Job Performance Measure

Prepare A Request To Alter The CX/CZ Database

JPM Number: JPM423

Revision Number: 00

Date: 3 / 6 / 2018

Developed By:	Tony Jennings Instructor	3/6/18 Date
Validated By:	Cuong Hoang SME or Instructor	4/2/18 Date
Reviewed By:	James Lucas Operations Representative	4/10/18 Date
Approved By:	Tony Jennings Training Department	4/10/18 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 SME review.

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

_____ 8. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure 3512.01 Rev: 14d
Procedure 3512.01F002 Rev: 3
Procedure 2208.01F001 Rev: 8

_____ 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. Subsequent validations, sign and date below:

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

Revision Record (Summary)

Revision	Date	Description
00	3/6/18	New JPM.

SIMULATOR SETUP INSTRUCTIONS

1. No simulator setup is required for this JPM.

INITIAL CONDITIONS

The plant is at rated power.

1B21-F021, Inboard MSIV Before Seat Warmup Drain Valve has a bad limit switch and is indicating OPEN on the Plant Process Computer display screen.

1B21-F021 is actually shut.

INITIATING CUE

Prepare a request to change the CX/CZ database for the Point State parameter computer point B21DC005 to indicate NOT OPEN.

When complete, submit the request to the SM/CRS for review and approval.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the following items: • CPS 3512.01 Plant Process Computer (PPC) • CPS 3512.01F002 CX/CZ Database Alteration Log (Marked Up)				
***1**	8.3.1.1 Enters point ID into the Database Alteration Log.	Examinee enters "B21DC005" in the Point ID field of CPS 3512.01F002. *Evaluator Note – Any similar terminology entered by the examinee is acceptable.*	___	___	___
***2**	8.3.1.1 Enters desired parameter to change into the Database Alteration Log.	Examinee enters "1B21-F021 position" in the Parameter field of CPS 3512.01F002. *Evaluator Note – Any similar terminology entered by the examinee is acceptable.*	___	___	___
***3**	8.3.1.1 Enters original condition of the parameter into the Database Alteration Log.	Examinee enters "Open and/or On" in the Original Condition field of CPS 3512.01F002. *Evaluator Note – Any similar terminology entered by the examinee is acceptable.*	___	___	___
***4**	8.3.1.1 Enters modified condition of the parameter into the Database Alteration Log.	Examinee enters "Not Open and/or Off" in the Modified Condition field of CPS 3512.01F002. *Evaluator Note – Any similar terminology entered by the examinee is acceptable.*	___	___	___
***5**	8.3.1.1 Enters reason for the change into the Database Alteration Log.	Examinee enters "To make PPC indicate the actual valve position" in the Reason field of CPS 3512.01F002. *Evaluator Note – Any similar terminology entered by the examinee is acceptable.*	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6	8.3.1.1 Enters a duration after which removal/ restoration is required into the Database Alteration Log.	Examinee enters "Until limit switch problem is corrected" in the Necessary Duration field of CPS 3512.01F002. *Evaluator Cue – If asked, limit switch replacement is scoped into the next refueling outage.* *Evaluator Note – Any similar terminology entered by the examinee is acceptable.*	___	___	___
7	8.3.1.2 Makes required notifications to the SM and CRS.	Examinee enters "NA" in the notification initial blank. *Evaluator Note – Notification is only required if the point being altered is used in the reactor heat balance calculation.* *Evaluator Note – Any similar terminology entered by the examinee is acceptable.* *Evaluator Note – The examinee may or may not refer to CPS 2208.01F001 to determine that computer point B21DC005 is not used in the reactor heat balance calculation.*			
8	8.3.1.3 Obtain SM/CRS approval.	Examinee submits completed CPS 3512.01F002 CX/CZ Database Alteration Log to the examiner.			
CUE	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: Prepare A Request To Alter The CX/CZ Database
JPM Number: JPM423 Revision Number: 00
Task Number and Title: 351201.43 Obtain Approval and Alter the PPC Database.
K/A Number and Importance: 2.1.20 / RO (4.6), SRO (4.6)
Suggested Testing Environment: Classroom
Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No
Reference(s):

- CPS 3512.01 Plant Processing Computer, Rev. 14d
- CPS 3512.01F002 CX/CZ Database Alteration Log, Rev. 3
- CPS 2208.01F001 Core Thermal Power Determination, Rev. 8

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

Comments: _____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name (Print): _____

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

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

CX/CZ DATABASE ALTERATION LOG Page: _____

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ALT. NO.: 0931 POINT ID: BZ1DC005

DESCRIPTION: _____

PARAMETER: BZ1-F021 position

ORIGINAL CONDITION: Open

MODIFIED CONDITION: Not Open

REASON: To make PPC indicate the actual valve position.

NECESSARY DURATION: Until limit switch problem is corrected.

c Notify both the SM and CRS if the point being altered is used in the reactor heat balance calculations.

N/A
INITIAL

INITIAL CONDITIONS

The plant is at rated power.

1B21-F021, Inboard MSIV Before Seat Warmup Drain Valve has a bad limit switch and is indicating OPEN on the Plant Process Computer display screen.

1B21-F021 is actually shut.

INITIATING CUE

Prepare a request to change the CX/CZ database for the Point State parameter computer point B21DC005 to indicate NOT OPEN.

When complete, submit the request to the SM/CRS for review and approval.

CX/CZ DATABASE ALTERATION LOG

SCOPE OF REVISION:

- LAN format update. No technical changes.
- No revision marks used.

- ITR: M. HUDSON

CONTINUOUS USE

ORIGINATOR: ***Thomas J. Landin***

CLASS CODE: ***NNND1***

APPROVAL DATE: ***NOV 08 1998***

CHANGE NO.	*DATE*	*PAGES*
❶		
❷		
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❺

CX/CZ DATABASE ALTERATION LOG Page: _____

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ALT. NO.: 0931 POINT ID: BZ1DC005

DESCRIPTION: _____

PARAMETER: BZ1-F021 position

ORIGINAL CONDITION: Open

MODIFIED CONDITION: Not Open

REASON: To make PPC indicate the actual valve position.

NECESSARY DURATION: until limit switch problem is corrected.

c Notify both the SM and CRS if the point being altered is used in the reactor heat balance calculations. N/A INITIAL

INSTALLATION	Initial/Date	**RESTORATION**	Initial/Date
SM/CRS:	/	RESTORED BY:	/
INSTALLED BY:	/	cINDEPENDENTLY VERIFIED BY:	/
cINDEPENDENTLY VERIFIED BY:	/	SM/CRS:	/

Job Performance Measure

Perform CPS 9820.01 Core Thermal Limits

JPM Number: JPM402

Revision Number: 00

Date: 4 / 5 / 2018

Developed By:	Tony Jennings Instructor	4/5/18 Date
Validated By:	Matt Baker SME or Instructor	4/23/18 Date
Reviewed By:	James Lucas Operations Representative	5/4/18 Date
Approved By:	Tony Jennings Training Department	5/4/18 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 SME review.

