 0830.

INITIATING CUE

1. The Unit supervisor has directed you to complete Attachment A of DOA 0010-10, FIRE-EXPLOSION for a fire inside the protected area in accordance with step D.1.f.

2. Inform the Unit Supervisor when the task is 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.
- -

JPM Start Time: _____   JPM Sequence #:   of   4

Task Standard:
The Examinee will dispatch an operator to open breakers for MOV 2-0220-1 and MOV 3-0220-1 per Attachment B for a fire at the U2 TBX EL 517' air compressor and switchgear room that has not been extinguished in 10 minutes using the guidance in DOA 0010-10, FIRE EXPLOSION – ATTACHMENT A, ACTIONS FOR FIRE NOT EXTINGUISHED IN 10 MINUTES.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Provide the examinee with the copy of DOA 0010-10.				
1.	Enter Attachment A, Actions for Fire Not Extinguished in 10 Minutes	Enters Attachment A of DOA 0010-10 for the fire not being extinguished in 10 minutes (fire on-going at the 13-minute mark)	☐	☐	___
*2.	Dispatch an operator to open the breaker for MOV 2-0220-1 per Attachment B	Dispatches an operator to open the breaker for MOV 2-0220-1 per Attachment B	☐	☐	___
Cue	Operator acknowledges request to open the breaker for MOV 2-0220-1 per Attachment B and confirms breaker has been opened.				
*3.	Dispatch an operator to open the breaker for MOV 3-0220-1 per Attachment B	Dispatches an operator to open the breaker for MOV 3-0220-1 per Attachment B	☐	☐	___
Cue	Operator acknowledges request to open the breaker for MOV 3-0220-1 per Attachment B and confirms breaker has been opened.				
4.	Dispatch an operator to Pre-stage at U2 250VDC MCC #2 (Bus 2A) in case entry into DSSP 0100-B1 is required	Dispatches an operator to Pre-stage at U2 250VDC MCC #2 (Bus 2A)	☐	☐	___
Cue	Operator acknowledges request and pre-stages at U2 250VDC MCC #2 (Bus 2A) .				
5.	Dispatch an operator to pre-stage at Bus 21/22 in case entry into DSSP 0100-B1 is required.	Dispatches another operator to the Bus 21/22 area.	☐	☐	___
Cue	Operator acknowledges request and pre-stages in the Bus 21/22 area.				
6.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	☐	☐	___
Cue	Acknowledge report				

JPM Stop Time: _____

JPM SUMMARY

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

Job Title: ☒ RO

JPM Title: Determine Actions for a Fire

JPM Number: A-N-4-R   **Revision Number:** 04

Task Number and Title: 295L009, Respond to a fire / explosion

Task Standard: The Examinee will dispatch an operator to open breakers for MOV 2-0220-1 and MOV 3-0220-1 per Attachment B for a fire at the U2 TBX EL 517' air compressor and switchgear room that has not been extinguished in 10 minutes using the guidance in DOA 0010-10, FIRE EXPLOSION – ATTACHMENT A, ACTIONS FOR FIRE NOT EXTINGUISHED IN 10 MINUTES.

K/A Number and Importance: Generic 2.4.25   3.3 / --

Suggested Testing Environment: Classroom

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

Reference(s):
Procedure: DOA 0010-10 _____   Revision: 28 _____
Procedure: _____   Revision: _____
Procedure: _____   Revision: _____

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

Testing Method: ☐ Simulate   ☒ Perform

Estimated Time to Complete: 12   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

1. Unit 2 and U3 are at 100%

2. You are an Aux NSO.

3. A fire is burning in the U2 TBX EL 517' (clean side) air compressor and switchgear room (Fire Zone 8.2.5.A), no explosion has occurred.

4. The fire started at 0817.

5. The fire has been classified as a major fire.

6. The Fire brigade has been alerted and is attempting to combat the fire.

7. The Shift Manager has determined that there is a potential entry into DSSP 0100-B1.

8. It is now 0830.

INITIATING CUE

1. The Unit supervisor has directed you to complete Attachment A of DOA 0010-10, FIRE-EXPLOSION for a fire inside the protected area in accordance with step D.1.f.

2. Inform the Unit Supervisor when the task is complete.