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

_____ 8. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure 9820.01 Rev: 34
Procedure 9820.01D001 Rev: 32e
Procedure WC-AA-111 Rev: 5

10. Procedure WC-AA-111-F-01 Rev: 0

_____ 11. Verify cues both verbal and visual are free of conflict.

_____ 12. Verify performance time is accurate

_____ 13. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 14. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

Revision Record (Summary)

Revision	Date	Description
00	4/5/18	New JPM.

SIMULATOR SETUP INSTRUCTIONS

1. This JPM can be performed in a classroom or other secure area with the 3D cases generated per step 2.

2. The following can be used as necessary to recreate the 3D Case printouts with out of spec MFLCPR and MFLPD:

   a. Initialize to a full power IC.

   b. Insert Malfunction M3D_FLCPR_V_10 to a final value of 1.012 to raise MFLCPR for fuel assembly 21-18 to a value greater than 1.0.

   c. Insert Malfunction M3D_FLPD_V_2 to a final value of 1.083 to raise MFLPD for fuel assembly 23-32 to a value greater than 1.0.

   d. Print out a 3D case.

   e. Verify MFLCPR and MFLPD are > 1.0.

3. Freeze Simulator.

INITIAL CONDITIONS

You are the 'B' RO.

The plant is at full power with RR Pumps A and B operating in fast speed.

INITIATING CUE

The Control Room Supervisor directs you to perform the daily surveillance CPS 9820.01, Power Distribution Limits.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the following items: • CPS 9820.01 Power Distribution Limits • CPS 9820.01D001 Power Distribution Limits Data Sheet • WC-AA-111 Surveillance Program Requirements Attachment 11 Initial Sheet • WC-AA-111-F-01 Surveillance WO Disposition (Shift Authorization to Start Work filled in) • Attachment 1 – 3D Case pages 1 & 2.				
Evaluator Note – For the following steps, refer to CPS 9820.01D001 Answer Key on JPM pages 11 and 12.					
1	Completes CPS 9820.01 Prerequisites.	Notifies SMngt. Enters start date, start time, and initials CPS 9820.01D001, Power Distribution Limits Data Sheet step 5.1. *Evaluator Note – Per the initiating cue, the reactor is operating at full power.* *Evaluator Cue – Acknowledge notification as* SMngt.	___	___	___
		Verifies Core Thermal Power is ≥ 21.6% of RTP and initials CPS 9820.01D001, Power Distribution Limits Data Sheet step 5.2. *Evaluator Note – Per the initiating cue, the reactor is operating at full power.*	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1 (cont.)	Completes CPS 9820.01 Prerequisites. (cont.)	Determines that the applicable entry condition is Daily Surveillance and checks the “Daily Surveillance” box on CPS 9820.01D001, Power Distribution Limits Data Sheet step 5.3. *Evaluator Note – Per the initiating cue, the entry condition is “Daily Surveillance”.*	___	___	___
		Determines that the second character of the 3D CASE ID is 'M' and initials CPS 9820.01D001, Power Distribution Limits Data Sheet step 5.4. *Evaluator Note – The case ID number appears in the upper right hand corner of the 3D case on page 1, below the date.*	___	___	___
		Determines “2 RR pumps are in operation and checks box on CPS 9820.01D001, Power Distribution Limits Data Sheet step 5.5. *Evaluator Note – RR Pump status is provided in the initiating cue.*	___	___	___
		Reviews the 3D Case and checks boxes for ARTS, 2 LOOPS ON, and MANUAL FLOW on CPS 9820.01D001, Power Distribution Limits Data Sheet step 5.6. *Evaluator Note – This information is located to the right of OPTION on the 3D Case.*	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1 (cont.)	Completes CPS 9820.01 Prerequisites. (cont.)	Determines that core flow is accurate and CPS 9820.01, Power Distribution Limits step 5.7 is "N/A". *Evaluator Cue – If the examinee asks the SRO if core flow is accurate, cue him/her that core flow instrumentation is operating normally.*	___	___	___
2	Determines highest MAPRAT value.	Determines the highest MAPRAT value is ≤ 1.0. Initials CPS 9820.01D001, Power Distribution Limits Data Sheet step 8.2.	___	___	___
***3**	Determines the highest MFLCPR value.	Determines that the highest value of MFLCPR is >1.0 and does **NOT** initial CPS 9820.01D001, Power Distribution Limits Data Sheet. Documents out of specification value in the Comments/Deficiencies section of 9820.01D001. *Evaluator Cue – If examinee reports MFLCPR value is > 1.0, acknowledge the report and then cue him/her to complete the surveillance.* *Evaluator Note – One location will have a MFLCPR value > 1.0 (21-18). May insert a note documenting what was observed.*	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*4	Determines the highest MFLPD value.	Determines that the highest value of MFLPD is >1.0 and does **NOT** initial CPS 9820.01D001, Power Distribution Limits Data Sheet. Documents out of specification value in the Comments/Deficiencies section of 9820.01D001. *Evaluator Cue – If examinee reports MFLPD value is > 1.0, acknowledge the report and then cue him/her to complete the surveillance.* *Evaluator Note – One location has MFLPD value > 1.0 (23-32). May insert a note documenting what was observed.*	___	___	___
*5	Notifies SMngt of OOS conditions.	Notifies Shift Management that MFLCPR and MFLPD are out of specification. *Evaluator Cue – Acknowledge notification. If earlier 3D printouts are requested state the previous 3D cases are within limits.*	___	___	___
6	Notifies SMngt of surveillance completion.	Notifies Shift Management of surveillance completion. Enters stop date, stop time, and initials CPS 9820.01D001, Power Distribution Limits Data Sheet.	___	___	___
7	Attaches 3D Case to CPS 9820.01D001.	Attaches a signed, dated, labeled copy of the 3D Case used to CPS 9820.01D001, Power Distribution Limits Data Sheet.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
8	Completes WC-AA-111-F-01.	Examinee records the following information in WC-AA-111-F-01: • Work Started – enters Name, Date, and Time • Work Stopped – enters Name, Date, and Time • Surveillance Found Within Acceptance Criteria – circles NO	___	___	___
9	Completes WC-AA-111 Attachment 11.	Examinee records the following information in WC-AA-111 Attachment 11: • Procedure No. – 9820.01 or 9820.01D001 • Enters printed Name and Initial	___	___	___

CUE	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: Perform CPS 9820.01 Core Thermal Limits
JPM Number: JPM402 Revision Number: 00
Task Number and Title: 982001.01 / Evaluate Core Thermal Limits during Power Operations
K/A Number and Importance: 2.1.19 / RO (3.9), SRO (3.8)
Suggested Testing Environment: Classroom
Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No
Reference(s):

- CPS 9820.01, Power Distribution Limits, Rev. 34
- CPS 9820.01D001, Power Distribution Limits Data Sheet, Rev. 32e
- WC-AA-111 Surveillance Program Requirements, Rev. 5
- WC-AA-111-F-01 Surveillance WO Disposition Sheet, Rev. 0

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

Comments: _____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name (Print): _____

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

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

9820.01D001 ANSWER KEY

POWER DISTRIBUTION LIMITS DATA SHEET Initial

5.1 SMngt notification. Date XX/XX/XXXX Time XXXX RO

❶ 5.2 Verify Core Thermal Power ≥ 21.6% RTP. RO

5.3 Check the applicable entry condition:

- ☑ Daily surveillance (at least once per 24 hours)
- ❶ ☐ Within 12 hours after ≥ 21.6% RTP
- ❺ ☐ Within 24 hours of entering single loop RR operations
- ☐ Other (explain) _____

5.4 Verify 2nd character of 3D CASE ID is an "M". RO

5.5
- √ ☐ 2 RR pumps in operation
- ☐ 1 RR pump in operation

5.6
- √ ☐ ARTS
- ❹❸ ☑ 2 LOOPS ON
- ☑ MANUAL FLOW
- ❸ ☐ 1 LOOP ON

❶

	Step(s)	Parameter	Admin Limit (3005.01)	Acceptable Value (ITS)	Initial
	8.2	MAPRAT	≤ 0.98	≤ 1.0	RO
❶❷	8.3	MFLCPR	≤ 0.98	≤ 1.0	Note 1
	8.4	MFLPD	≤ 0.98	≤ 1.0	Note 2

8.6 Inform SMngt of surveillance completion Date XX/XX/XXXX Time XXXX RO

Corrective Action Taken

Operability Requirements:

ITS LCOs: 3.2.1 3.2.2 3.2.3
ORM ORs: None ODCM ORs: None

As applicable:
Initiated Condition Report No. _____
Initiated Work Document No. _____

Comments/Deficiencies

Note 1: MFLCPR 1.012 and greater than 1.0 (or equivalent)

Note 2: MFLPD 1.083 and greater than 1.0 (or equivalent)

Review and Approval

SMngt Review: _____
(Signature) (Date)

9820.01D001 ANSWER KEY

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

Attachment 1 – 3D Case (Page 1)

```
FOR TRAINING USE ONLY                                                    PAGE    1
                                CLINTON CYCLE 18     SEQUENCE NO 10
 CORE PARAMETERS                3D MONICORE          XX-XXX-2018 13:47 CALCULATED
 POWER  MWT          3401.      PERIODIC LOG         XX-XXX-2018 13:48 PRINTED
 POWER  MWE          1113.                           CASE ID FMLD1180410134733
 FLOW   MLB/HR      84.228      CALC RESULTS         RESTART FMLD1180410134733
 FPAPDR              *****                           LPRM SHAPE - FULL CORE
 SUBC   BTU/LB       29.98      Keff          1.0001
 PR     PSIa         1038.0     XE WORTH %   -2.36   LOAD LINE SUMMARY
 CORE   MWD/sT     21573.8      XE/RATED      0.94    CORE POWER          97.9%
 CYCLE  MWD/sT      9000.0      AVE VF                CORE FLOW           99.7%
 MCPR                1.326      FLLLP                 LOAD LINE           98.1%

 CORRECTION FACTOR:  MFLCPR= 1.024  MFLPD= 0.990  MAPRAT= 0.990
 OPTION:  ARTS        2 LOOPS ON     MANUAL FLOW   MCPRLIM= 1.310
                   MOST LIMITING LOCATIONS (NON-SYMMETRIC)
 MFLCPR    LOC     MFLPD     LOC        MAPRAT    LOC       PCMARG     LOC
 1.012   21-18     1.083   23-32- 4     0.751   17-40- 2     0.100    21-18
 0.831   15-40     0.876   17-40- 2     0.750   41-18- 1     0.080    15-40
 0.829   41-16     0.876   15-42- 2     0.746   39-40- 2     0.065    41-16
 0.825   41-40     0.875   41-18- 3     0.739   17-16- 3     0.048    41-40
 0.818   15-18     0.874   15-42- 1     0.732   19-46- 2     0.033    15-18
 0.810   19-46     0.873   15-40- 2     0.731   43-36- 2     0.028    19-46
 0.809   45-38     0.873   17-42- 2     0.729   37-14- 3     0.020    45-38
 0.807   37-12     0.872   39-18- 1     0.726   13-20- 1     0.010    37-12
 0.803   11-22     0.871   39-16- 3     0.716   11-36- 1     0.000    11-22
 0.793   11-36     0.870   41-16- 2     0.714   25-50- 2    -0.010     11-36

 SEQ. A-2     C=MFLCPR D=MFLPD M=MAPRAT P=PCRAT *=MULTIPLE    CORE AVE AXIAL
 53                          12                              NOTCH REL PW  LOC
                                                                    0.417   25
 49                                                          00    0.695   24
   L                                                         02    0.787   23
 45                  22              16                      04    0.879   22
                                                             06    0.924   21
 41                                                          08    0.948   20
   L               M                                         10    0.971   19
 37          16                              22              12    0.995   18
                                                             14    1.008   17
 33                                                          16    1.020   16
   L                     D                                   18    1.033   15
 29 12                                               12      20    1.035   14
                                                             22    1.037   13
 25                                                          24    1.039   12
   L                                                         26    1.077   11
 21          22                              16              28    1.114   10
                                                             30    1.152   09
 17                      C                                   32    1.209   08
   L                                                         34    1.267   07
 13                  16              22                      36    1.325   06
                                                             38    1.304   05
 09                                                          40    1.284   04
   L                                                         42    1.287   03
 05                          12                              44    0.912   02
       L         L         L         L         L         L   46    0.281   01
    04   08   12   16   20   24   28   32   36   40   44   48   52

 CORE AVERAGE RADIAL POWER DISTRIBUTION
 RING #     1      2      3      4      5      6      7
 REL PW   0.932  1.128  1.202  1.090  1.192  1.089  0.596
```

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

Attachment 1 – 3D Case (Page 2)

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FOR TRAINING USE ONLY                                                    PAGE    2
 CLINTON CYCLE 18   INSTRUMENT READINGS/STATUS    SEQUENCE NO 10
                     CALIBRATED LPRM READINGS     XX-XXX-2018 13:47 CALCULATED
                                                  XX-XXX-2018 13:48 PRINTED
     47D         29.9  43.8  46.1  41.7  17.8      CASE ID FMLD1180410134733
       C         31.3  43.3  44.3  40.9  18.1      LPRM SHAPE - FULL CORE
       B         31.2  40.7  45.6  44.4  18.0
       A         30.7  43.4  42.4  42.9  15.9

                                                      FAILED SENSORS:
     39D  27.4  48.9  50.0  52.1  53.1  40.9         LPRM (  0 SIGNAL FAILED)
       C  28.2  45.4  43.4  41.4  46.7  40.5         LPRM (  0 PANACEA REJECTED)
       B  29.5  47.8  41.1  39.2  46.0  38.2         OTHER SENSORS (  0 TOTAL)
       A  27.4  44.9M 34.7  30.4  41.5  41.8         SUB RODS
                                                       NONE
     31D  36.6  49.9  55.9  53.7  53.3  46.8
       C  36.4  40.7  45.8  44.3  41.3  44.0         T = TIP RUN RECOMMENDED
       B  37.3  40.1  42.6  40.3  38.9  44.1         C = MFLCPR LOCATION
       A  34.0  34.3  31.5D 27.6  30.5  42.1         M = MAPRAT LOCATION
                                                      D = MFLPD LOCATION
     23D  33.9  50.4  57.4  55.0  53.8  46.8         P = PCRAT LOCATION
       C  33.8  42.4  47.3  46.0  44.0  44.1         * = MULTIPLE LIMIT
       B  33.8  38.5  45.0  42.8  42.7  47.5
       A  33.0  38.5  35.7  31.6  35.1  44.9         + = CTP/WT OUT OF RANGE

     15D  16.5  42.4 C50.8  45.7  47.2  30.9
       C  16.6  42.3  42.5  40.3  45.7  32.2
       B  16.2  43.3  44.2  38.8  42.8  33.4
       A  14.9  42.9  39.2  34.0  44.5  31.7

     07D         16.9  34.4  35.8  26.3
       C         17.1  34.8  36.1  27.0
       B         17.3  36.4  36.4  26.7
       A         15.1  33.8  33.7  26.4

           06    14    22    30    38    46

    CORE SUMMARY
 CORE POWER    97.9%   CALC SUB FLOW     97.5%   DP MEAS PSI              18.95
 CORE FLOW     99.7%   OPER SUB FLOW     -2.1%   DP CALC PSI              21.59
 LOAD LINE     98.1%   FLOW BASIS         MEAS   FEEDWTR FLOW MLB/HR      14.71

                            APRM CALIBRATION
                              A      B      C      D
   READING                  97.4   97.1   97.9   97.3
   AGAF                      1.006  1.008  1.000  1.007

   APRM - %CTP             -0.6   -0.8   -0.0   -0.6

    TIP RUNS RECOMMENDED
 STRINGS:         NONE
 DRIVE FLOW     MLB/HR
 FEEDWTR TEMP   DEG.F
```

INITIAL CONDITIONS

You are the ‘B’ RO.

The plant is at full power with RR Pumps A and B operating in fast speed.

INITIATING CUE

The Control Room Supervisor directs you to perform the daily surveillance CPS 9820.01, Power Distribution Limits.

Report to the CRS after completing the task.

Job Performance Measure

Complete CPS 3506.01C005 Diesel Generator Start Log

JPM Number: JPM555

Revision Number: 00

Date: 3 / 5 / 2018

Developed By:	W. D. Kiser Instructor	3/5/18 Date
Validated By:	Coang Huong SME or Instructor	4/3/18 Date
Reviewed By:	James Lucas Operations Representative	4/10/18 Date
Approved By:	Tony Jennings Training Department	4/10/18 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 SME review.

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

_____ 8. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure 9080.01 Rev: 55f
Procedure 3506.01 Rev: 37f
Procedure 3506.01C005 Rev: 1b
Procedure 3506.01F001 Rev: 8a

_____ 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. Subsequent validations, sign and date below:

_____ _____
SME / Instructor Date

_____ _____
SME / Instructor Date

_____ _____
SME / Instructor Date

Revision Record (Summary)

Revision	Date	Description
00	3/5/18	New JPM.

SIMULATOR SETUP INSTRUCTIONS

1. No simulator setup is required for this JPM.

INITIAL CONDITIONS

You are an extra RO in the MCR.

The plant is in Mode 1.

CPS 9080.01, Diesel Generator 1A Operability Manual And Quick Start Operability is in progress. This is the 51st start since the last start motor rebuild.

On start, DG 1A achieved 4200 V and 60.0 Hz within 10.2 seconds.

40 minutes into the Surveillance Run with Load ≥ 50% the DG 1A Output Breaker tripped open on overcurrent.

INITIATING CUE

Complete CPS 3506.01C005 Diesel Generator Start Log.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the examinee with the following items: • Marked up copy of CPS 3506.01C005 Diesel Generator Start Log • Marked up copy of CPS 3506.01F001Diesel Generator Start Log Index • A copy of CPS 3506.01 Diesel Generator And Support Systems (DG)				
1	Maintenance Rule Evaluation Start Demand	Selects "Successful Start". *Evaluator Note – Using Attachment 1 Of CPS 3506.01C005 and conditions presented in the initial conditions, candidate determines that rated voltage and frequency were achieved.*	___	___	___
***2**	Maintenance Rule Evaluation Load-Run Demand	Selects "Invalid Load-Run Failure (Invalid Test)". *Evaluator Note – Using Attachment 1 Of CPS 3506.01C005, exceptions to valid tests and failures listed in 3506.01 step 2.2.1.7, and conditions presented in the initial conditions, candidate determines that the Load Run was terminated by an Invalid Failure (DG 1A Output Breaker tripping on overcurrent – bypassed during a LOCA).*	___	___	___
3	Tech Spec Evaluation	Selects "Invalid Test". *Evaluator Note – Using Attachment 1 Of CPS 3506.01C005, exceptions to valid tests and failures listed in 3506.01 step 2.2.1.7, and conditions presented in the initial conditions, candidate determines that the Load Run was terminated by an Invalid Failure (DG 1A Output Breaker tripping on overcurrent – bypassed during a LOCA).*	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***4**	Number Of Valid Test Failures In Last 25 Valid Tests (including this start)	Enters "1". *Evaluator Note – Using the provided Diesel Generator Start Log, the candidate will determine that the current Invalid Test will leave a total of 1 valid test failure in the last 25 valid tests.*	___	___	___
5	Report to the CRS.	Present the completed Generator Start Log to the CRS.	___	___	___
CUE	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: Complete CPS 3506.01C005 Diesel Generator Start Log
JPM Number: JPM555 Revision Number: 00
Task Number and Title: 350601.23 Diesel Generator operating logs.
K/A Number and Importance: 2.2.37 / RO (3.6), SRO (4.6)
Suggested Testing Environment: Classroom
Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No
Reference(s):

- CPS 9080.01 Diesel Generator 1A Operability Manual And Quick Start Operability, Rev. 55f
- CPS 3506.01 Diesel Generator And Support Systems (DG), Rev. 37f
- CPS 3506.01C005 Diesel Generator Start Log, Rev 1b
- CPS 3506.01F001 Diesel Generator Start Log Index, Rev 8a

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

Comments: _____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name (Print): _____

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

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

INITIAL CONDITIONS

You are an extra RO in the MCR.

The plant is in Mode 1.

CPS 9080.01, Diesel Generator 1A Operability Manual And Quick Start Operability is in progress. This is the 51st start since the last start motor rebuild.

On start, DG 1A achieved 4200 V and 60.0 Hz within 10.2 seconds.

40 minutes into the Surveillance Run with Load ≥ 50% the DG 1A Output Breaker tripped open on overcurrent.

INITIATING CUE

Complete CPS 3506.01C005 Diesel Generator Start Log.

Report to the CRS after completing the task.

Job Performance Measure

RT Pump Shutdown

JPM Number: JPM475

Revision Number: 00

Date: 4 / 10 / 2018

Developed By:	Tony Jennings Instructor	4/10/18 Date
Validated By:	Keith Kocek SME or Instructor	7/23/18 Date
Reviewed By:	James Lucas Operations Representative	7/23/18 Date
Approved By:	Tony Jennings Training Department	7/24/18 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 SME review.

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

_____ 8. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure 3303.01 Rev: 36d
Procedure 3303.01V001 Rev: 20a
Procedure RP-AA-203 Rev: 5
Procedure _____ Rev:_____

_____ 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. Subsequent validations, sign and date below:

_____ _____
SME / Instructor Date

_____ _____
SME / Instructor Date

_____ _____
SME / Instructor Date

Revision Record (Summary)

Revision	Date	Description
00	4/10/18	New JPM.

SIMULATOR SETUP INSTRUCTIONS

1. This is an RO admin JPM; no simulator setup is required.
2. Administer this JPM in any appropriate setting where exam security can be set and which allows the examinee access to a:
   a. calculator.
   b. copy of the “Selected RP Procedures for Admin JPMs” binder.

INITIAL CONDITIONS

RWCU Recirc Pump 'B' 1G33-C001B has been secured due to a leaking seal per CPS 3303.01 Reactor Water Cleanup (RT) section 8.1.4 Removing RWCU Pump(s) From Service.

INITIATING CUE

Determine:

1) the total dose required to support a pre-job brief of two Equipment Operators tasked with performing CPS 3303.01 section 8.1.4.4 to isolate and vent the 'B' RWCU Pump, and

2) the margin each Operator will have to the yearly admin dose limit after performing the task.

The following amplifying information is provided:

- Equipment Operator #1 has 700 mr radiation dose YTD.
- Equipment Operator #2 has 500 mr radiation dose YTD.
- Equipment Operator #1 will be performing steps 8.1.4.4.1, 8.1.4.4.2, and 8.1.4.4.3 of CPS 3303.01 Reactor Water Cleanup (RT).
- Equipment Operator #2 will be performing steps 8.1.4.4.4, 8.1.4.4.6, 8.1.4.4.7, and 8.1.4.4.8 of CPS 3303.01 Reactor Water Cleanup (RT)
- Expected total dose for each operator based on the following:
  - Equipment Operator #1: 3 minutes at 1G33-F013B, 3 minutes at 45B, and 6 minutes at 43B.
  - For Equipment Operator #2: 2 minutes performing 8.1.4.4.4 and 3 minutes performing 8.1.4.4.6, 8.1.4.4.7, and 8.1.4.4.8.
  - The 30 cm dose is the whole body dose to be received.
  - No dose will be received during the transit to and from each component.

Inform the Shift Manager 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.

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

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: _____

<table>
<tr><th>STEP</th><th>ELEMENT</th><th>STANDARD</th><th>SAT</th><th>UNSAT</th><th>Comment Number</th></tr>
<tr><td>CUE</td><td colspan="5">Provide the examinee with the following items:
• CPS 3303.01 Reactor Water Cleanup (RT)
• CPS 3303.01V001 Reactor Water Cleanup Valve Lineup
• JPM475 Attachments 1 – 4: Survey maps RP-1137-04, RP-1126-04, RP-1136-05 and RP-1192-03</td></tr>
<tr><td>*1</td><td>Examinee determines total dose for each operator.</td><td>Examinee determines total dose for Operator #1 is 95 mrem.
<table>
<tr><th colspan="5">Operator #1</th></tr>
<tr><th>Procedure Step</th><th>Valve</th><th>Dose Rate (mr/hr)</th><th>Time (min)</th><th>Dose (mr)</th></tr>
<tr><td>8.1.4.4.1</td><td>13B</td><td>700</td><td>3</td><td>35</td></tr>
<tr><td>8.1.4.4.2</td><td>45B</td><td>400</td><td>3</td><td>20</td></tr>
<tr><td>8.1.4.4.3</td><td>43B</td><td>400</td><td>6</td><td>40</td></tr>
<tr><td></td><td></td><td></td><td>Total Dose</td><td>95</td></tr>
</table></td><td>___</td><td>___</td><td>___</td></tr>
<tr><td></td><td></td><td>Examinee determines total dose for Operator #2 is 25 mrem.
<table>
<tr><th colspan="5">Operator #2</th></tr>
<tr><th>Procedure Step</th><th>Valve</th><th>Dose Rate (mr/hr)</th><th>Time (min)</th><th>Dose (mr)</th></tr>
<tr><td>8.1.4.4.4</td><td>005B</td><td>300</td><td>2</td><td>10</td></tr>
<tr><td>8.1.4.4.6, 8.1.4.4.7, 8.1.4.4.8</td><td>10B / 11B</td><td>300</td><td>3</td><td>15</td></tr>
<tr><td></td><td></td><td></td><td>Total Dose</td><td>25</td></tr>
</table>
Examiner Cue – if asked, cue the examinee that 1G33-F005B is located at point A on Survey Map RP-1126-4, and 1G33-F010B & 11B are located at point B on Survey Map RP-1126-4.</td><td>___</td><td>___</td><td>___</td></tr>
</table>

***2**	Examinee calculates margin to the admin dose limit for both Operators.	**Examinee determines Operator #1 will have a margin of 1205 mrem to the annual admin dose limit after completing the task.** 2000 mr – 700 mr - 95 mr = 1205 mr	___	___	___
		Examinee determines Operator #2 will have a margin of 1475 mrem to the annual admin dose limit after completing the task. 2000 mr – 500 mr - 25 mr = 1475 mr			
CUE	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: RT Pump Shutdown

JPM Number: JPM475 Revision Number: 00

Task Number and Title: 102405.01 Apply the administrative requirements of ALARA program elements.

K/A Number and Importance: 2.3.13 / RO (3.4), SRO (3.8)

Suggested Testing Environment: Classroom

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

Reference(s):

- CPS 3303.01 Reactor Water Cleanup (RT) Rev. 36d
- CPS 3303.01V001 Reactor Water Cleanup Valve Lineup Rev. 20a
- Procedure RP-AA-403 Administration of the Radiation Work Permit Program Rev. 10
- Procedure RP-AA-460 Controls For High and Locked High Radiation Areas Rev. 32

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

Comments: _____

_____

_____

_____

_____

_____

_____

Evaluator's Name (Print): _____

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

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

Attachment 1 – Survey Map RP-1137-04

RP- 1137-04
11/28/2009

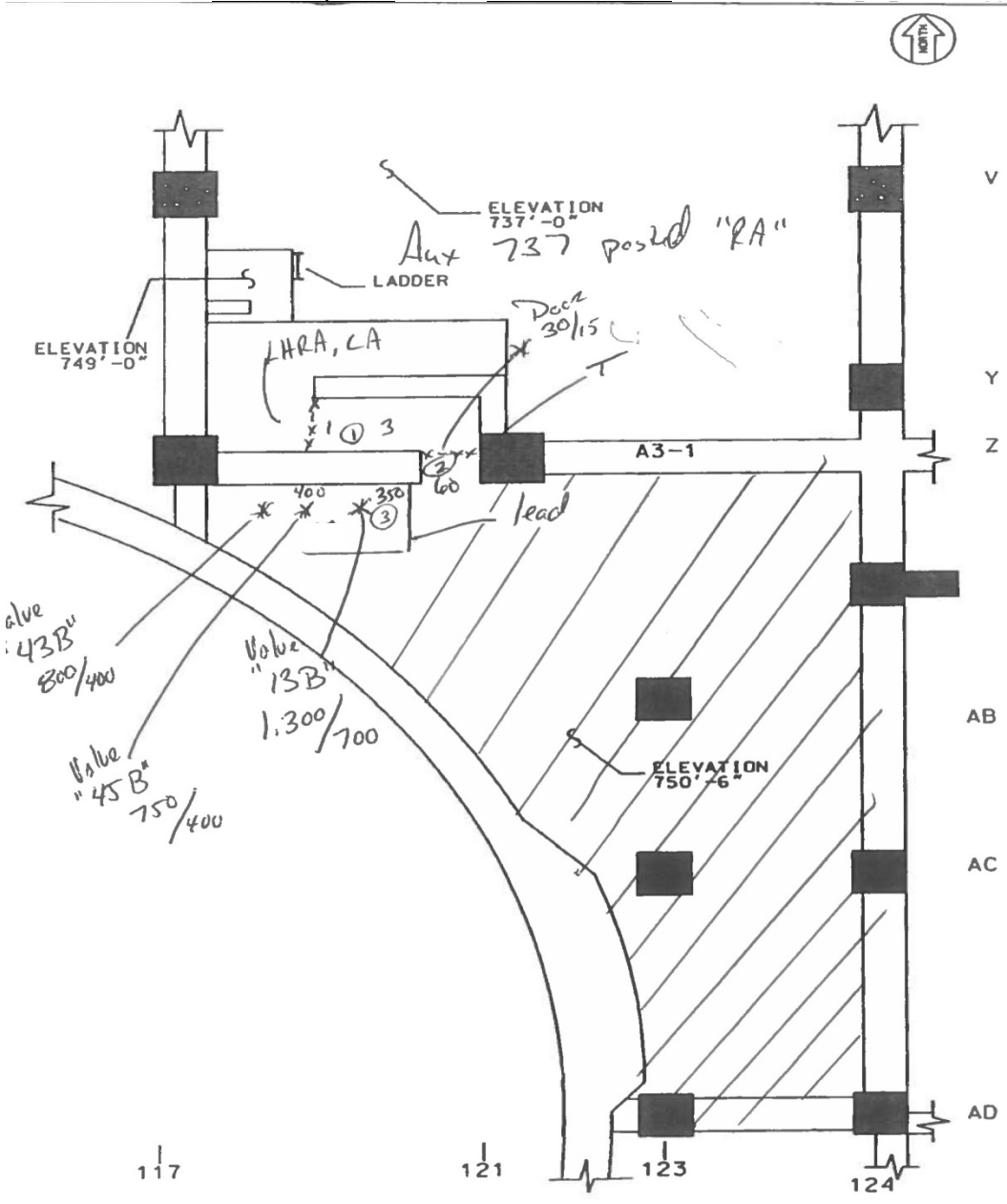
CPS RADIOLOGICAL SURVEY SHEET

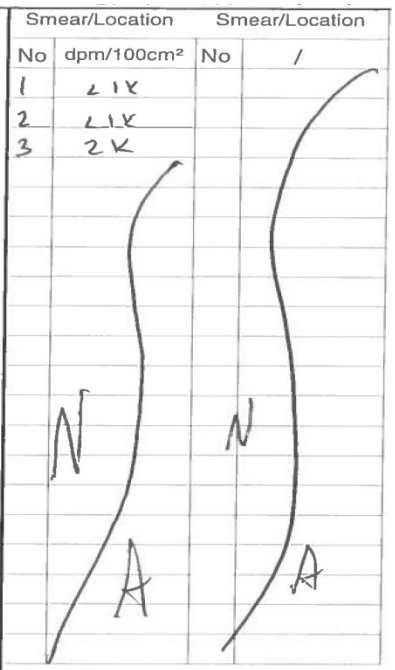
Aux. Building – 750'EL.
RT Mezzanine

Survey Index No: XX/XX/XXXX (Date) - 21 (IndexNo)

Date: XX/XX/XXXX Time: XX:XX
Type: ☒ RWP ☐ Other:
Performed By: A. Radcontech
Counted By: A. Nothertech
Reviewed By: R.P. Sup Date: XX/XX/XXXX

	RADIATION	CONTAMINATION
Inst. Type	Telepole	L-177
Serial #	334721	19265
Cal Due Date	xx/xx/xxxx	xx/xx/xxxx





Remarks:
MRRR/RWP: CL-ILT-XX-XXXXX

To support removing 'B' RWCU Pump from service.

Not Surveyed

Tech Dose Received: 3.4 mR

Notes: Gross Masslinn (~100 ft²)

1. Gen. Area Dose Rates in mRem/hr.
2. * # / # = Contact/30cm Dose Rates
3. Smears Taken at Circled Locations
4. X X = Radiological Boundary
5. RCA = Radiological Control Area
6. CA = Contaminated Area
7. HCA = High Contamination Area
8. RA = Radiation Area
9. HRA = High Radiation Area
10. LHRA= Locked High Radiation Area
11. T = Transfer Area
12. CAB = Clean Area Boundary

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

Attachment 2 – Survey Map RP-1126-04

RP- 1126-04
11/28/2009

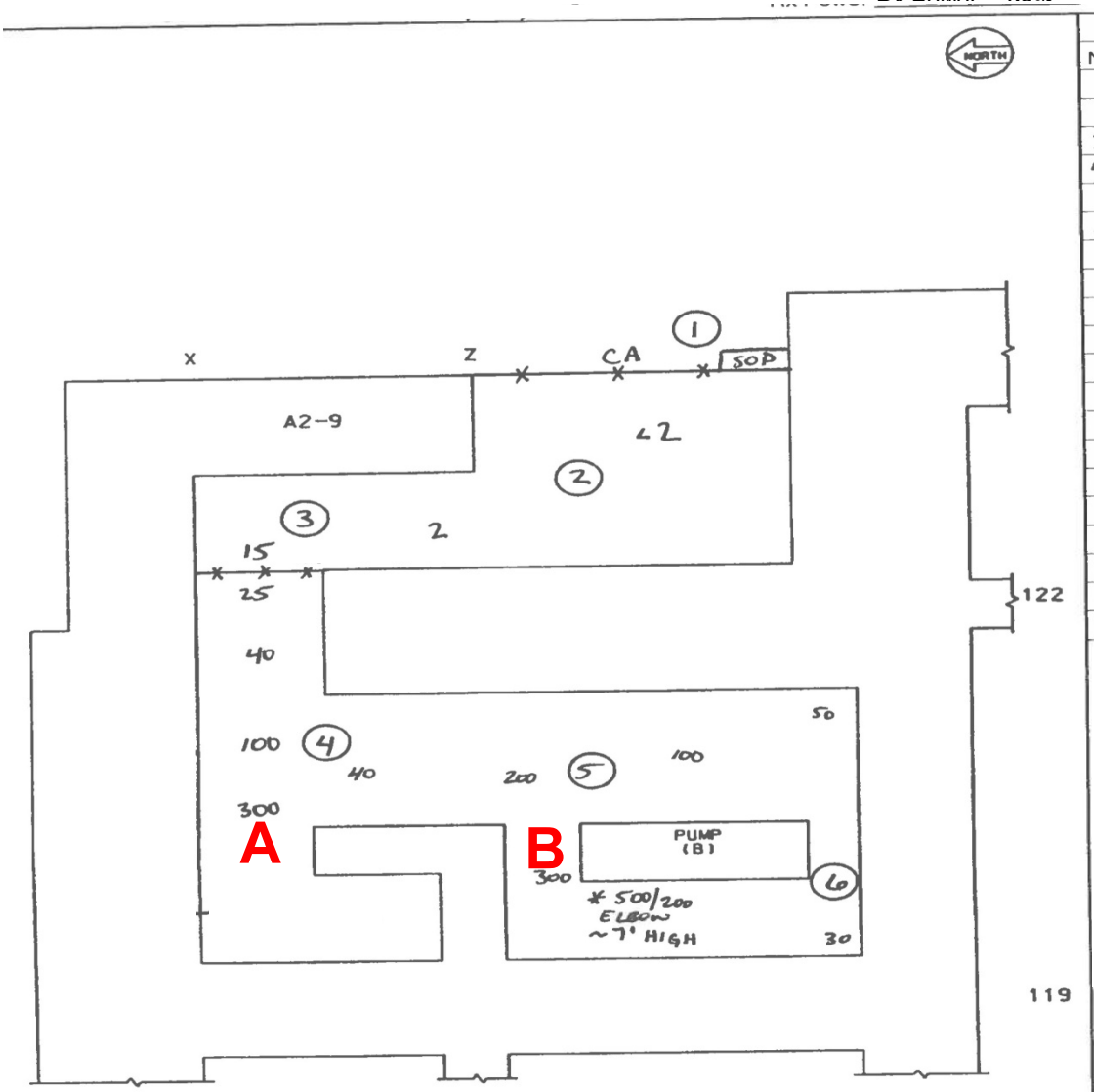
CPS RADIOLOGICAL SURVEY SHEET

Aux. Building – 737'EL.
Reactor Water Cleanup Pump 'B'

Survey Index No: XX/XX/XXXX (Date) - 13 (IndexNo)

Date: XX/XX/XXXX Time: XX:XX
Type: [X] RWP [ ] Other:
Performed By: A. Radcontech
Counted By: A. Nothertech
Reviewed By: R.P. Sup Date: XX/XX/XXXX

	RADIATION	CONTAMINATION
Inst. Type	R02A	L-177
Serial #	78050	327040
Cal Due Date	xx/xx/xxxx	xx/xx/xxxx



Smear/Location No	dpm/100cm²	Smear/Location No	N/A
1	< 1K		
2	< 1K		
3	2 K		
4	15 K		
5	20 K		
6	40 K		
	N/A		

Remarks:
MRRR/RWP: CL-ILT-XX-XXXXX

To support removing 'B' RWCU Pump from service.

Tech Dose Received: 23 mR

Notes: Gross Masslinn (~100 ft²)

1. Gen. Area Dose Rates in mRem/hr.
2. * # / # = Contact/30cm Dose Rates
3. Smears Taken at Circled Locations
4. -X-X- = Radiological Boundary
5. RCA = Radiological Control Area
6. CA = Contaminated Area
7. HCA = High Contamination Area
8. RA = Radiation Area
9. HRA = High Radiation Area
10. LHRA= Locked High Radiation Area
11. T = Transfer Area
12. CAB = Clean Area Boundary

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

Attachment 3 – Survey Map RP-1136-05

RP- 1136-05
11/28/2009

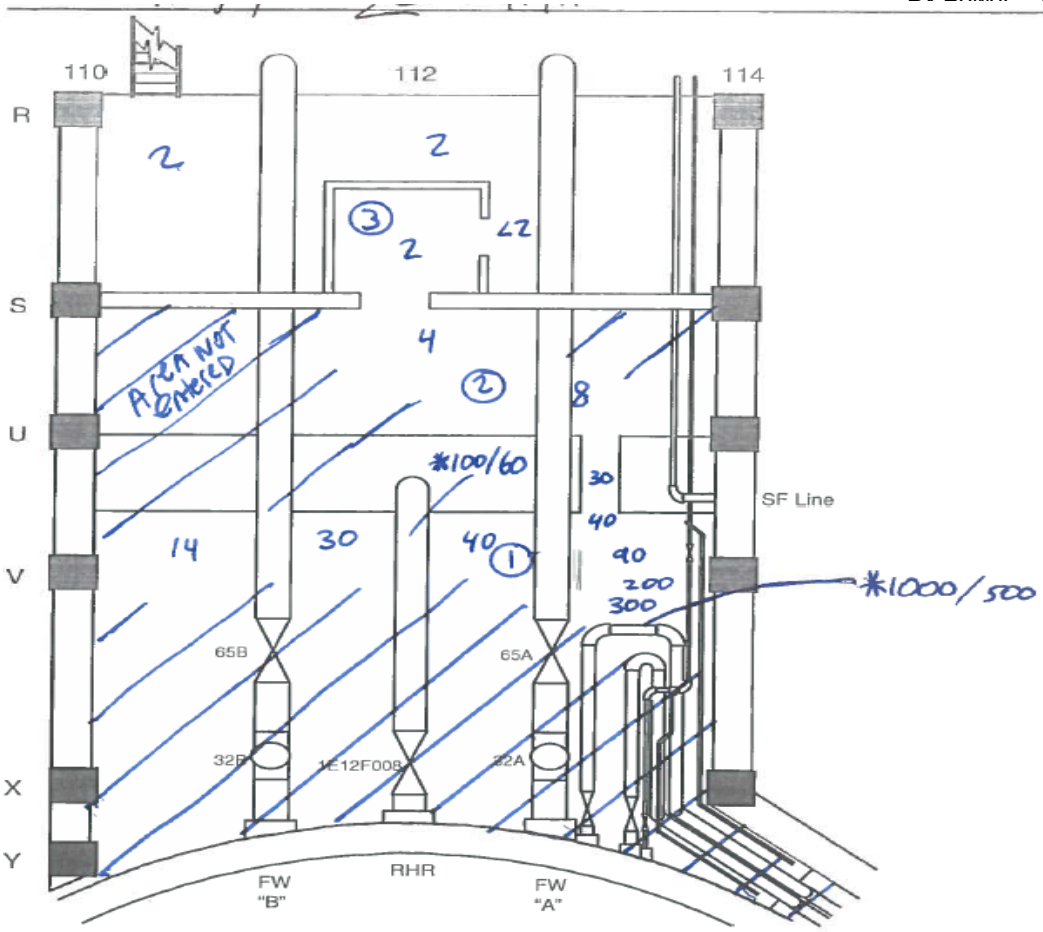
CPS RADIOLOGICAL SURVEY SHEET

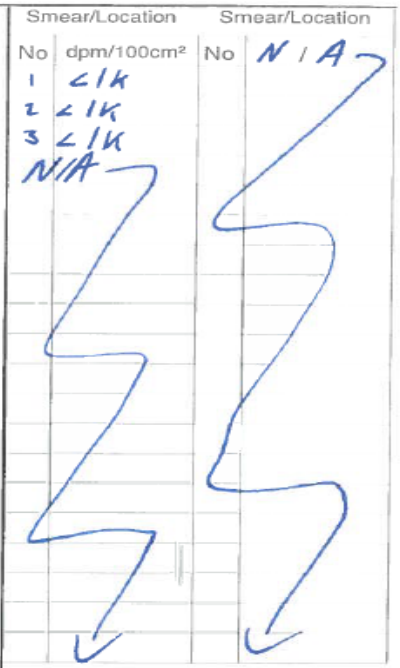
Aux. Building – 750'EL.
Aux. Building Steam Tunnel

Survey Index No: XX/XX/XXXX (Date) - 8 (IndexNo)

Date: XX/XX/XXXX Time: XX:XX
Type: ☒ RWP ☐ Other:
Performed By: A. Radcontech
Counted By: A. Nothertech
Reviewed By: R.P. Sup Date: XX/XX/XXXX

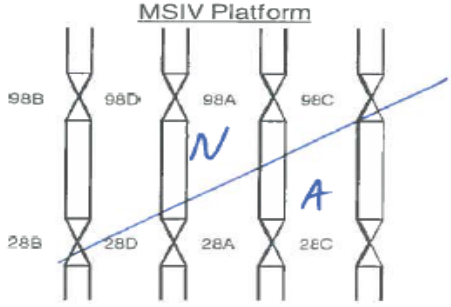
	RADIATION	CONTAMINATION
Inst. Type	R02A	L-177
Serial #	3316	327099
Cal Due Date	xx/xx/xxxx	xx/xx/xxxx
	Rx Power 98%	Bkgd 100 (cpm)

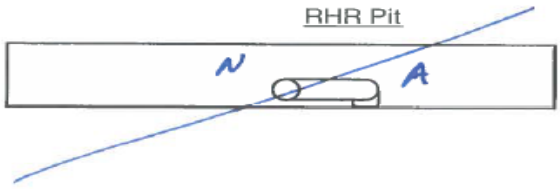




Remarks:
MRR#/RWP#: CL-ILT-XX-XXXXX

To support removing 'B' RWCU Pump from service.





Tech Dose Received: 6 mR

Notes: Gross Masslinn (~100 ft²)

1. Gen. Area Dose Rates in mRem/hr.
2. * # / # = Contact/30cm Dose Rates
3. Smears Taken at Circled Locations
4. X X = Radiological Boundary
5. RCA = Radiological Control Area
6. CA = Contaminated Area
7. HCA = High Contamination Area
8. RA = Radiation Area
9. HRA = High Radiation Area
10. LHRA= Locked High Radiation Area
11. T = Transfer Area
12. CAB = Clean Area Boundary

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

Attachment 4 – Survey Map RP-1192-03

RP- 1192-03
11/28/2009

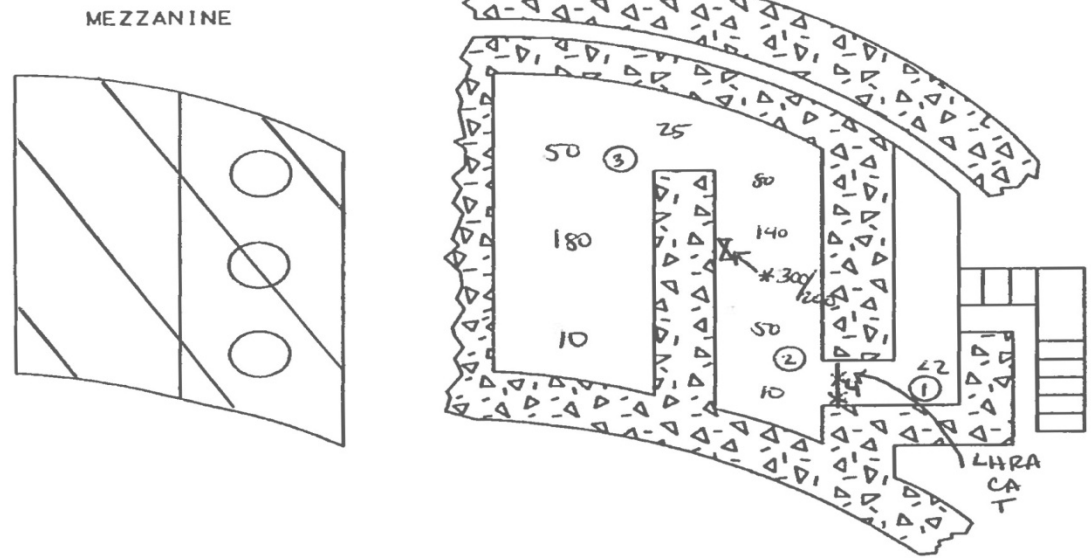
CPS RADIOLOGICAL SURVEY SHEET

Containment – 789'EL.
RT HX Room (B)

Survey Index No: XX/XX/XXXX (Date) - 10 (IndexNo)

Date: XX/XX/XXXX Time: XX:XX
Type: [X] RWP [ ] Other:
Performed By: A. Radcontech
Counted By: A. Nothertech
Reviewed By: R.P. Sup. Date: XX/XX/XXXX

	RADIATION	CONTAMINATION
Inst. Type	R02A	L-177
Serial #	76965	327099
Cal Due Date	xx/xx/xxxx	xx/xx/xxxx



Smear/Location No	dpm/100cm²	Smear/Location No	
1	<1K		N/A
2	10K		
3	35K		
	N/A		

Remarks:

Remarks:
MRRR/RWP: CL-ILT-XX-XXXXX

To support removing 'B' RWCU Pump from service.

Tech Dose Received: 0.5 mR

Notes: Gross Masslinn (~100 ft²)

1. Gen. Area Dose Rates in mRem/hr.
2. * # / # = Contact/30cm Dose Rates
3. Smears Taken at Circled Locations
4. X-X = Radiological Boundary
5. RCA = Radiological Control Area
6. CA = Contaminated Area
7. HCA = High Contamination Area
8. RA = Radiation Area
9. HRA = High Radiation Area
10. LHRA= Locked High Radiation Area
11. T = Transfer Area
12. # N = Neutron Dose Rate (mRem/hr)

INITIAL CONDITIONS

RWCU Recirc Pump 'B' 1G33-C001B has been secured due to a leaking seal per CPS 3303.01 Reactor Water Cleanup (RT) section 8.1.4 Removing RWCU Pump(s) From Service.

INITIATING CUE

Determine:

1) the total dose required to support a pre-job brief of two Equipment Operators tasked with performing CPS 3303.01 section 8.1.4.4 to isolate and vent the 'B' RWCU Pump, and

2) the margin each Operator will have to the yearly admin dose limit after performing the task.

The following amplifying information is provided:

- Equipment Operator #1 has 700 mr radiation dose YTD.
- Equipment Operator #2 has 500 mr radiation dose YTD.
- Equipment Operator #1 will be performing steps 8.1.4.4.1, 8.1.4.4.2, and 8.1.4.4.3 of CPS 3303.01 Reactor Water Cleanup (RT).
- Equipment Operator #2 will be performing steps 8.1.4.4.4, 8.1.4.4.6, 8.1.4.4.7, and 8.1.4.4.8 of CPS 3303.01 Reactor Water Cleanup (RT)
- Expected total dose for each operator based on the following:
  - Equipment Operator #1: 3 minutes at 1G33-F013B, 3 minutes at 45B, and 6 minutes at 43B.
  - For Equipment Operator #2: 2 minutes performing 8.1.4.4.4 and 3 minutes performing 8.1.4.4.6, 8.1.4.4.7, and 8.1.4.4.8.
  - The 30 cm dose is the whole body dose to be received.
  - No dose will be received during the transit to and from each component.

Inform the Shift Manager when the task is complete.